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Development of Gametogenesis

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Abstract*—Gametogenesis is a biological process that involves the division and development of diploid or haploid precursor cells to produce mature haploid gametes. Gametogenesis may take place either by the mitotic or meiotic division of haploid gametogenous cells, depending on the biological life cycle of the organism. For instance, plants undergo mitosis in gametophytes to create gametes. During sporic meiosis, haploid spores develop into gametophytes. Alternation of generations is another name for the multicellular, haploid phase that occurs between meiosis and gametogenesis in all living things.

***Index Terms*— Cells, Gamete, Gametogenesis, Ova, Ovum**

I. INTRODUCTION

Gametogenesis is the process through which sperms and ova are created in the male and female gonads, respectively, as well as other sex cells or gametes. The nuclei of gametes have half the number of chromosomes present in the nuclei of somatic cells, making them unique from all other cells in the body. The gametogenesis process' most important component is meiosis. Spermatogenesis and oogenesis are two different terms for the same process of gametogenesis, which produces sperm. Similar periods of sequential alterations are seen in both spermatogenesis and oogenesis[1]–[3].

I. SPERMATOGENESIS

By the process of mitosis and meiosis division, spermatozoa are created from spermatogonial stem cells during spernatogenesis. The first cells in this route are spermatogonia, which undergo mitosis to become primary spermatocytes. Meiosis I separate the original spermatocyte into two secondary spermatocytes, while Meiosis II divides each secondary spermatocyte into two spermatids. They transform into fully developed spermatozoa, or sperm cells. As a result, the main spermatocyte develops into two secondary spermatocytes, which in turn divide to become four spermatozoa.

In many sexually reproducing species, the mature male gametes are called spermatozoa. As a result, spermatogenesis is the male counterpart of gametogenesis, while oogenesis is the female version. Stepwise development takes place in the seminiferous tubules of the male testes in animals.

Spermatogenesis is crucial for sexual reproduction but is extremely reliant on favourable circumstances for the process to work properly. The control of this mechanism has been linked to DNA methylation and histone modification. While there is a tiny decline in sperm production with advancing age, it typically begins at puberty and lasts uninterruptedly until death.

II. PURPOSE:

The process of spermatogenesis results in mature male gametes, also known as spermatozoa, which may fertilise the egg, the female counterpart gamete, during conception to create a zygote, a single cell. The two gametes both contribute half the average number of chromosomes to create a zygote that is chromosomally normal. This is the basis of sexual reproduction.

Each gamete must include half the typical number of chromosomes seen in other body cells in order to maintain the number of chromosomes in the progeny, which varies across species. Otherwise, the progeny would have twice as many chromosomes as they normally would, which might lead to severe defects. Chromosomal anomalies resulting from improper spermatogenesis in humans cause congenital malformations, aberrant birth defects, and, in the majority of instances, spontaneous miscarriage of the growing baby.

Location: The male reproductive system's many structures are where spermatogenesis takes place. Beginning in the testes, the development of the gametes continues in the epididymis, where they mature and are kept until ejaculation. The process begins in the seminiferous tubules of the testes, where permatogonial stem cells close to the inner tubule wall divide centripetally, starting at the walls and moving into the innermost region, or lumen, to generate immature sperm. In the epididymis, maturation takes place. The site [Testes/Scrotum] is particularly significant since the process of spermatogenesis need a lower temperature to create viable sperm, more precisely 1° to 8°C below the usual body temperature of 37 °C. Clinical studies show that minor temperature changes, such those caused by an athletic support strap, have no effect on sperm viability or count.

There are conflicting estimates of the length of the human spermatogenesis process, which range from 74 to 120 days. It takes three months, including the transit time on the ductal system. Every day, 200 to 300 million spermatozoa are produced by the testes. Just 50 million or 100 million of them, however, develop into viable sperm.

The whole spermatogenic process may be divided into a number of separate phases, each of which corresponds to a certain kind of human cell. The following table shows one cell's ploidy, copy number, and chromosome/chromatid numbers, usually before DNA synthesis and cell division.

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After DNA synthesis but before division, the main spermatocyte is halted.

A. SPERMATOCYTOGENESIS

Spermatogenesis is the process by which the cells develop from primary spermatocytes to secondary spermatocytes to spermatids to sperm.

The male version of gametocytogenesis, spermatocytogenesis, produces spermatocytes with just half the amount of genetic material as usual. A diploid spermatogonium, which sits in the basal compartment of the seminiferous tubules, splits mitotically during spermatocytogenesis to produce two diploid intermediate cells known as primary spermatocytes. Each primary spermatocyte then enters the seminiferous tubule's adluminal compartment, replicates its DNA, and undergoes meiosis I to create two haploid secondary spermatocytes, which will eventually split into haploid spermatids. According to this division, the gamete's genetic diversity is increased by sources of genetic variety including chromosomal crossover or the haphazard incorporation of parental chromosomes. Structure of sperm: During spermiogenesis, microtubules develop on one of the centrioles, which develops into the basal body, and the spermatids start to form a tail. Its axoneme is made up of microtubules. To assure adequate energy source, mitochondria are positioned all around the axoneme, which causes the front portion of the tail to thicken. Spermatid DNA similarly goes through packaging and becomes quite compressed. During spermatid elongation, protamines take the place of certain nuclear basic proteins that were first used to wrap the DNA. The chromatin that results is compact and transcriptionally inactive.

With the nucleus now compressed, the Golgi apparatus surrounds it, forming the acrosome. The remaining superfluous cytoplasm and organelles are subsequently excised during maturation under the effect of testosterone. In the testes, the surrounding Sertoli cells phagocytose the extra cytoplasm, also referred to as residual bodies. The ensuing spermatozoa are now fully developed, but they are immobile, making them infertile. Spermiation is the process by which mature spermatozoa are extruded from the protecting Sertoli cells and discharged into the lumen of the seminiferous tubule[4]–[6].

Via the use of peristaltic contraction, testicular fluid released by the Sertoli cells transports the non-motile spermatozoa to the epididymis. Spermatozoa acquire motility and acquire the ability to fertilise when in the epididymis. Yet, rather than using the spermatozoon's newly developed motility, the mature spermatozoa are transported through the rest of the male reproductive system by muscular contraction.

The Sertoli cells, which are believed to assist the developing sperm cells structurally and metabolically, are in close proximity to the spermatogenic cells at all stages of differentiation. While the cytoplasmic processes are difficult to discern at the light microscopic level, a single Sertoli cell extends from the basement membrane to the lumen of the seminiferous tubule. Influencing elements

Changes in the environment, notably changes in temperature and hormone levels, have a significant impact on the process of spermatogenesis. Large local quantities of testosterone are needed to keep the process going, and this is done by attaching testosterone to an androgen binding protein found in the seminiferous tubules. Leydig cells, or interstitial cells, which are found next to the seminiferous tubules create testosterone.

Seminiferous epithelium in various animals, including humans, is sensitive to high temperatures and will suffer from temperatures as high as normal body temperature. As a result, the testes are found in the scrotum, a pouch of skin lying outside the body. From 2 °C to 8 °C below body temperature, the ideal temperature is maintained. This is accomplished by controlling blood flow and placing the scrotum's cremasteric muscle and dartos smooth muscle towards and away from the body's heat. Deficits in the diet, anabolic steroids, metals, x-ray exposure, dioxin, alcohol, and viral disorders will all have a negative impact on the pace of spermatogenesis. Moreover, oxidative stress may harm DNA in the male germ line, which is expected to have a substantial influence on fertilisation and pregnancy. Pesticide exposure has an impact on spermatogenesis as well. Regulation of hormones each species has a different hormonal control on spermatogenesis. The process is not fully understood in humans, but it is known that the hypothalamus, pituitary gland, and Leydig cells interact to cause the onset of spermatogenesis at puberty. With the absence of the pituitary gland, testosterone and follicle stimulating hormone may still start spermatogenesis. The only function of LH in spermatogenesis, in contrast to FSH, seems to be to stimulate the generation of gonadal testosterone.

The synthesis of the blood-testis barrier and the creation of androgen binding protein by Sertoli cells are both induced by FSH. For testosterone to be concentrated at levels high enough to start and sustain spermatogenesis, ABP is necessary. While there is fluctuation across a 5- to 10-fold range in healthy males, intra-testicular testosterone levels are 20–100 or 50–200 times greater than the quantity detected in blood. After testosterone has been generated, only testosterone is needed to keep spermatogenesis from stopping. FSH may start the sequestering of testosterone in the testes. Yet, by inhibiting the death of type Aspermatogonia, raising FSH levels would enhance the generation of spermatozoa. FSH levels are lowered by the hormone inhibin. Gonadotropins are believed to help the process of spermatogenesis by decreasing the proapoptotic signals and so promoting spermatogenic cell survival, according to studies using mouse models[7], [8].

By producing hormones, the Sertoli cells themselves influence a portion of spermatogenesis. The hormones estradiol and inhibin may be produced by them. Together with their primary product, testosterone, the Leydig cells May also produce estradiol. It has been discovered that

oestrogen is necessary for animal spermatogenesis. Yet, a guy with oestrogen insensitivity syndrome was discovered to generate sperm with a normal sperm count, even if his sperm viability was unusually low. It is unknown whether or not this man was infertile. Due to the reduction of gonadotropin secretion and, therefore, intratesticular testosterone synthesis, excessive oestrogen levels might be harmful to spermatogenesis. Moreover, prolactin seems to be crucial for spermatogenesis.

III. OOGENESIS

An ovum is created during oogenesis, also known as ovogenesis or oögenesis. Gametogenesis is the female version; spermatogenesis is the male version. It involves the immature ovum's growth through its many phases. Diagram of mammalian oogenesis demonstrating the shrinkage of chromosomes throughout the ovum's maturation phase[9]–[11].

IV. DISCUSSION

The series of chemical reactions that keep life alive inside the cells of living things is known as metabolism. The three major functions of metabolism are to turn food or fuel into energy to power cellular functions, to turn food or fuel into the building blocks of proteins, lipids, nucleic acids, and certain carbohydrates, and to get rid of nitrogenous waste. Organisms need these enzyme-catalyzed processes to maintain their structures, develop and reproduce, and adapt to their surroundings. The term "metabolism" can also refer to the totality of chemical processes that take place within living things, such as digestion and the movement of substances within and between cells. In this case, the term "intermediary metabolism" or "intermediate metabolism" refers to the set of processes that take place inside the cells. Catabolism, or the breakdown of organic matter, such as via cellular respiration, and anabolism, or the synthesis of cell components like proteins and nucleic acids, are the two main subtypes of metabolism. Energy is often released when something breaks down and used when something is built up. The chemical processes of metabolism are arranged into metabolic pathways, where one molecule is changed into another by a number of steps by a set of enzymes. Enzymes are essential to metabolism because they enable organisms to drive energy-demanding, desired processes that would otherwise not take place by themselves by linking them to energy-releasing spontaneous reactions. The processes may go more quickly because of the role that enzymes play as catalysts. As a result of changes in the cell's environment or signals from other cells, enzymes also enable the control of metabolic pathways. Which compounds an organism will find nutritive and which toxic depends on the metabolic system of that organism. As an example, certain prokaryotes employ the deadly gas hydrogen sulphide as a nutrition. An organism's metabolic rate, or pace at which it burns through food, determines how much of it it needs and how it may get it. The closeness of the fundamental metabolic components and routes, even amongst quite dissimilar species, is a notable aspect of metabolism. For instance, the group of carboxylic acids best known as citric acid cycle intermediates are present in all known organisms and may be found in species as different as the unicellular bacteria. Elephants and Escherichia coli are large multicellular creatures. These strong metabolic pathway similarities most likely result from their early evolutionary history and their persistence owing to their effectiveness[12], [13].

V. CONCLUSION

By definition, gametogenesis is the process by which mature haploid gametes are produced from either haploid or diploid progenitor cells. The precursor cells divide into gametes by cell division. While it may seem like a pretty technical term now, you'll grasp it by the conclusion of this session. The two types of organisms are diploid and haploid. Like you and I, diploid individuals have two copies of their DNA in each cell. A haploid organism has one copy of its DNA in each cell. Gametes, as stated in the definition, are all haploid. Thus, if you're already a haploid cell, you divide into two cells as usual. Yet, haploid gametes must be produced if you are diploid. You must thus produce cells that contain only one copy of DNA. Meiosis, a unique kind of cell division, is also used to accomplish this. A cell creates a full copy of its DNA during mitotic cell division. The DNA is then divided between the two daughter cells as the cell divides. Therefore, the genetic information of the parent cell is completely and accurately copied into each daughter cell. This kind of cell division just requires one step. Meiotic cell division occurs in two stages. A diploid cell with two copies of DNA initiates meiosis. One is inherited from the mother, the other from the father. Four haploid cells are produced when the cell divides twice. Meiosis I is the first division. While allowing "gene shuffling" between the maternal and paternal chromosomes, it entails chromosomal replication. The Meiosis II division is the second division. Haploid cells are the outcome.

REFERENCES

[1] M. Ben maamar, e. E. Nilsson, and m. K. Skinner, “epigenetic transgenerational inheritance, gametogenesis and germline development†,” biol. Reprod., 2021, doi: 10.1093/biolre/ioab085.
[2] I. Ayalon et al., “coral gametogenesis collapse under artificial light pollution,” curr. Biol., 2021, doi: 10.1016/j.cub.2020.10.039.
[3] X. Liu et al., “transcriptional dynamics of gametogenesis in the green seaweed ulva mutabilis identifies an rwp-rk transcription factor linked to reproduction,” bmc plant biol., 2022, doi: 10.1186/s12870-021-03361-3.
[4] D. Salilew-wondim, s. Gebremedhn, m. Hoelker, e. Tholen, t. Hailay, and d. Tesfaye, “the role of micrornas in mammalian fertility: from gametogenesis to embryo implantation,” international journal of molecular sciences. 2020. Doi: 10.3390/ijms21020585.

[5] L. Notini, c. Gyngell, and j. Savulescu, "drawing the line on in vitro gametogenesis," bioethics, 2020, doi: 10.1111/bioe.12679.
[6] Y. Nagahama, "endocrine regulation of gametogenesis in fish," international journal of developmental biology. 1994.
[7] F. J. Van werven and a. Amon, "regulation of entry into gametogenesis," philosophical transactions of the royal society b: biological sciences. 2011. Doi: 10.1098/rstb.2011.0081.
[8] S. Hao, t. Ariizumi, and h. Ezura, "sexual sterility is essential for both male and female gametogenesis in tomato," plant cell physiol., 2017, doi: 10.1093/pcp/pcw214.
[9] M. Saitou and k. Hayashi, "mammalian in vitro gametogenesis," science. 2021. Doi: 10.1126/science.aaz6830.
[10] Y. Jiang et al., "an intracellular membrane protein gep1 regulates xanthurenic acid induced gametogenesis of malaria parasites," nat. Commun., 2020, doi: 10.1038/s41467-020-15479-3.
[11] M. Saitou and h. Miyauchi, "gametogenesis from pluripotent stem cells," cell stem cell. 2016. Doi: 10.1016/j.stem.2016.05.001.
[12] K. Makar and k. Sasaki, "roadmap of germline development and in vitro gametogenesis from pluripotent stem cells," andrology. 2020. Doi: 10.1111/andr.12726.
[13] F. Li, z. An, and z. Zhang, "the dynamic 3d genome in gametogenesis and early embryonic development," cells. 2019. Doi: 10.3390/cells8080788.

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The Process of Fertilization

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***Abstract*—A fertilised egg is the end product of the challenging process of human fertilization. The fertilised egg will develop in the mother's womb until it is born. Human fertilisation will be discussed in this lesson, along with its procedure, definition, and certain symptoms. Gregor Mendel, an Austrian scientist, used the word "gamete" to describe a cell division process. In creatures that reproduce sexually, a gamete is a cell that combines with another cell during fertilisation.**

***Index Terms*— Egg, Fertilization, Gamete, Ovum, Ova**

I. INTRODUCTION

The diploid somatic cells of a human, as opposed to a gamete, have one copy of the chromosomal set from the sperm and one copy from the egg cell; hence, the cells of the progeny include genes expressing traits from both the mother and the father. A gamete's chromosomes often experience random mutations that result in changed DNA since they are not exact replicas of either of the sets of chromosomes contained in the diploid chromosomes. Identifying gender in both humans and birds[1]–[3].

Male sperm can therefore play a role in determining the gender of any resulting zygote. If the zygote has two X chromosomes, it may develop into a female; if it has an X and a Y chromosome, it may develop into a male. In humans, a normal ovum can only carry an X chromosome; however, a sperm can carry either an X or a Y. With the ZW sex-determination mechanism, the female ovum decides the sex of the progeny in birds. Synthetic gametes

Artificial gametes, sometimes referred to as stem cell-derived gametes, in vitro generated gametes, and in vitro derived gametes, are gametes produced in a lab. According to research, same-sex male partners may be able to conceive using artificial gametes, albeit the gestation time would still call for a surrogate mother. Menopausal women may be able to create eggs and give birth to genetically related offspring using synthetic gametes. According to Robert Sparrow's article in the Journal of Medical Ethics, it is possible to produce numerous generations of humans in the lab using embryos created from synthetic gametes. With this method, cell lines for therapeutic purposes and research on the heritability of genetic illnesses might be produced. By selecting breeding for a desirable genome or utilising recombinant DNA technology to develop improvements that have not naturally emerged, this method might also be used to human enhancement.

A sperm enters the female egg during fertilisation, initially fusing with the plasma membrane before penetrating it to fertilise it. The sperm typically has no trouble fusing to the egg, but it may have more trouble breaking through the hard shell of the egg. As a result, sperm cells undergo a process called the acrosome reaction, which is a reaction that takes place in the sperm's acrosome as it approaches the egg. The front part of the sperm's head is covered by a cap-like structure called the acrosome. Differences between species

The appearance and effects of the acrosome response vary significantly across species. The layer that surrounds the egg has been shown to contain the acrosome response trigger in various species. Echinoderms

A protuberance, supported by a core of actin microfilaments, develops at the tip of the sperm head in several lower animal species. The plasma membrane of the egg is fused with the membrane at the tip of the acrosomal process.A significant amount of the acrosomal material in certain echinoderms, such as starfish and sea urchins, includes a protein that serves to briefly retain the sperm on the surface of the exposed egg.Hyaluronidase and acrosin are released during the acrosome reaction in mammals; their function in fertilisation is not yet known. The sperm must first make contact with the zona pellucida of the egg before the acrosomal response can start. The acrosomal enzymes start to disintegrate upon contact with the zona pellucida and the actin filament contacts the zona pellucida. Upon their meeting, a calcium influx results in a cascade of signalling. After that, a brief rapid block response takes place when the cortical granules within the oocyte merge with the outside membrane. In order for a patch of pre-existing sperm plasma membrane to merge with the plasma membrane of the egg, it also modifies that patch.

An acrosome response test, which evaluates how effectively a sperm can function during fertilisation, is a component of a sperm penetration assay. Sperm that can't complete the acrosome reaction adequately won't be able to fertilise an egg. Nevertheless, only around 5% of the males who undergo the test have this issue. This test is rather pricey and offers little insight into a man's fertility.

At times, such in the wood mouse Apodemussylvaticus, it has been shown that early acrosome responses boost the mobility of aggregates of spermatozoa, facilitating fertilisation. The acrosomal reaction often occurs in the fallopian tubes ampulla after the sperm enters the secondary oocyte. By developing a "hyperactive motility pattern," the

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sperm cell propels the sperm across the uterine cavity and cervical canal until it reaches the isthmus of the fallopian tube using ferocious whip-like motions produced by the flagellum. Chemotaxis is one of the several methods by which the sperm moves towards the ovum in the fallopian tubes ampulla. Then, glycoproteins on the sperm's outer surface attach to those on the ovum's zona pellucida.The first step is the penetration of corona radiata, which is accomplished by exposing acrosin linked to the sperm's inner membrane and releasing hyaluronidase from the acrosome to breakdown cumulus cells surrounding the egg. The cumulus cells were created in the ovary along with the egg to sustain it as it grew. They are encased in a gel-like material that is mostly formed of hyaluronic acid. The real acrosome response starts after the cell reaches the zona pellucida.

The oocyte's membrane and zona pellucida are broken down by acrosin. The contents of the sperm head then sink into the egg when a portion of its cell membrane fuses with the membrane of the egg cell. ZP3, one of the proteins that make up the zona pellucida, has been shown to attach to a partner molecule on the sperm in mice. The sperm and egg of different species cannot fuse thanks to this species-specific lock and key mechanism. Moreover, the zona pellucida produces calcium granules to stop further sperm binding. Some data suggests that this binding causes the acrosome to release the enzymes necessary for the sperm and egg to unite. While it is probable that other animals have a similar mechanism, the relevant protein and receptor may vary due to species-to-species variation in zona proteins.

If all goes according to plan, the oocyte is considered to have gotten activated after penetration when the egg-activation process starts. Phospholipase C Zeta is assumed to be the particular protein that causes this. It proceeds through its second meiotic division, and the resulting zygote is created when the two haploid nuclei combine. Soon after the first sperm penetrates the egg, various alterations to the egg's cell membranes make them impermeable, preventing polyspermy and reducing the likelihood of creating a triploid zygote. The aforementioned procedure outlines the key physiological processes. Nonetheless, one should be aware that certain sperm cells will spontaneously undergo an acrosome response even in the absence of the ovum. Even if they do eventually reach the egg, those cells are unable to fertilise it. As a cell undergoes apoptosis or necrosis, certain cells will spontaneously lose their acrosome[4]–[6]. When it comes to IVF

The implantation rate is greater in oocytes injected with spermatozoa that have experienced an acrosome reaction than it is in oocytes implanted with nonreacted spermatozoa when utilising intracytoplasmic sperm injection for IVF. When both responded and nonreacted spermatozoa are injected, the implantation rate is around 25%. The cycle delivery rate has the similar pattern.

Progesterone, follicular fluid, and calcium ionophore, as well as other chemicals that sperm cells may naturally encounter, may all be utilised to trigger the acrosome response in vitro.The shedding of the acrosome or "acrosome response" of a sperm sample may be evaluated using birefringence microscopy, flow cytometry, or fluorescence microscopy. After staining with a fluorescent lectin like FITC-PNA, FITC-PSA, or FITC-ConA or a fluorescent antibody like FITC-CD46, flow cytometry and fluorescence microscopy are often performed. The antibodies/lectins exclusively attach to a certain spot and are very selective for various areas of the acrosomal region. These probes may be used to see places where they have bonded when attached to a fluorescent molecule. Positive controls might be sperm cells with induced acrosome responses.A smear of washed sperm cells is created, air dried, permealized, and stained for fluorescence microscopy. The slide is next examined under light of a wavelength that, if the probe is attached to the acrosomal area, will cause it to glow. At least 200 cells are randomly selected and categorised as either having an acrosome that is intact or one that has responded. After that, it is quantified as a percentage of the counted cells.

The selected probe is incubated with the washed cells prior to sampling and analysis using a flow cytometer. Data may be analysed when the cell population is gated based on forward- and side-scatter. As many sperm cells will naturally shed their acrosome when they die, this method might additionally incorporate a viability probe, such as propidium iodide, to exclude dead cells from the acrosome evaluation.

Formation of fertilization membrane

At the egg's surface, the most impressive post-fertilization alterations take place. The sea urchin egg is the most well-known example, and it is detailed here. The vitelline membrane rises from the surface of the egg as an early reaction to fertilisation. The membrane is quite thin at first, but it rapidly thickens, becomes a well-organized molecular structure, and is known as the fertilisation membrane. A significant alteration of the egg surface's molecular structure also takes place at the same time. Around a minute is needed for the processes that result in the creation of the fertilisation membrane.The thin vitelline membrane separates from the sea urchin egg's outer surface at the location where a spermatozoan attaches. The cortical granules' membranes then come into touch with the inner aspect of the egg's plasma membrane and fuse with it, causing the granules to open and release their contents into the perivitelline space, or the area between the egg surface and the elevated vitelline membrane. If the fusion of the contents of the cortical granules with the vitelline membrane is avoided, the membrane stays thin and soft. Part of the contents of the granules fuse with the vitelline membrane to produce the fertilisation membrane. The hyaline layer, which is generated on the surface of the egg by a different substance that also comes from the cortical granules, is translucent and has a crucial function in retaining the cells created during the egg's division, or cleavage. As a result, the plasma membrane that surrounds a fertilised egg is a mosaic structure that includes remnants of the original

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plasma membrane of the unfertilized egg as well as regions made of membranes from the cortical granules. A change in the plasma membrane's electric charge, known as the fertilisation potential, and a simultaneous outflow of potassium ions occur in conjunction with the events that lead to the formation of the fertilisation membrane; both of these phenomena are comparable to those that take place in a stimulated nerve fibre. The egg's plasma membrane experiences a several-fold increase in permeability to different molecules as a consequence of fertilisation; this shift may be brought on by the activation of a membrane transport mechanism that is positioned on the egg's surface.

The spermatozoal nucleus, now known as the male pronucleus, expands when it enters the egg cytoplasm, its chromosomal material disperses, and it takes on a look that is similar to the female pronucleus. The male pronucleus' membrane envelope quickly breaks down in the egg, but a new one grows around it right away. Two cell division-related components initially surround the male pronucleus as it spins 180 degrees and advances towards the egg nucleus. The spermatozoal centrioles produce the first cleavage spindle, which comes before the fertilised egg is divided, after the male and female pronuclei have made contact. It is possible for the two pronuclei to fuse together in certain circumstances by a process known as membrane fusion, in which two adjacent membranes merge at the point of contact to form the continuous nuclear envelope that encircles the zygote nucleus. Analysis of fertilization's biochemistry

Early research on the metabolic alterations that take place during fertilisation often focused on the egg's respiratory metabolism. The results, however, were misleading. For instance, the sea urchin egg displayed a rapid increase in oxygen consumption in response to either parthenogenetic activation or fertilisation, which appeared to support the notion that the main function of fertilisation is the removal of a respiratory or metabolic block in the unfertilized egg. The increased rate of oxygen consumption in fertilised sea urchin eggs is not an universal norm, according to many comparative research; in fact, the rate of oxygen consumption in most animal eggs does not alter at the time of fertilisation and may even momentarily drop.

The components needed to carry out protein synthesis and accelerate growth through the blastula, an early stage of the embryo, are present in the egg at the moment of fertilisation. The majority of the protein synthesis that occurs just after fertilisation is controlled by messenger RNA molecules, which are ribonucleic acid molecules that were created during oogenesis and stored in the egg. Moreover, the unfertilized egg has ribosomes, which are cell components that control protein synthesis up to the blastula stage. Later in the embryonic development, additional ribosomes as well as transfer RNA molecules, another form of RNA involved in protein synthesis, are generated. In addition to reaching the blastula stage, fertilised eggs allowed to grow in the presence of the antibiotic actinomycin, which inhibits RNA synthesis, also produce protein at the same pace as untreated embryos.

The relatively low rate of protein synthesis in unfertilized sea urchin eggs and those of other marine creatures so far investigated suggests that something inside the unfertilized egg suppresses its protein synthesis machinery. As the rate of protein synthesis rises right after fertilisation, it may be affected by the alteration or removal of an inhibitor. For instance, the poor efficiency of the protein synthesis system in the sea urchin egg seems to be influenced by certain ribosome characteristics. In an unfertilized sea urchin egg, the majority of the ribosomes are single ribosomes; however, shortly after fertilisation, the single ribosomes combine with messenger RNA molecules to form polyribosomes, which are the active components in protein synthesis. The eggs of a few other marine species that have been investigated also go through this procedure. Unfertilized sea-urchin egg ribosomes are ineffective at synthesising proteins because of an inhibitor that is linked to them and prevents messenger RNA molecules from attaching to the ribosomes. The inhibitor is eliminated almost immediately after fertilisation, possibly through enzymatic breakdown.

So, it would seem that, at least in sea urchin eggs, the total rate of protein synthesis is regulated at the ribosome level and that "turning on" the ribosomes is the first step in the activation of protein synthesis after fertilisation.

As egg maturation begins in vertebrates like frogs, protein synthesis is activated. This process is thought to be started by the hormone progesterone. Progesterone has a direct impact on the cytoplasm rather than being mediated by the nucleus.

Activation of Egg

The oocyte releases calcium after sperm entrance. While it has not been shown conclusively, it has been suggested that in mammals, this is brought about by the import of phospholipase C isoform zeta from the sperm cytoplasm. These actions constitute the ovum's activation:

1. Cortical response to restrict sperm from other men.
2. The metabolism of eggs is activated
3. Meiosis resumption
4. DNA creation

II. DISCUSSION

A sperm protein and an egg surface receptor may interact to cause the sperm to activate the egg.

Another possibility is that, at sperm-oocyte union, a soluble "sperm factor" diffuses from the sperm into the egg cytoplasm. This interaction may result in the activation of a second messenger-based signal transduction pathway. A brand-new PLC isoform called PLC may be the same as the sperm factor found in mammals. Mammaliam sperm contain PLC zeta, which may initiate the signalling cascade, according to 2002 research. Both a quick and slow obstacle to polygamy[7]–[9].

When many sperm combine with one egg, the result is known as polyspermy. Genetic material duplicates as a consequence of this. The slow block and the quick block are the two mechanisms that prevent polyspermy in sea urchins. Polyspermy is electrically blocked by the quick block. An egg has a resting potential of -70mV. The potential rises to +20mV after coming into contact with sperm due to an influx of sodium ions. A wave of increased calcium activates a biological pathway that causes the sluggish block. The sluggish block can only be caused by a spike in calcium, which is both adequate and essential. Cortical granules right below the plasma membrane are released during the cortical response into the area between the plasma membrane and the vitelline membrane. Its release is brought on by a rise in calcium. Proteases, mucopolysaccharides, hyalin, and peroxidases are all included in the granules' composition.

In order to liberate the sperm, the proteases also break the bindin and the bridges linking the plasma membrane and the vitelline membrane. The mucopolysaccharides elevate the vitelline membrane by drawing water to them. Hyalin deposits next to the plasma membrane, and peroxidases cross-link the vitelline membrane's protein to harden it and render it impermeable to sperm. The vitelline membrane becomes the fertilisation membrane or fertilisation envelope thanks to these substances. The cortical response in sea urchins is analogous to the zona reaction in mice. In order to release the sperm and stop further binding, the terminal sugars in ZP3 are broken down. The resumption of meiosis

At the metaphase of the second meiotic division, the oocyte's meiotic cycle was halted. PLC cleaves phospholipid phosphatidylinositol 4,5-bisphosphate into diacyl glycerol and inositol 1,4,5-trisphosphate after it is delivered into the oocyte by the sperm cell. The PIP2 needed for oocyte activation is typically stored in intracellular vesicles scattered throughout the cytoplasm, however in certain cells, this happens at the cell membrane. The calcium oscillations caused by the IP3 generated then restarts the meiotic cycle. As a consequence, the second polar body is created and extruded. DNA creation

Histones take the role of the male protamines, and the male DNA is demethylated. For mitosis, chromosomes then align themselves on the metaphase spindle. Syngamy is the joining of these two genomes. A pronucleus and a centriole are gifts from the sperm to the egg. The majority of other parts and organelles decay quickly. In a short period of time, mitochondria are ubiquitinated and destroyed. According to the notion of oxidative stress, it is advantageous for mitochondria from the father to be destroyed since there is a higher likelihood that their DNA has been damaged or altered. This is due to the weak repair mechanisms and lack of histone protection for mtDNA. The sperm has a higher metabolic rate than the egg owing to its greater motility, which also results in a higher generation of reactive oxygen species and a higher risk of mutation. Moreover, while in transit, sperm are exposed to reactive oxygen species produced by leukocytes in the epididymis.

Also, because numerous sperm are discharged rather than just one dominant follicle every cycle, spermatozoa quality control is significantly weaker than it is for the ovum. The most "fit" ova are chosen for fertilisation via this competitive selection, which helps to assure this. Stimulation of synthetic oocytesCalcium ionophores have the potential to artificially enhance oocyte activation, which is thought to be advantageous in the event of fertilisation failure, which still happens in 1-5% of intracytoplasmic sperm injection cycles. Another way is to take the medication Roscovitine, which lowers the activity of the mouse M-phase stimulating factor [10]–[13].

III. CONCLUSION

A male creates the smaller, tadpole-like kind of gamete, known as a sperm, while a female produces the bigger type of gamete, known as an ovum, in species that generate two morphologically different forms of gametes. This is an illustration of anisogamy, also known as heterogamy, which is the state in which male and female gametes have distinct sizes of gametes. When gametes from both sexes have the same size and form and have arbitrary designators for mating type, the condition is known as isogamy. Meiosis is the process through which gametes, which have one ploidy of each kind and half the genetic information of a person, are produced.

REFERENCES

[1] K. Georgadaki, N. Khoury, D. A. Spandidos, and V. Zoumpourlis, “The molecular basis of fertilization (Review),” International Journal of Molecular Medicine. 2016. doi: 10.3892/ijmm.2016.2723.
[2] M. Okabe, “The cell biology of mammalian fertilization,” Dev., 2013, doi: 10.1242/dev.090613.
[3] M. Tabak, A. Lepiarczyk, B. Filipek-Mazur, and A. Lisowska, “Efficiency of nitrogen fertilization of winter wheat depending on sulfur fertilization,” Agronomy, 2020, doi: 10.3390/agronomy10091304.
[4] P. Stein, V. Savy, A. M. Williams, and C. J. Williams, “Modulators of calcium signalling at fertilization,” Open Biology. 2020. doi: 10.1098/rsob.200118.
[5] M. R. Marcello, G. Singaravelu, and A. Singson, “Fertilization,” Adv. Exp. Med. Biol., 2013, doi: 10.1007/978-1-4614-4015-4_11.
[6] J. Liu, J. Zhang, D. Li, C. Xu, and X. Xiang, “Differential responses of arbuscular mycorrhizal fungal communities to mineral and organic fertilization,” Microbiologyopen, 2020, doi: 10.1002/mbo3.920.
[7] A. Morugán-Coronado, P. Pérez-Rodríguez, E. Insolia, D. Soto-Gómez, D. Fernández-Calviño, and R. Zornoza, “The impact of crop diversification, tillage and fertilization type on soil total microbial, fungal and bacterial abundance: A worldwide meta-analysis of agricultural sites,” Agric. Ecosyst. Environ., 2022, doi: 10.1016/j.agee.2022.107867.
[8] Z. Trebichalská and Z. Holubcová, “Perfect date—the review of current research into molecular bases of mammalian

fertilization," Journal of Assisted Reproduction and Genetics. 2020. doi: 10.1007/s10815-019-01679-4.
[9] K. Fan et al., "Suppressed N fixation and diazotrophs after four decades of fertilization," Microbiome, 2019, doi: 10.1186/s40168-019-0757-8.
[10] M. Zhang et al., "The stronger impact of inorganic nitrogen fertilization on soil bacterial community than organic fertilization in short-term condition," Geoderma, 2021, doi: 10.1016/j.geoderma.2020.114752.
[11] M. González-Piñero, C. Páez-Avilés, E. Juanola-Feliu, and J. Samitier, "Cross-fertilization of knowledge and technologies in collaborative research projects," J. Knowl. Manag., 2021, doi: 10.1108/JKM-04-2020-0270.
[12] B. Loppin, R. Dubruille, and B. Horard, "The intimate genetics of Drosophila fertilization," Open Biology. 2015. doi: 10.1098/rsob.150076.
[13] K. Asplund, "Use of in vitro fertilization—ethical issues," Upsala Journal of Medical Sciences. 2020. doi: 10.1080/03009734.2019.1684405.

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Cleavages and Embryonic Induction

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***Abstract*—Zygote production occurs as a consequence of fertilization. Segmentation happens immediately after fertilization or any other action that stimulates the egg. The zygote is divided into several cellular units during cleavage. Blasto-meres are the cells that are created during segmentation. By creating a suitable number of cells, the segmentation process lays the foundation for the embryo's eventual design. Moreover, the cleavage sets the key prerequisites for the start of the subsequent developmental stage, Gastrulation.**

***Index Terms*— Cleavages, Embryo, Egg, Induction, Zygote**

I. INTRODUCTION

The interchange of chemical and contact signals between cell populations during embryonic development is caused by morphogenetic communication, which in turn affects the destiny of individual cells. Embryonic induction refers to this kind of cellular interaction. The process by which the fertilized egg divides into many cell types is known as segmentation or cleavage. The era of development known as cleavage is defined by the chemical conversion of reserve food into active cytoplasm and the active cytoplasmic materials into nucleus materials including DNA, RNA, and proteins [1]–[3].

The following sorts of egg organization-related cleavage patterns are possible.

A Radial division:

Radial cleavages occur when the cleavage planes split the zygote in such a way that the ensuing blastomeres have radial symmetry. For instance, the zygote of the frog splits into two equal blastomeres along a vertical furrow. Although the second cleavage furrow is likewise vertical, it is offset from the first. Four blastomeres are created as a result. These four blastomeres are still adherent to one another. The four blastomeres are subsequently divided into eight blastomeres, four smaller "upper" blastomeres and four larger "lower" blastomeres, by a horizontal cleavage that develops above the equatorial area. The blastomeres are organised in four radial planes at this stage, with a smaller blastomere resting on top of each larger blastomere.

Any meridian may be used to cut a blastula formed via radial cleavage into two identical pieces. There is radial cleavage in echinoderms. Biradial cleavage: This kind of cleavage occurs when the initial three division planes are not perpendicular to one another. Examples may be found in clenophora and polychoerus. Spiral cleavage: The mitotic spindles are displaced or inclined with regard to the radii that are symmetrically positioned when there is a rotational movement of cell components around the axis of the egg's North and South poles.

The cleavage planes in this instance are inclined with respect to this axis rather than being vertical or horizontal. Moreover, each blastomere splits into two smaller cells and one larger cell. The top tier blastomeres in such a cleft sit above the junction between each pair of vegetal blastomeres.

The mitotic spindles' oblique location is to blame for this. As a result, it is also known as oblique cleavage. The mitotic spindles are organised in a kind of spiral during subsequent cleavages. Spirals may have turns that are either clockwise or anticlockwise. Examples may be found in all molluses, with the exception of uphalopods, in Turbellaria, nematoda, rotifera, and annelides. Bilateral cleavage: The blastula can only be split vertically in one plane in bilateral cleavage, resulting in the separation of the right and left portions into two identical pieces. The opposite side's activity mirrors the cleavage on the first. The initial cleavage furrow, which is bilaterally symmetrical, often establishes the plane of bilateral symmetry. Examples may be found in higher mammals, amphibians, tunicates, and Amphioxus. The following two forms of cleavage have been identified in accordance with the idea of potency, which refers to the whole range of developmental possibilities that an egg or a blastomere is capable of achieving under any imposed circumstances, whether natural or experimental:

Determine: The embryo is created by repeatedly dividing the fertilised egg. Even before cleavage, certain eggs or ova contain distinct areas designated to generate various components of the embryo. For instance, the area that will eventually become the endoderm is fixed in ascidian eggs. An embryo won't have endoderm if this portion of a fertilised egg is removed before it develops. Mosaic eggs are those having specified areas.

With mosaic eggs, cleavages occur in a specific pattern, and each blastomere has a fixed place and destiny. Here, cleavage, also known as determinate or mosaic cleavage, divides several organ-forming zones. Nematodes, annelids, molluses, and ascidians are a few examples of organisms that exhibit a specific form of cleavage. Uncertain: The design of cleavage is less strict in vertebrates. The location of the fertilised eggs is not decided here. The embryo produced later will still contain the endoderm if the area of a fertilised sea

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urchin egg where the endoderm typically develops is removed. Regulative or ambiguous eggs are what we refer to as such eggs[4]–[6].These cleavages only divide the eggs into segments that have the ability to develop any organ since there are no preset areas in these eggs and the cleavages cannot distinguish such regions. Indeterminate or regulative cleavage is the name given to this form of cleavage. All vertebrates and several families of invertebrates have eggs that exhibit ambiguous cleavage.

B Cleavage Pattern Control

It would be easy to control cell divisions differently throughout development if all necessary factors were expressed constitutively with the exception of one, and then the expression of the one remaining, rate-limiting factor was modulated. Our results support this form of regulation and imply that stg mRNA, whose expression controls mitotic patterns after interphase 14, is the rate-limiting component. The first of these findings—that stg mRNA is produced in a spatiotemporal way that foreshadows the mitotic pattern—and the second—that the stg gene is zygotically necessary for the beginning of the first patterned mitosis—are the most suggestive. As stg mutants experience cell-cycle arrest sooner than any other described zygotic mutant, it is probable that maternal supply of other cell-cycle components continues when stg is no longer needed. An obvious example of a substance that is necessary for mitosis but does not seem to be rate-limiting during the initial zygotically regulated divisions is the research done by Lehner and O'Farrell on Drosophila cyclin A. Unlike stg, maternal mRNA-derived cyclin A is adequate to maintain divisions through mitosis 15, and the amount of cyclin A protein has minimal effect on the timing of mitoses. Only mitosis 14 has been shown to need stg directly, but future embryonic mitoses may also require stg, according to our findings of the mitotic patterns in hypomorphic and temperature-sensitive stg mutants. Stg is also necessary for cell divisions in the imaginal discs during metamorphosis, according to clonal analysis. The continuing link between stg expression and mitotic patterns shows that stg expression may control the timing of all postblastoderm divisions, even if such data do not address whether stg remains rate-limiting throughout subsequent mitoses.

The pattern of embryonic cell divisions may be anticipated from the expression pattern of stg messenger RNA, which is perhaps our most important discovery. This suggests that varying rates of stg transcription and/or RNA degradation may regulate the mitotic pattern. Although recent studies have described a variety of components involved in producing complicated spatiotemporal patterns of transcription during embryogenesis, we still know very little about RNA degradation in Drosophila. The "selector" genes that establish patterns and choose cell identities in the embryo encode these elements. The majority of selection genes examined at the molecular level to far encode nucleolar-localized zinc finger or homeodomain DNA binding proteins, which are commonly accepted to be transcription factors. This is appropriate given that selection genes were long believed to control cell fates by regulating the expression of "cytodifferentiation" genes, which encode proteins directly involved in cell shape, motility, and division. As a cytodifferentiation gene, which is how we interpret stg's role, it is a probable candidate for selector-gene regulation.

Nonetheless, there are more solid grounds than just theory to think that stg is a selector-gene target. One is the startling similarity between the selector-gene expression patterns and the stg expression patterns. Among the six dorsoventral domains identified by selector genes like zerknüllt, twist, and those of the spitz group, stg expression along the embryo's dorsoventral axis is divided into at least six different patterns before mitosis 14. The head, thorax, abdomen, and tail are separated into distinct patterns along the anteroposterior axis, and these patterns are established by the differential expression of selection genes from the gap and homeotic classes. Theoretically, the different selector-gene expression patterns split the embryo into sufficiently distinct regions to account for almost all stg expression throughout cycle 14. In addition, several selector-gene mutations have predictable changes in the patterns of mitosis 14. We anticipate a correlation between the changed patterns of stg expression and the altered patterns of mitosis in these mutants. Hence, we would like to suggest that a range of selector-gene products work as transcriptional regulators to control stg activity and, therefore, the mitotic pattern. While a large portion of this regulation may be indirect, the relative timing of selector-gene and stg expression points to direct interactions, perhaps using combinations of transcription factors encoded by selector-genes.

C Embodiment Induction

The process of cell communication necessary for their differentiation, morphogenesis, and maintenance is known as embryonic induction. Only when the chorda-mesoderm is underneath the dorsal ectodermal cells in a mid-longitudinal area of a frog embryo can they develop to produce a neural plate. The layer that makes up the roof of the archenteron, the dorsal blastoporal lip area, is called the chorda-mesoderm. Mangold transplanted a little portion of the dorsal blastoporal lip from a Trituruscristatus early gastrula close to the lateral lip of the host Triturustaeniatus gastrula's blastopore. In order to create an extra chorda-mesoderm at this location, the graft cells multiplied and disseminated throughout the host gastrula. The host gastrula's ectoderm was subsequently stimulated by this chorda-mesoderm to produce an extra neural tube.

An extra notochord was generated by the graft cells themselves. The host gastrula expanded into a double embryo fused together as it continued to grow. The first embryo was the uninduced one, while the second was the normal one. The latter didn't fully form a head. This experiment unequivocally demonstrated the capacity of the dorsal blastoporal lip of the

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blastula to trigger the development of the neural plate in the host ectoderm. Neural induction is the term for this phenomenon. Similar mechanisms may cause the creation of various structures in different areas of an embryo. Embryonic induction refers to the effect of one structure on the development of another. In reality, a number of inductions are responsible for the complete evolution of an organism. The inductor or organiser is the structure that causes the creation of another structure. An evacuator is the name for the chemical that an inductor emits. The term "responsive tissue" refers to the tissue that is affected by an evacuator or inductor. Background of Embryonic Induction in History: The German embryologist Hans Spemann and his student Hilde Mangold put a lot of effort into discovering neural induction, and Spemann was awarded the Nobel Prize in 1935 for their work.

The dorsal lip of the early gastrua of Trituruscristatus and Triturustaeniatus has the ability to induce and organise presumptive neural ectoderm to form a neural tube, as well as the ability to elicit and organise ectoderm, mesoderm, and endoderm to form a complete secondary embryo, according to these two scientists who carried out some heteroblastic transplantations between the two species of newt.

As it was the first in the chain of inductions and had the ability to plan the formation of a second embryo, they named the dorsal lip of the blastopore the principal organiser. Subsequently, it was discovered that numerous creatures, including frogs, cyclostomes, bony fish, birds, and rabbits, possess the fundamental organiser.In several pre-vertebrate chordates, including ascidians and Amphioxus, primary organiser and neural induction have been documented. Between 1960 and 1963, Curtis conducted research and discovered that the grey crescent of a fertilised eggs cortex contains the Xenopuslaevisorganiser of the gastrula.Holtfreter described how a huge range of completely unspecific chemicals—organic acids, steroids, kaolin, methylene blue, and sulphhydryl compounds—produced neurulation in explants. These substances had nothing in common other than the ability to be poisonous to sub-ectodermal cells. Further information regarding the chemistry of embryonic induction was supplied by Barth and Barth.

D Several forms of embryonic induction

Endogenous and exogenous inductions are the two fundamental groups into which Lovtrup divided various forms of embryonic induction.Endogenous induction: With the use of inductors that they manufacture on their own, certain embryonic cells eventually adopt novel patterns of diversification. These inductors cause these cells to either self-differentiate or self-transform. Instances of this induction have been documented in the tiny, yolk-filled mesenchymal cells of the frog blastopore's dorsal lip and the ventral pole of the echinoid.Exogenous induction: When a foreign substance, such as a cell or tissue, is injected into an embryo, it causes nearby cells to diversify via a process known as contact induction. Exogenous induction is the term for this process. Depending on whether the inductor stimulates the creation of the same or various types of tissues, it may be homotypic or heterotypic. A differentiated cell creates an inductor during homotypic induction. In addition to maintaining the state of the cell itself, the inductor also encourages neighbouring cells to develop in accordance with it after crossing cell borders. The development of a secondary embryonic axis by an implanted presumptive notochord in amphibians is the best example of heterotypic exogenous induction.

E Experimental data supporting induction

Spemann and Mangold grafted a portion of the ventral or lateral lip of the blastopore of the early gastrula of the pigmented newt T. taeniatus near the dorsal lip of the blastopore of a Trituruscristatus pigmented newt early gastrula. A little strip of tissue remained on the surface after the majority of the graft invaded the interior, grew into notochord and somites, and encouraged the host ectoderm to create a neural tube.An extra whole system of organs was induced at the site of the graft implantation together with the development of the host embryo. An almost whole secondary embryo made up of the extra organs was created, with the exception of the front of the skull. A pair of ear rudiments demonstrated the presence of the posterior region of the skull. As the sort of transplantation used in this experiment was heteroplastic, it was discovered that the notochord of the secondary embryo was made entirely of graft cells, while the somites were made up of a mix of graft and host cells. The neural tube only contained a small number of cells that did not invade during gastrulation. Host cells made up the majority of the secondary embryo's neural tube, some of the somites, kidney tubules, and the beginnings of the ear. The graft self-differentiates while also encouraging the neighbouring host tissue to develop the spinal cord and other structures, such as somites and kidney tubules. The dorsal lip of the early gastrula was referred to by Spemann as the "primary organiser" of the gastrulative process. Nonetheless, a combination of inductive contacts and self-differentiating alterations in the host and donor tissues lead to the construction of the secondary embryo. Hence, "embryonic induction" or "inductive interactions" are currently favoured terms. The component that produces induction is referred to as a "inductor."

F Details about the organiser

Organizer has the capacity for organisation and self-differentiation. Moreover, it has the ability to organise nearby cells and instigate changes in the cell, including the induction and early organisation of the neural tube. The vertebrate embryo's primary organiser governs the key aspects of axiation and organisation.This hub of activity uses a tool-like mechanism called induction to cause changes in neighbouring cells, which in turn affects organisation and differentiation. These surrounding cells, which have

undergone the induction process, may operate as secondary inductor centres with the capacity to organise certain sub-regions.

As a result, it appears that a number of distinct inductions are required for the late blastula to develop into an organised condition of the late gastrula, and that these inductions are combined into a single coordinated whole by the "formative stimulus" of the primary organiser, which is found in the pre-chordal plate area of the endodermal-mesodermal cells and nearby chorda-mesodermal material of the early gastrula.

G Geographical focus of the organiser

Vogt's research with newt eggs using vital staining have shown that the material gradually forming the dorsal blastoporal lip advances to become the archenteron roof. The archenteron roof functions as a main inductor in a manner similar to that of the dorsal lip tissue proper, allowing transplants taken from this area to similarly induce a secondary embryo or the belly of a new host. It has been discovered that the geographical specificity of the neural inductor's inductions is imposed on the induced organ[7]–[9].

As a result, the blastoporal lip's inductive ability changes both geographically and over time. In order for a graft to create a more-or-less complete secondary embryo, the majority of the dorsal and dorso-lateral blastoporal material is required. Spemann showed that the anterior section of the archenteric roof invaginates over the blastopore's dorsal lip sooner during gastrulation.The archenteric and deuterocephalicorganiser are located on the dorsal blastopore lip of the early gastrula, while the spinocaudalorganiser is located on the dorsal blastopore lip of the late gastrula. The early and late gastrulae create different inductions from the dorsal lip of the blastopore, with the first tending to develop head organs and the second tending to produce trunk and tail organs.

The dorsal lip serves as a trunk tail inductor as invagination progresses and it gradually transforms from prospective head endo-mesoderm to prospective trunk mesoderm. In fact, tail somites and maybe other mesodermal tissues are selectively induced in the archenteron roof's most caudal portion. The anterior section of the archenteron roof produces a variety of neural and meso-ectodermal tissues, whereas the most posterior area produces a variety of mesodermal tissues.Due to the regional diversification of the neural tissue into archencephalic, deuterencephalic, and spinocaudal components, disparities in particular induction capabilities between the head and trunk level of the archenteron roof occur. An anterior head inductor, which includes an archencephalic inductor, a deuterencephalic inductor, and a trunk- or spinocaudal inductor, make up the archenteron roof.

h Gray crescent and primary induction

The gray-crescent of the undivided fertilised frog egg may be linked to the area of the blastopore's dorsal lip during the start of gastrulation. Several developmental biologists believed that the crescent material of the egg cortex started gastrulation and had the ability to induce brain growth. In a series of studies, A.S.G. Curtis transplanted fragments of the fertilised egg of the clawed toad into Xenopus embryos that were in the early stages of cleavage. In one experiment, the fertilised egg's gray-crescent cortex was removed, and it was found that although cell division continued unhinderedly, gastrulation did not occur. Another experiment included removing the grey crescent cortex from an uncleavedfertilised egg and grafting it onto the ventral location of a second egg, resulting in the recipient egg having two grey crescents on opposing sides.

The outcome was that the egg split apart to create a blastula, which proceeded through two distinct gastrulation motions to create two distinct major nerve systems, a notochord, and related somites. Similar research on the eight-cell stage revealed that within the brief time covered by the first three cleavages, something had occurred. When transplanted to younger stages, the grey crescent cortex of the eight-cell stage still maintained its inductive ability. As the features of the absent grey crescent are replaced by those of nearby cortical regions, removal of the grey crescent at this stage no longer prevents further gastrulation and normal development.

According to Curtis, a change in cortical structure begins at the grey crescent and extends throughout the egg's surface between the second and third cleavages. After this shift is complete, interactions between diverse sections of the cortex may occur, most likely of a biophysical character.The transformation of the ectoderm that covers the archenteron's roof into neural tissue shows that there has been a direct impact on the ectodermal cells, either by surface contact or chemical mediation. Surface contact of the cells at the inductive interface is one of the many possibilities. The two cellular layers coming into touch may serve as a mechanism by which the chorda mesodermal cells underneath them may directly affect the structural pattern, shape, or behaviour of the ectodermal cell membranes.

As a result, the spatial arrangement of the latter membranes may cause a change in the spatial arrangement of the ectodermal cell membranes, which would then produce alterations within the cell that would control how it developed into a neural plate. Such a morphological arrangement might explain the efficient and speedy transmission of the inductive action.

The inductive effect being chemically mediated is another wide option. In order to start cellular processes leading to neural development, a chemical substance or chemicals synthesised and released by inducing chorda mesoderm cells at the archenteron-ectoderm boundary may act with or enter the ectodermal cells. Several pieces of evidence support the assumption that cells communicate materials, and they also point to the possibility that a diffusible chemical may function as a powerful inductive stimulation.

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II. DISCUSSION

Many investigations to clarify the induction process and pinpoint the chemical substance or chemicals thought to be involved have failed to provide promising findings. It was discovered that several different tissues, adult or embryonic, from a wide range of different species, may induce nerve tissue in the embryos of amphibians. Also, it was discovered that certain foreign tissues that had been destroyed by heat or alcohol treatment were considerably more effective inductors. This finding continues to contradict the idea of a "masked organiser" that is released in the major inductor area and is always there. Just a few inorganic substances, such iodine and kaolin, local trauma, contact with abnormally high or low pH saline solutions, and neuronal development in the ectoderm may induce this[10], [11].

To identify the molecule that induces neural induction, several chemical components of either grey crescent, dorsal lip, or chord mesoderm were isolated using various biochemical techniques. The inductive potential of each molecule was then evaluated independently. A protein seems to be the inciting ingredient in just a few tests.

Several embryologists made extensive efforts to comprehend the true process of neural induction. The following are the most significant ideas that have been put out to explain the process of neural induction:

A The neural induction hypothesis based on protein denaturation

Ranzi claims that protein denaturation is connected to both neuronal induction and the creation of notochords. Amphibian grey crescent, which is a region of intense metabolic activity, is the site of notochord development. Protein denaturation occurs at these regions of higher metabolic activity.

B Induction of neuronal gradients

According to Toivonen and Yamada, the main inductor's operation is influenced by two chemically separate components. The neutralising agent is one of these two variables, while the mesodermalizing agent is the other. Denatured bone marrow and liver were used as the inductors in these tests. Regional specificity of the embryonic axis results from the interplay of two gradients: the neutralising principle, which is present as an antero-posterior gradient with its peak in the posterior area, has its maximum concentration on the dorsal side of the embryo and decreases laterally.

Forebrain structures are produced anteriorly by the neutralising principle acting alone. Midbrain and hindbrain structures are produced posteriorly by the mesodermalizing principle acting in conjunction with the neutralising one. Spino-caudal structures are produced even more posteriorly by the high concentration level of the mesoderm gradient. Nieuwkoop proposed that there is only one element that triggers the formation of neural tissue in the ectoderm before causing it to change into more posterior and mesodermal structure. He used the live notochord as the inductor in his theory.In one experiment, isolated gastrular ectoderm was combined with a piece of notochord, and the notochord tissue was then removed after various amounts of time. It was discovered that only 5 minutes of exposure to the inductor was necessary for a portion of the ectoderm to transform into brain and eye structures.

B Ionic neural induction theory:

According to Barth and Barth, the real induction process may be triggered by the release of ions from their bound state, which would shift the proportion of bound to free ions inside the early gastrula cell. It was discovered that the quantity of sodium ions was necessary for the induction of nerve and pigment cells in tiny clusters of developing epidermis in the frog gastrula.The external sodium content is necessary for the mesoderm to properly induce nerve and pigment cells in tiny explants from the early gastrula's dorsal lip and lateral marginal zones. Hence, an endogenous supply of ions is required for appropriate embryonic induction, and late gastrulation is when these ions are released intracellularly.

There is evidence that the neural inductor's constituent tissues develop before ectodermal cells do. The rate of mRNA transcription and differential gene activation increases dramatically during this period, although the differentiation of ectodermal cells does not begin until mid-gastrulation. According to Tiedemann's experiments, induction could not occur, but some differentiation of muscle and notochord occurred after 2 to 7 days of cultivating the dorsal blastopore lip of a young Triturus gastrula with adjacent ectoderm in a medium containing enough Actinomycin-D to inhibit RNA synthesis. It demonstrates that mRNA transcription from DNA was necessary, which also calls for Actinomycin-D to be present. Thus, in this experiment, no neural induction could be seen.Whenchordamesoderm material travels inward and forward from the dorsal lip of the blastopore, neural induction takes place. A temporal gradient is present in the inductive stimuli, which may be significant in relation to action and response events.

C Induction of embryos in various chordates

While neural induction was first detected in urodele frogs, it was later shown that other vertebrates also have a roof of the archenteron that serves a similar purpose. The nervous system and sensory organs are induced by chordamesoderm in all animals. The following chordates have had neural inductor studies: In Cyclostomes, particularly in lampreys, the presumed chorda mesodermal cells of the blastopore's dorsal lip are where the neural induction feature is found. Prior to cyclostomes, in Ascidians different blastomeres of eight cell stage have the following presumptive fates- the two anterior animal pole blastomeres produce head epidermis, pulps and the brain with its two pigmented sensory structures, two posterior animal pole blastomeres produce epidermis, two anterior vegetal blastomeres produce notochord, spinal

cord and part of the intestine two posterior vegetal cells produce mesenchyme, muscles and part of the intestine.Raverberi deduced from these tests that the induction of two anterior vegetal blastomeres, which serve as neural inductors, is necessary for the creation and differentiation of the brain by two anterior animal blastomeres. It was also found that the two anterior vegetal blastomeres gave birth to the endoderm, notochord, and spinal cord, which are all different tissues.The cells in the thickened area lose their capacity to proliferate as the lens continues to expand and are transformed into fibres that will eventually form the adult lens's central structure. The cells in the lens' periphery, which divide quickly and organise themselves into concentric circles around the original centre, give rise to new fibres. Three concentric layers of fibers—the core, an intermediate layer of irregularly distributed fibres, and the radial layers—are present at the time of hatching. These layers continue to expand after hatching. At day 7, the lens capsule, an extracellular substance with a strong collagenous component, begins to develop. The ciliary body secretes the vitreous chamber fluid after developing in close proximity to the lens.

The anterior chamber of the eye is created when the lens breaks off contact with the ectoderm. The corneal stroma grows from the mesenchyme and is evident on day 4 as a thin layer under the epithelium. The corneal stroma develops from the ectoderm covering the anterior chamber. On day 7, mesenchyme cells go into it, thickening it.Around day 7, the iris forms from cells at the anterior chamber's edge. The anterior chamber's components become disorganised when the lens is removed. The optic cup gives rise to the retina. The neuronal retina develops from its inner layer, and the pigmented retina from its outer layer[12], [13].

III. CONCLUSION

Cell division in the early embryo is known as cleavage in the field of embryology. Several species' zygotes go through quick cell cycles with little discernible growth, resulting in a cluster of cells that is the same size as the initial zygote. The blastomeres, which are the many cells produced by cleavage, group together to form the morula, a dense mass. The development of the blastula marks the conclusion of cleavage. The cleavage may be holoblastic or meroblastic, mostly depending on the quantity of yolk in the egg. The term "vegetable pole" refers to the pole of the egg that contains the most yolk, whereas the term "animal pole" refers to the opposite pole. In contrast to other methods of cell division, cleavage results in a rise in cell count without an increase in bulk. This indicates that the ratio of nuclear to cytoplasmic material rises with each subsequent subdivision.

REFERENCES

[1] R. Hadas et al., “Hyaluronan control of the primary vascular barrier during early mouse pregnancy is mediated by uterine NK cells,” JCI Insight, 2020, doi: 10.1172/jci.insight.135775.

[2] K. Lee et al., “IRE1-mediated unconventional mRNA splicing and S2P-mediated ATF6 cleavage merge to regulate XBP1 in signaling the unfolded protein response,” Genes Dev., 2002, doi: 10.1101/gad.964702.

[3] P. Tao et al., “A dominant autoinflammatory disease caused by non-cleavable variants of RIPK1,” Nature, 2020, doi: 10.1038/s41586-019-1830-y.

[4] S. Middelkamp et al., “Sperm DNA damage causes genomic instability in early embryonic development,” Sci. Adv., 2020, doi: 10.1126/sciadv.aaz7602.

[5] M. Miyamoto et al., “Noncanonical Notch signals have opposing roles during cardiac development,” Biochem. Biophys. Res. Commun., 2021, doi: 10.1016/j.bbrc.2021.08.094.

[6] S. Denzel, D. Maetzel, B. Mack, C. Eggert, G. Bärr, and O. Gires, “Initial activation of EpCAM cleavage via cell-to-cell contact,” BMC Cancer, 2009, doi: 10.1186/1471-2407-9-402.

[7] P. Porayette, M. J. Gallego, M. M. Kaltcheva, R. L. Bowen, S. V. Meethal, and C. S. Atwood, “Differential processing of amyloid-β precursor protein directs human embryonic stem cell proliferation and differentiation into neuronal precursor cells,” J. Biol. Chem., 2009, doi: 10.1074/jbc.M109.026328.

[8] T. Kohno et al., “Importance of reelin C-terminal region in the development and maintenance of the postnatal cerebral cortex and its regulation by specific proteolysis,” J. Neurosci., 2015, doi: 10.1523/JNEUROSCI.4119-14.2015.

[9] D. Mikami et al., “β-Hydroxybutyrate enhances the cytotoxic effect of cisplatin via the inhibition of HDAC/survivin axis in human hepatocellular carcinoma cells,” J. Pharmacol. Sci., 2020, doi: 10.1016/j.jphs.2019.10.007.

[10] M. Mishima, “Centralspindlin in Rappaport’s cleavage signaling,” Seminars in Cell and Developmental Biology. 2016. doi: 10.1016/j.semcdb.2016.03.006.

[11] E. Bolderson, D. J. Richard, W. Edelmann, and K. K. Khanna, “Involvement of Exo1b in DNA damage-induced apoptosis,” Nucleic Acids Res., 2009, doi: 10.1093/nar/gkp194.

[12] F. Hsin, Y. C. Hsu, Y. F. Tsai, S. W. Lin, and H. M. Liu, “The transmembrane serine protease hepsin suppresses type I interferon induction by cleaving STING,” Sci. Signal., 2021, doi: 10.1126/scisignal.abb4752.

[13] P. J. Kang et al., “Glycine decarboxylase regulates the maintenance and induction of pluripotency via metabolic control,” Metab. Eng., 2019, doi: 10.1016/j.ymben.2019.02.003.

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Prevention of Polyspermy

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***Abstract*— Polyspermy is a phenomenon in which an egg is fertilized by more than one sperm, which can lead to developmental abnormalities and failure of embryonic development. Preventing polyspermy is therefore critical for successful fertilization and embryonic development. There are several mechanisms in place to prevent polyspermy, including the presence of the zona pellucida and the cortical reaction.**

***Index Terms*— Embryo, Egg, Development, Polyspermy, Sperm**

I. INTRODUCTION

The egg membrane's fusibility, which was so important to getting the sperm into the egg, turns into a deadly liability as soon as one sperm has entered the egg. Any sperm that penetrates the egg in sea urchins, like in the majority of other species investigated, may give the egg a haploid nucleus and a centriole. A haploid sperm nucleus and a haploid egg nucleus join to produce the diploid nucleus of the fertilised egg in normal monospermy, in which only one sperm penetrates the egg. This restores the proper number of chromosomes for the species. The sperm-provided centriole will split during cleavage to create the two poles of the mitotic spindle[1]–[3].

Polyspermy, the fertilization of an egg by more than one sperm cell, is a common problem in assisted reproductive technologies and can lead to developmental abnormalities and embryonic death. To prevent polyspermy, a variety of techniques have been developed, including chemical and mechanical methods, as well as genetic modification. Chemical methods involve the use of agents that disrupt the function of sperm cells, such as calcium ionophores, which disrupt the acrosome reaction, or various inhibitors of ion channels and enzymes involved in sperm motility and fertilization. These agents can be added to the culture medium used during in vitro fertilization (IVF) procedures, or directly injected into the egg or sperm cells.

Mechanical methods involve physically preventing multiple sperm from reaching the egg, such as by microinjection of a single sperm into the egg or by using microfluidic devices that separate sperm cells based on their motility and morphology. These methods can be more time-consuming and require greater technical expertise than chemical methods, but may be more effective in preventing polyspermy. Genetic modification techniques involve modifying the genes of sperm or eggs to prevent fertilization by multiple sperm. One approach involves modifying the zona pellucida, the protective layer surrounding the egg, to make it less permeable to sperm cells. Another approach involves modifying the sperm cells themselves, such as by knocking out genes involved in the acrosome reaction or sperm motility.

Despite these various techniques, the prevention of polyspermy remains a significant challenge in assisted reproductive technologies, particularly in cases where the quality of the sperm or eggs is compromised. Ongoing research is focused on developing new and more effective methods for preventing polyspermy, including the use of artificial intelligence and machine learning to optimize IVF procedures and identify the most viable embryos.

In most creatures, polyspermy—the entry of numerous sperm—has devastating effects. When two sperm fertilise an egg, a triploid nucleus is created in the sea urchin. In this nucleus, each chromosome is represented three times rather than twice. Even worse, as each sperm's centriole separates to produce the two poles of a mitotic apparatus, the triploid chromosomes may be split into as many as four cells rather than two by a bipolar mitotic spindle. The chromosomes would be distributed unevenly since there is no mechanism to guarantee that each of the four cells obtains the appropriate quantity and kind of chromosomes. Some chromosomes are duplicated more often in certain cells than others, and vice versa. Such cells either perish or grow improperly, according to Theodor Boveri's 1902 research.

Abnormal growth in a sea urchin egg with dispersal. The division of the two sperm centrioles into four mitotic poles, and the fusion of three haploid nuclei, each having 18 chromosomes. On the four spindles, the 54 chromosomes are distributed at random.

In order to avoid the merger of more than two haploid nuclei, species have developed strategies. The most typical method is to stop more than one sperm from entering the egg. A quick response, brought on by an electric shift in the egg plasma membrane, and a longer reaction, brought on by the exocytosis of the cortical granules, are two ways the sea urchin egg avoids polyspermy. The quick road to polygamy

Altering the egg plasma membrane's electric potential causes a quick barrier to poly-spermy. The ionic concentration of the egg is significantly different from that of its surroundings, and this membrane acts as a selective barrier between the egg's cytoplasm and the outer environment. The

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sodium and potassium ions are particularly important due to this concentration differential. In contrast to the egg cytoplasm, which has a comparatively low sodium content, seawater has a notably high sodium ion concentration. For potassium ions, the situation is the opposite. The plasma membrane, which resolutely blocks sodium ion entrance into the oocyte and stops potassium ions from leaking out into the environment, keeps this state in place. The continuous differential in charge across the egg plasma membrane may be measured by inserting one electrode into the egg and another electrode outside of it. The resting membrane potential of a cell is typically 70 mV, which is often stated as -70 mV due to the negative charge of the cell's inside compared to its outside[4]–[6].

The membrane potential changes to a positive level, roughly +20 mV, within 1-3 seconds after the initial sperm binding. A little inflow of sodium ions into the eggs is what has changed. No additional sperm can fuse to the egg because whereas sperm may fuse with membranes having a resting potential of -70 mV, they cannot fuse with membranes having a positive resting potential. It is unclear whether the first sperm's attachment to the egg or its fusion with the egg is what causes the enhanced sodium permeability.

Sea urchin eggs' capacity to form membranes both before and after fertilisation. The voltage differential across the egg plasma membrane is roughly -70 mV before sperm are added. Laurinda Jaffe and colleagues showed the significance of sodium ions and the shift in resting potential within 1-3 seconds after the fertilising sperm meets the egg. They discovered that sea urchin eggs may be intentionally fed with an electric current that maintains their membrane potential negative in order to promote polyspermy. On the other hand, fertilisation may be completely avoided by artificially maintaining positive egg membrane potential. It is also possible to get over the quick barrier to polyspermy by reducing the amount of sodium ions in the water. Polyspermy happens if there is insufficient sodium ion supply to trigger the positive change in membrane potential. The mechanism by which the alteration in membrane potential prevents secondary fertilisation in sperm is unknown. Most likely, the sperm include a voltage-sensitive component, and the electric charge across the membrane may control how deeply this component enters the egg plasma membrane. Frogs likewise experience an electric impediment to polyspermy, although most mammals presumably do not.

A second mechanism exists in sea urchin eggs to prevent numerous sperm from entering the cytoplasm. As the sea urchin egg's membrane potential is positive for for approximately a minute, the quick barrier to polyspermy is momentary. If the sperm anchored to the vitelline envelope are not properly released, polyspermy may still happen despite this short possible change. The cortical granule response, a delayed mechanical barrier to polyspermy that becomes active around a minute after the first successful sperm-egg attachment, accomplishes this elimination.

Around 15,000 cortical granules, each with a diameter of approximately 1 m, are located just under the sea urchin egg plasma membrane. These cortical granules fuse with the plasma membrane of the egg upon sperm entrance and release their contents into the gap between the plasma membrane and the fibrous mat of vitelline envelope proteins. This cortical granule exocytosis results in the release of many proteins. Proteases are first. These enzymes cut off the bindin receptor and any sperm adhering to it, as well as the protein posts connecting the vitelline envelope proteins to the cell membrane. The vitelline envelope expands to form the fertilisation envelope when mucopolysaccharides generated by the cortical granules create an osmotic gradient that forces water to rush into the gap between the plasma membrane and the envelope. By crosslinking tyrosine residues on nearby proteins, a third protein produced by the cortical granules, a peroxidase enzyme, strengthens the fertilisation envelope. At the point when the sperm enters the egg, the fertilisation envelope begins to develop and continues to grow around the egg. Bound sperm are released from the envelope as it develops. Around 20 seconds after the sperm attaches, this process begins, and by the end of the first minute of fertilisation, it is finished. Hyalin, a fourth cortical granule protein, eventually coats the egg to complete the process. Long microvilli that have tips that adhere to this hyaline layer are extended by the egg. The blastomeres are supported by this layer when they separate.

Granular exocytosis in the cortex: Diagrammatic representation of the processes that result in the creation of the hyaline layer and fertilisation envelope.The serine proteases released by cortical granules during exocytosis break the proteins connecting the vitelline envelope to the cell membrane. Water enters and fills the space between the vitelline envelope and the cell membrane peroxidases and transglutaminases, which then hardens the vitelline envelope, also known as the fertilisation envelope, as a result of mucopolysaccharides released by the cortical granules creating an osmotic gradient.While the cortical granule response in mammals does not result in the formation of a fertilisation envelope, the end result is the same. The sperm receptors in the zona pellucida are altered by released enzymes such that they lose their ability to bind sperm. ZP3 and ZP2 are both altered during this process, which is known as the zona response. An enzyme found in the cortical granules of mouse eggs releases bound sperm from the zona and prevents the attachment of further sperm by clipping off the terminal sugar residues of ZP3. N-acetylglucosaminidase has been shown to be present in the cortical granules of mouse eggs. Enzymes that can separate ZP3 carbohydrate chains from N-acetylglucosamine. Miller and colleagues have shown that when the N-acetylglucosamine residues are eliminated after fertilisation, ZP3 will no longer function as a substrate for the binding of additional sperm. N-acetylglucosamine is one of the carbohydrate groups to which sperm may adhere. The cortical granule proteases clip

ZP2, which also loses its capacity to bind sperm. As a result, once a sperm has penetrated the egg, the other sperm are quickly shed since they can no longer establish or sustain their connection to the zona pellucida. Calcium as the cortical granule reaction's catalyst

The cortical granule response has a similar mechanism to the acrosomal reaction. The egg's intracellular calcium ion concentration significantly rises during fertilisation. The cortical granule membranes and egg plasma membrane merge in this high-calcium environment, releasing the contents of both structures. A wave of cortical granule exocytosis spreads throughout the cortex to the opposite side of the egg once the fusing of the cortical granules starts to occur close to the place of sperm entrance[7]–[9].

The increase in calcium concentration that causes the cortical granule response in sea urchins and mammals occurs from inside the egg itself rather than from an input of calcium. Using calcium-activated luminous dyes like aequorin or fluorescent dyes like fura-2, the release of calcium from intracellular storage may be seen visually. When these dyes bond to free calcium ions, light is released. An astounding wave of calcium release spreads over a sea urchin egg after it has been dyed and fertilised. A ribbon of light travels the length of the cell, beginning at the sperm entrance site. From the sperm entrance site, the calcium ions do not only disperse throughout the egg. Instead, the release of calcium ions occurs actively from one end of the cell to the other. In sea urchin eggs, the full calcium ion release takes around 30 seconds to complete, and the liberated calcium ions are quickly resequestered. The release of calcium ions may be observed beginning at the two different locations of entrance on the cell wave throughout sea urchin eggs during fertilisation if two sperm penetrate the egg cytoplasm. An inbuilt pigment that fluoresces when it binds calcium is present in sea urchin eggs. A wave of calcium release that starts at the sperm site may be visible when the sperm and egg merge.

Several studies have shown that calcium ions, which are stored inside the egg, are directly responsible for causing the cortical granule response to spread. The medication, a calcium ionophore, enables these cations to pass through barriers that would otherwise be impervious. This substance triggers the cortical granule response and the elevation of the fertilisation envelope when unfertilized sea urchin eggs are submerged in saltwater. Moreover, this process takes place even when there are no calcium ions present in the water around it. Hence, something must be causing the calcium ions that are already locked up in organelles inside the egg to leak out[10], [11].

The endoplasmic reticulum of the egg houses the calcium ions necessary for the cortical granule response. This reticulum surrounds the cortical granules and is prominent in the cortex of sea urchins and frogs. As an egg matures in the Xenopus, the cortical endoplasmic reticulum multiplies by 10 and then vanishes locally within a minute of any cortical area experiencing a wave of cortical granule exocytosis. The release of calcium is self-replicating once it is started. A wave of calcium ions are released along with cortical granule exocytosis when free calcium is able to release sequestered calcium from its storage locations.

Cortical granules in the endoplasmic reticulum enclosing sea urchin eggs. Osmium-zinc iodide has been used to dye the endoplasmic reticulum to enable transmission electron microscopy imaging [12], [13].

II. CONCLUSION

In conclusion, preventing polyspermy is essential for successful fertilization and embryonic development. Natural mechanisms such as the zona pellucida and the cortical reaction, as well as assisted reproductive technologies, play critical roles in preventing polyspermy and ensuring healthy embryos.The prevention of polyspermy remains a critical issue in assisted reproductive technologies, and ongoing research is needed to develop new and more effective methods for preventing this phenomenon. While a variety of techniques have been developed, each has its own strengths and limitations, and there is no single approach that is universally effective. Nonetheless, continued progress in this area has the potential to greatly improve the success rates of IVF procedures and reduce the risk of developmental abnormalities and embryonic death.

REFERENCES

[1] K. K. Shimizu and K. Okada, “Attractive and repulsive interactions between female and male gametophytes in Arabidopsis pollen tube guidance,” Development, 2000, doi: 10.1242/dev.127.20.4511.

[2] M. Psenicka, M. Rodina, and O. Linhart, “Ultrastructural study on the fertilisation process in sturgeon (Acipenser), function of acrosome and prevention of polyspermy,” Anim. Reprod. Sci., 2010, doi: 10.1016/j.anireprosci.2009.03.013.

[3] B. Dale and L. Defelice, “Polyspermy prevention: Facts and artifacts?,” J. Assist. Reprod. Genet., 2011, doi: 10.1007/s10815-010-9513-5.

[4] J. P. Evans, “Preventing polyspermy in mammalian eggs—Contributions of the membrane block and other mechanisms,” Molecular Reproduction and Development. 2020. doi: 10.1002/mrd.23331.

[5] N. Banks, M. Avella, B. Baibakov, K. Tokuhiro, and J. Dean, “ZP1 contributes to the prevention of polyspermy in mice,” Fertil. Steril., 2016, doi: 10.1016/j.fertnstert.2016.07.985.

[6] K. L. Wozniak, M. Tembo, W. A. Phelps, M. T. Lee, and A. E. Carlson, “PLC and IP3-evoked Ca2+ release initiate the fast block to polyspermy in Xenopus laevis eggs,” J. Gen. Physiol., 2018, doi: 10.1085/jgp.201812069.

[7] M. C. Gould and J. L. Stephano, “Polyspermy prevention in marine invertebrates,” Microscopy Research and Technique. 2003. doi: 10.1002/jemt.10351.

[8] L. A. Jaffe, “Fast block to polyspermy in sea urchin eggs is electrically mediated,” Nature, 1976, doi: 10.1038/261068a0.

[9] F. Tanihara, M. Nakai, H. Kaneko, J. Noguchi, T. Otoi, and K. Kikuchi, “Evaluation of zona pellucida function for sperm penetration during in vitro fertilization in pigs,” J. Reprod. Dev., 2013, doi: 10.1262/jrd.2013-021.

[10] N. U. S. Kapu and D. J. Cosgrove, “Changes in growth and cell wall extensibility of maize silks following pollination,” J. Exp. Bot., 2010, doi: 10.1093/jxb/erq225.
[11] H. Funahashi and B. N. Day, “Effects of follicular fluid at fertilization in vitro on sperm penetration in pig oocytes,” J. Reprod. Fertil., 1993, doi: 10.1530/jrf.0.0990097.
[12] D. Epel and E. J. Carroll, “Molecular mechanisms for prevention of polyspermy.,” Res. Reprod., 1975.
[13] R. Machtinger, L. C. Laurent, and A. A. Baccarelli, “Extracellular vesicles: Roles in gamete maturation, fertilization and embryo implantation,” Human Reproduction Update. 2016. doi: 10.1093/humupd/dmv055.

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Blastulation and Gastrulation in Frog and Chick

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Abstract— A solid ball of blastomers is created as a consequence of repeated cleavage. It is called morula. Subsequently, blastomersreorganise themselves on the egg's edge to produce a single layer of blastoderm, which results in the creation of a cavity filled with fluid known as a blastocoel. The term "blastula" refers to both this structure and the method through which it forms. Three germ layers are created as a consequence of the large-scale migration of blastula cells known as gestation. The three-layered structure is termed a gastrula, and the activity that takes place is known as gastrulation.

Index Terms— Blastomers, Blastula, Chick, Gastrulation, Frog

I. INTRODUCTION

Frog gastrulation is quite similar to other species' gastrulation. The three germ layers are developing as they would in people, as can be seen. In the end, the process will resemble, if not exactly match, the human gastrulation process. Hence, if you get the notion of gastrulation, you can very well comprehend it for the majority of species[1]–[3].There are more yolk-laden cells that will eventually develop into the endoderm in frogs than in humans, which is one of the fundamental distinctions between the two species. A yolk plug is also ultimately formed by these cells. The blastocoel, a hollow region within the blastula, is also slightly off-center in frogs, although this has no impact on the gastrulation process.

A Frog Blastulation

The term "cleavage" or "segmentation" refers to the zygote's first division. It is a mitotic division.Two cells of different sizes are produced by the initial cleavage. As a result, it is claimed that the cleavage is of the uneven kind.Meridional means that the initial cleavage runs through both the animal and vegetal poles. The animal pole is where the cleavage starts, and it descends to the vegetable poles. It cuts across the grey crescent region like a shallow groove on the zygote. Blastomeres are the two cells that are created as a consequence of the first cleavage. After fertilisation, the first two blastomeres are fully formed in 3 to 3.5 hours.

Around 60 to 70 minutes following the initial cleavage, there is a second cleavage. While it occurs at a right angle to the initial plane of division, this cleavage is likewise meridional. This division results in the formation of four cells, called blastomeres. There are differences among the four blastomeres. The grey crescent is present in two of them, but not in the other two. The third cleavage, which starts around 80 minutes after the second cleavage, is latitudinal, parallel to the second cleavage, and passes just above the equator. Eight cells are produced as a consequence of the third cleavage. Among these eight cells, the four that are closest to the vegetal pole are bigger and contain yolk. Megameres or macromeres are what they are. The four top, near the animal pole, pigmented cells are referred to as micromeres and are smaller in size. After fertilisation, the eight-cell stage is finished in around 5.5 hours. The first and second cleavages pass through the fourth cleavage, which is meridional and consists of two cleavage planes. This happens after the third cleavage, after around 20 minutes. This cleavage produces sixteen cells, of which eight are yolk-filled megameres and the other eight are pigmented micromeres. After fertilisation, the four cleavages take roughly six and a half hours to complete. The fifth cleavage is horizontal and double. Two longitudinal cleavage furrows make up this structure; one is located above and the other below the third cleavage furrow. As a consequence, thirty-two cells are created, of which sixteen are yolky megameres and the remaining sixteen are pigmented micromeres. These 32 cells are set up in forty groups of eight each. After fertilisation, which takes place around seven and a half hours later, the thirty-two-cell stage develops. The divide gets fairly erratic beyond this point. The solid ball of cells that makes up the blastula at the point of cleavage is made up of many blastomeres. The existence of a clearly defined cavity known as the blastocoel is one of the characteristics of the blastula stage. Here is where the major body cavity starts. Blastulation is the term used to describe the process of blastula development. Frog blastulae are known as amphiblastian because the cavity is limited to the animal pole. Yet, the vegetal pole is made up of a dense mass of yolky cells that are not coloured[4]–[6].

The blastula is known as the early blastula and is composed of a single layer of cells at the thirty-two-cell stage. The front half contains the pigmented cells, whereas the posterior half contains the yolky megameres. The blastocoel is totally located in the anterior portion, as has previously been mentioned. Frogs have hollow blastulae and well developed blastocele. Apparently, it is a coeloblastula.The number of cells in the blastula and blastocoel both increase as segmentation progresses. The blastocoel's top is arched while its bottom is flat. The floor is constructed of yolky megameres, whereas the ceiling is composed of three to four layers of pigmented micromeres. A cluster of cells with an intermediate size may be seen

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between the micromeres and megameres as well as along the equator. The germ ring is made up of these cells. The area of the grey crescent is where the germ ring develops.

B Frog Gastrulation

The process of highly integrated endodermal and mesodermal cell and tissue migration to their specific places within the embryo is known as gastrulation. These movements, known as morphogenetic motions because they are self-determined and reliant on one another, lead to the development of additional connections and eventually a triploblastic embryo. During cleavage, the cells start preparing for these motions. The cell cycle slows down, cell division turns into a synchronus, the cells acquire the ability to move away from their initial positions, and the transcription of new mRNA is first observed from the nucleus for the first time in the animal's life during the midblastula transition in the amphibian embryo. This shift happens in Xenopus just after the twelfth cleavage. As amphibians gastrulate, three different morphogenetic movements take place.

The triangle designates the endodermal cells that initiate foregut invagination. The cross designates the location of endodermal cells in the embryo, immediately below the equator in the area of the grey crescent, which were at the vegetal pole before gastrulation started and are now covered by epibolic development of ectoderm. Here, the marginal endodermal cell dips into the embryo and creates a blastopore that resembles a slit. Now, the form of these cells resembles a flask. Bottle cells are what they are known as. The main body of the bottle cells is shifted into the inside of the embryo, but they are still able to retain touch with the outside surface thanks to cytoplasmic threads. As a result, gastrulation in frogs starts at the marginal zone near the blastula's equator. The endodermal cells in this area are not as big or as yolky as the blastomeres that are the most vegetal.

So, even if the bottle cells may have created the first groove, the driving power behind it seems to have originated from the deep layers of marginal cells. Also, it seems that this dense layer of cells is in charge of the embryo's ongoing cell migration.

Marginal zone cells undergo involution during the next stage of gastrulation, whereas animal cells proceed through epiboly and converge at the blastopore. The marginal cells bend inward as they approach the blastopore's tip and move along the inner surface of the outer cells sheets. As a result, the cells that make up the lip of the blastopore are continually evolving. Endodermal cells are the first cells that build the dorsal lip.These cells subsequently develop into the foregut's pharyngeal cells. The blastopore lip develops from involuting cells that are precursors of the head mesoderm when these initial cells go deeper into the embryo. The chorda mesoderm cells are the next cells to involute over the dorsal lip of the blastopore. These cells will develop into the Notochord, a temporary "backbone" of mesoderm that is necessary to start the development of the nervous system. Epiboly:

The blastocoels move to the side opposing the dorsal blastoporal lip when the fresh cells enter the embryo. When more animal hemisphere cells congregate at the blastopore lip, the blastopore becomes more vegetal and expands. Lateral lips and a ventral lip eventually form on the expanding blastopore, which is where the extra mesodermal and endodermal precursor cells pass. The blastopore has developed a ring around the big endodermal cells that are still visible on the surface as a result of the ventral lip's development.The yolk plug, the last surviving piece of endoderm, is also finally internalised. At this stage, the mesoderm has been introduced between the ectoderm and the surface and all of the endodermal precursors have been carried into the interior of the embryo.

C Blasphemy in a chick

The morula state only lasts a short time. The cells that precede the creation of the blastula start to reconfigure themselves almost immediately after it is created. The primary cells of the blastoderm separate from the yolk underneath it, leaving the periphery cells connected, creating a hollow. The segmentation cavity is the word for the gap created in this way between the blastoderm and the yolk. The segmentation cavity known as region pellucida, which is present, makes the core portion look more distinct and translucent. The blastoder's edge, which is tightly attached to it, is where the cells that are still attached to the yolk and e zone of connection are found. Area opaca is the name for this region, which appears opaque and white. The embryo is considered to have advanced from the morula stage to the blastula stage with the development of the blastocoels.

The whole yolk must be seen as having a diameter of around three feet at this magnification. If the whole importance of the large yolk mass is understood, the structure of the avian embryo at these stages may be brought into alignment with the morula and blastula stages of species possessing little yolk. The blastomeres in the avian embryo are compelled to develop on the surface of a huge yolk sphere rather than being free to aggregate first into a solid sphere of cells and later into a hollow sphere of cells, as occurs in species with minimal yolk. The blastomeres are compelled by such mechanical forces to organise themselves on the surface of the yolk into a disc-shaped mass. It becomes obvious how similar the morula is to the morula in a form with minimal yolk if one imagines the yolk of the bird morula removed and the disc of cells left free to adopt the spherical shape imposed by surface tension.

The existence of a significant quantity of yolk alters the blastulation procedure as well. If the majority of the morula contains inert yolk, then there can be no simple hollow sphere creation via cell rearrangement. Nonetheless, the blastoderm's core region's cells are split from the yolk to create a tiny blastocoele. The yolk serves as the blastocoele's floor while also virtually obliterating it due to its enormous bulk. The chick blastula resembles the shape of the blastula in embryos with minimal yolk if we envision the yolk removed

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from the blastula and the margins of the blastoderm drawn together.

D Chick Gastrulation

In comparison to frog and Amphioxus, the gastrulation process in chicks is extended and significantly altered. After the chick's egg is deposited, it has already begun, and it lasts until far into the second day of incubation. The production of primordial streaks is the primary feature of avian gastrulation.

In the central posterior end of the region pellucida, the streak is first discernible as a thickening of the cell sheet. The cells in the posterior epiblast's lateral area move towards the centre, causing this thickening. The thickening travels anteriorly and contracts to generate the distinct primitive stripe as it becomes thinner. This stripe, which extends 60–75% of the length of the region pellucida, denotes the embryo's anterior–posterior axis. The primitive knot, also known as Hensen's node, is a localised cell thickening at the anterior end of the primitive streak. The centre of the node has a funnel-shaped depression where cells may enter the blastocoel. Blastoderm cells start to move across the lips of the primitive streak and into the blastocoel as soon as it forms.

Henson's node migration results in the formation of head mesoderm and the notochord, whereas migration across the lateral section of the primitive streak results in the formation of the bulk of endodermal and mesodermal tissues. A loosely linked mesenchyme is formed by the cells that enter the inside of the avian embryo. In addition, no real archenteron develops in the gastrula of birds. The primordial streak lengthens towards the future head region as the cells enter it. The secondary hypoblastic cells are moving from the blastoderm's posterior edge anteriorly at the same time. The foregut's precursor cells are the first to pass through the primitive streak.

These cells move anteriorly inside the blastocoel, ultimately displacing the hypoblast cells in the front of the embryo. The following cells travel anteriorly as well as they reach the blastocoel via Hensen's node, however they do not go as far ventrally as the presumed

The head mesoderm and chorda mesoderm cells are formed by these cells that stay in the region between the endoderm and the epiblast. All of these early ingressing cells have advanced anteriorly, pushing the epiblast's anterior midline area upward to create the head process. Cells are still moving via the primitive streak inward in the meanwhile. These cells divide into two streams as they go towards the blastocoel. The hypoblast cells are pushed to the sides as one stream deepens and joins the hypoblast along its midline.All of the embryo's endodermal organs as well as the majority of the additional embryonic membranes are produced by these deep-moving cells. Between the hypoblast and the epiblast, or about in the middle of the blastocoel, the second migratory stream spreads out as a loose sheet.

Extra embryonic membranes and mesodermal sections of the embryo develop from this sheet. Most of the presumed endodermal cells are within the embryo by 22 hours of incubation, however presumed mesodermal cells continue to move inward for a longer period of time.The second stage of gastrulation has now started. Hensen's node moves from near the centre of the region pellucida to a more posterior location when the primitive streak begins to recede while the mesodermal ingression persists.The last piece of the notochord is put down when the node advances posteriorly. The node finally moves back to its most posterior place and forms the anal area in a deuterostome-like manner. At this point, only presumed ectodermal cells make up the epiblast. Avian embryos have an unique antero-posterior gradient of developmental maturity as a result of this two-step gastrulation process. Cells in the front end of the embryo are already beginning to create organs while the posterior regions are going through gastrulation. The embryo's front end is shown to be developing more quickly than its posterior end over the next several days.

II. DISCUSSION

By identifying the relationship between individual cells at one stage of development and their offspring at other stages of development, destiny mapping is a technique used in developmental biology to understand the embryonic genesis of different tissues in the adult organism. Cell lineage tracing is the name used for this procedure when performed at single-cell resolution[7]–[9].Inferences based on the analysis of embryos that had been preserved, sectioned, and stained at various developmental time periods led to the earliest efforts at destiny mapping. The drawback of this method was that it only offered pictures of the actual cell motions and cell fates that were happening at certain developmental time periods. So, early embryologists had to guess which cells subsequently developed into which organs.

Early embryologists tracked the motions of certain cell types or groups throughout time in Xenopus frog embryos using "vital dyes". So, in the mature organism, the tissue that the cells contribute to will be identified and apparent. The embryologist Walter Vogt was the first to create and use this method to research cell fate in 1929. In Xenopus embryos, Vogt applied tiny pieces of agar soaked with a crucial dye to a specific cell or group of cells until the dye was absorbed into the yolk platelets of the target cell. The agar chip could be taken off when the cells were successfully tagged, allowing the embryo to grow normally. Vogt was able to determine the motions of specific cell populations using this technique, as well as the final organ or tissue that they merged into. The size of an agar chip may not be sufficient for single-cell resolution research at later stages of development, as further cell divisions will result in smaller cells, even if this approach was novel at the time. Moreover, because the agar chip containing the dye must be applied to the embryo's surface, the target cell or cell population must be superficial.A destiny

map was then created using the data Vogt acquired from his tracing tests of various cell types and populations in Xenopus. The highlighted locations on the map were early-stage embryonic regions that are known to give birth to certain tissues in the adult organism. For instance, Nile blue staining of a 32-cell blastula at the animal pole results in a blue-stained brain that may also stain the anterior part of the notochord.

By injecting horseradish peroxidase enzyme, and subsequently fluorescent peptides, into individual cells of Helobdellatriserialis embryos during early development, David Weisblat and colleagues in Gunther Stent's lab at Berkeley refined the method of single-cell resolution destiny mapping in 1978. All offspring of the injected cells could then be identified by fluorescence microscopy or staining for HRP using benzidine substrate. Using this method, the researcher had more discretion and control over which cells were identified and tracked. Nevertheless, the HRP stain's opaque nature made it impossible to employ crucial nuclear counter-stains like Hoechst 33258 to see the offspring of the injected cell's mitotic state. Moreover, because the HRP staining required fixing the embryos, only one time point could be used to see each injected leech embryo. Several of the drawbacks of HRP injection were resolved by the use of fluorescent peptides, such as Rhodamine-D-protein and Fluorescein-D-protein coupled to large carrier molecules to hinder diffusion via cell gap junctions[10], [11].

The single-layered blastula gets rearranged into a multilayered structure called the gastrula during the early stage of development known as gestation. The embryo starts off with a continuous epithelial sheet of cells; by the time gastrulation is complete, the embryo has started differentiating to generate discrete cell lineages, established the fundamental axis of the body, and internalised one or more cell types, including the potential gut. The gastrula is trilaminar in triploblastic species. The ectoderm, mesoderm, and endoderm are the names of these three germ layers. Only ectoderm and endoderm are present in the gastrula of diploblastic creatures like Cnidaria and Ctenophora. After cleavage and blastula development, there is gastrilation. Organogenesis, when specific organs grow inside the newly created germ layers, occurs after gastrulation. In the growing embryo, each layer gives birth to certain tissues and organs. In vertebrates, the neural crest, the nervous system, and the epidermis all develop from the ectoderm. The endoderm develops into the respiratory and digestive system epithelium as well as the liver and pancreas, two organs connected to the digestive system. Many cell types, including muscle, bone, and connective tissue, are derived from the mesoderm. The notochord, the heart, the blood and blood arteries, the cartilage of the ribs and vertebrae, and the dermis are all examples of mesoderm derivatives in vertebrates.The blastula is known as a blastocyst in mammals. The trophoblast, which later forms the extra-embryonic tissues, and the embryoblast, which finally gives birth to the fetus's definitive features, are both present in the blastocyst [12].

III. CONCLUSION

The process of developing an embryo starts when a sperm fertilises an egg, creating a zygote that goes through several cleavages before developing into a morula, or ball of cells. The early embryo does not develop into a blastula until the blastocoele forms. The term "blastula," which means "sprout," refers to a hollow sphere of cells known as blastomeres that surrounds an inner cavity filled with fluid known as the blastocoele that forms at an early stage of animal embryonic development. The blastula develops before the gastrula, in which the embryo's germ layers take shape. The blastoderm, a layer of blastomeres that encircles the blastocoele, is a characteristic of most vertebrate blastulas

REFERENCES

[1] D. Drasdo and G. Forgacs, “Modeling the interplay of generic and genetic mechanisms in cleavage, blastulation, and gastrulation,” Dev. Dyn., 2000, doi: 10.1002/1097-0177(200010)219:2<182::AID-DVDY1040>3.3.CO;2-1.

[2] S. Wei and Q. Wang, “Molecular regulation of Nodal signaling during mesendoderm formation,” Acta Biochimica et Biophysica Sinica. 2018. doi: 10.1093/abbs/gmx128.

[3] X. Liu, G. Ning, A. Meng, and Q. Wang, “ MicroRNA-206 Regulates Cell Movements during Zebrafish Gastrulation by Targeting prickle1a and Regulating c-Jun N-Terminal Kinase 2 Phosphorylation ,” Mol. Cell. Biol., 2012, doi: 10.1128/mcb.00134-12.

[4] D. Yimlamai, L. Konnikova, L. G. Moss, and D. G. Jay, “The zebrafish down syndrome cell adhesion molecule is involved in cell movement during embryogenesis,” Dev. Biol., 2005, doi: 10.1016/j.ydbio.2004.12.001.

[5] S. Fagundez, R. Ramirez, and G. Robaina, “Desarrollo embrionario del calamar tropical sepioteuthis sepioidea (blainville) (cephalopoda: Loliginidae),” Bol. Investig. Mar. y Costeras, 2016, doi: 10.25268/BIMC.INVEMAR.1992.21.0.416.

[6] A. Kohl, N. Golan, Y. Cinnamon, O. Genin, B. Chefetz, and D. Sela-Donenfeld, “A proof of concept study demonstrating that environmental levels of carbamazepine impair early stages of chick embryonic development,” Environ. Int., 2019, doi: 10.1016/j.envint.2019.03.064.

[7] C. Park, S. Y. Lee, D. S. Kim, and Y. K. Nam, “Embryonic development of Siberian sturgeon Acipenser baerii under hatchery conditions: An image guide with embryological descriptions,” Fish. Aquat. Sci., 2013, doi: 10.5657/FAS.2013.0015.

[8] M. S. Tellis, M. M. Lauer, S. Nadella, A. Bianchini, and C. M. Wood, “Ionic status, calcium uptake, and Ca2+-ATPase activity during early development in the purple sea urchin (Strongylocentrotus purpuratus),” Comp. Biochem. Physiol. - A Mol. Integr. Physiol., 2013, doi: 10.1016/j.cbpa.2013.05.028.

[9] M. Ferg et al., “The TATA-binding protein regulates maternal mRNA degradation and differential zygotic transcription in zebrafish,” EMBO J., 2007, doi: 10.1038/sj.emboj.7601821.

[10] Z. Liu et al., “Global identification of SMAD2 target genes reveals a role for multiple co-regulatory factors in zebrafish

early gastrulas," J. Biol. Chem., 2011, doi: 10.1074/jbc.M111.236307.
[11] J. Zhao, Y. Cao, C. Zhao, J. Postlethwait, and A. Meng, "An SP1-like transcription factor Spr2 acts downstream of Fgf signaling to mediate mesoderm induction," EMBO J., 2003, doi: 10.1093/emboj/cdg593.
[12] H. R. Esmaeili and T. Asrar, "Life cell imaging microscopy of embryo and early development of the Kol tooth-carp, Aphanius darabensis (Teleostei: Aphaniidae)," Acta Zool., 2021, doi: 10.1111/azo.12333.

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Classification of Aquaculture

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Abstract— Aquaculture refers to the cultivation of all aquatic life in fresh, brackish, and marine environments, including fish, prawns, mollusks, and seaweed. The term "Aquaculture" refers to the many culture systems used, such as pond, cage, and pen culture. The kind of creatures that are raised, such as fish, oysters, shrimp, or prawns. Aquaculture has been practised for at least 3,000 years, but unlike agriculture, which has historically been the most significant means of acquiring food on land, aquaculture has until recently made a relatively little contribution to civilization owing to outdated practises and a lack of understanding. The situation is currently quickly changing, however, as aquaculture becomes increasingly significant in today's contemporary world as a result of the growing population and food crisis.

Index Terms— Aquaculture, Cell, Cultivation, Culture, Fish

I. INTRODUCTION

The 'Arthshastra' of the 'Kautilya,' in which he discussed the covert methods of maintaining fish in reservoirs, is the source of the evidence for the long-ago practise of fish cultivation in India. The techniques for fattening fish in ponds were reported by "King Someshwara" of the Chanakya Dynasty. Fish culture in India has a long history, but by the end of the 19th century, Bengals, Bihar, and Orissa had evolved conventional methods for collecting and transporting carp spawn from rivers and stocking ponds. This method expanded to other areas as well, and the building of "Bundhs" for carp breeding in Bengal marked a significant development in fish farming. Under the direction of "H.C. Wilson," the first large fish farm with carp breeding facilities was established in Tamil Nadu, giving warm water fish farming a boost[1]–[3].

The Indian Council of Agricultural Research advised state governments and universities to fund fisheries research initiatives on many facets of fish production. The Central Inland Fisheries Research Institute was created in Barrackpore by the Indian government in order to expand fish culture efforts across the nation. In order to address issues with fish culture in ponds, the CIFRI Pond Culture Substation was established in Cuttack in 1949. Since then, inland fisheries research programmes have received significant attention.

In order to make the cultivated species spawn for seed production, development after 1970 has led to the adoption of "Second generation Methods," such as mammalian hormones, steroids, prostaglandin, and its equivalents.

A Induced Birth

The artificial procedure known as "induced breeding of fishes" involves injecting pituitary extract into the bodies of both adult male and female fishes. Then, once the fishes are aroused and deposit eggs in the pond water, fertilisation occurs. Hypophysation is another name for this process of reproduction.

1. Pituitary extract is taken from adult fish of both sexes that are either members of the recipient's species or one that is closely related. The pituitary gland should ideally be removed from recently butchered fish. Nonetheless, it has been shown that pituitary glands removed from fish that were ice-preserved between five and eight days old also had positive outcomes. After washing the brain tissue, the pituitary glands may be removed from the back of the skull via the foramen magnum at fish markets where the heads of cut fish are sold.

2. Pituitary extract preparation: The production of pituitary extract is crucial for the induction of fish breeding. Making it is pretty simple. The pituitary glands are maintained in 100% alcohol for dehydration immediately upon harvest. The alcohol is replaced for additional dehydration and fattening after 24 hours. The glands are then measured and preserved in dark-colored phials with new alcohol. It may be kept in a fridge or at room temperature. Each pituitary gland weighs between 7 and 19 mg in Rohu, which weighs 1 to 3.8 kg, and 3 to 23 mg in Mrigal, which weighs 0.3 to 3.6 kg. The necessary number of pituitary glands are removed from the phials at the time of injection into carps for the induced breeding process, and the alcohol is then allowed to evaporate. The glands are then macerated in distilled water or 0.3 percent saline water using a tissue homogenizer. The supernatant fluid from the centrifuged gland suspension is then drawn into a hypodermic syringe for injection.

3. The injection and spawning procedure:

The same species' pituitary gland extract, which is manufactured via the aforementioned scientific procedure, is injected into the muscle of adult carps during the rainy season. These carps range in weight from 1.5 kg to 5.5 kg overall. Pituitary extract is to be intravenously given into two males with about the same body weight for each female just before sunset. To prevent harm to the carps, the carps must be injected while lying on a piece of sponge outside of the water. Pituitary extracts are given to male carps once, and female carps twice, depending on the species.

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One female and two male carps are then put in a breeding hapa to begin spawning. Both the male and female carps in the breeding hapa are enthusiastic. After the excitement, female carps deposit eggs. The spermatozoa that the men secrete fertilise the eggs from the outside. The eggs are then gathered using a net and carried to the inside of the hatching hapa once all the fish have been removed from the breeding hapa. The spawns penetrate the outer hapa after 14 to 18 hours, marking the end of the induced breeding procedure. The spawn is then removed from the outer hapa and placed in the pond for nursery purposes.

Benefits of induced breeding include:

i) Carp eggs and spawns were taken from the riverbed; it's possible that some other fish eggs and spawns were mixed in. In contrast, there is little chance for mixing during forced breeding, therefore only the purest type of fish seeds is produced.

ii) With the process of induced breeding, desired species of carps may be cultivated.

iii) Fish that have undergone induced breeding are capable of producing large quantities of eggs.

iv) Several breeding events may be generated in a carp throughout the same season.

v) As carps may be bred in any chosen pond, transportation costs become extremely minimal.

vi) Fish hybridization between distinct species is conceivable, giving rise to a variety of hybrid fish.

B Hybrid Fish Culture

From the dawn of time, humans have consumed fish, which is the cheapest and most readily digested animal protein, from natural sources. But, overfishing and pollution have made it harder to find fish in natural waterways, pushing researchers to come up with new strategies to boost output. It has been simpler to increase fish production and availability for consumption by engaging in fish farming under artificial or controlled settings. Farmers may significantly improve their financial situation by starting a fish culture in village ponds, tanks, or any new water body. Both talented and less skilled young people may find meaningful jobs thanks to it. The most cutting-edge method and most widely used in the nation is the technology created for fish culture, in which many suitable fish species are raised. Composite Fish Culture is the name given to this technique. This approach makes it possible to obtain the most fish possible out of a pond or tank by using the fish food organisms that are already present in all of the natural niches, supplemented by artificial feeding. Fish may be raised in any perennial freshwater pond or tank with a water depth of two metres. The lowest level, however, must not be less than one metre. Even seasonal ponds may be used for fish rearing for a short period of time[4]–[6].

Here, fingerlings of fish species with various dietary preferences that are capable of rapid growth are used. Major Indian carps including catlacatla, Labeorohita, and Cirrhinamrigala are supplied with foreign cars like silver carp, common carp, and grass carp.

Species used in composite fish culture include:

The following fishes of Indian and exotic species have been found and suggested for cultivation in the composite fish culture technique based on compatibility and type of eating habits of the fishes:

Potential: 2.85 million acres are thought to be under tanks and ponds and accessible for warm fresh water aquaculture. Also, 0.78 million hectares of low-lying waterlogged areas, such as marshes and beels, are not suitable for cultivation. Furthermore, any agricultural land may be turned into a fish farm. The cultural sector contributes around 60% of the overall inland fish output. The average annual production from ponds is about 2160 kg/ha. This demonstrates the country's enormous potential for fish culture. Just 16% of the total area of tanks and ponds accessible for growth, or 4.56 lakh ha, was brought under scientific fish culture by 1997–1998. This demonstrates the tremendous potential for horizontal expansion of composite fish culture.Layout of the fish farm, management of the facility, and by-products of the fishing industry.

Fish farming, often known as pisciculture, is the practise of rearing fish for a living in tanks or other enclosures. Although other practises may be classified as mariculture, it is the primary kind of aquaculture. Carnivorous fish farming, such as salmon farming, does not necessarily lessen the strain on wild fisheries. A fish hatchery is often referred to as a location that releases young fish into the wild for recreational fishing or to increase the population of a species. Carp, tilapia, salmon, and catfish are the top four fish species raised in fish farms across the world.

Several distinct kinds of fish farms are utilised in intense and extended aquaculture techniques, each with advantages and uses particular to its design. The conventional by-products of fishing include fishmeal, liver and body oils, fish maw, etc. Other by-products that are typically produced from fish and fish waste include fish protein concentrate, fish albumin, glue, gelatine, pearl essence, peptones, amino acids, proteins, fish skin leather, etc. Also processed into a variety of culinary and non-food items are fish and other aquatic critters.

C Fish by-products

Fish are eaten as food while they are still alive. After preservation, several of them are still used. Some fish and prawn ingredients go to waste during processing and preservation. Similar to rubbish, certain fish are not fit for food by humans. These leftovers and the fish mentioned above serve as a significant source of fish byproducts, which are then utilised to create a variety of valuable fish byproducts. A shimmery substance found on fish scales can also be used for pearlescent effects, primarily in nail polish, but is now rarely used due to its high cost; bismuth oxy-chloride flakes are used as a substitute. It is most frequently obtained from herring and is one of many by-products of commercial fish processing.

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A stable protein concentrate made from entire fish, other aquatic animals, or by-products thereof is called fish protein concentrate. By removing elements like water, oil, bones, and other things, protein content is raised. Conventional dried or other forms of preservation are not included in this description. The creation of FPC has cleared the door for the production of protein concentrate for human nutrition from a variety of whole fish that bears no similarity to the original raw material.Cod protein concentrate is a powder that is grit-like, tasteless, colourless, and odourless. At room temperature, it may remain stable for up to 3 to 4 years without significantly changing in flavour. The following table lists the approximate makeup of a typical sample of FPC. FPC is a very nutritious food because it contains more easily digested protein, lysine that is readily accessible, and minerals.

Applications for By-Products: While FPC is made for human consumption, it is not enjoyed in that capacity. As a result, it is added to the human diet as a protein supplement. The permissible range for FPC content in bread and biscuits is 5–10%. The recommended daily intake of FPC is 35 g per person.

Unquestionably, one of the healthiest meals for human nutrition is fish. On average, fish meat contains 15% to 20% protein. Certain fish species have extremely high body oil concentrations. Just a few fish species, including shark and cod, are rich providers of liver oil. Large amounts of trash from the fishing industry are produced by the filleting and processing of fish. They are all excellent sources of high-quality fat, minerals, and protein.Fishmeal, fish body and liver oils, fish maw, isinglass, and other traditional byproducts of fishing are available. Other byproducts that are often produced from fish and fish waste include fish protein concentrate, fish albumin, glue, gelatin, pearl essence, peptones, amino acids, protamines, fish skin leather, etc. High-value byproducts made from shrimp, crab, and other crustacean trash include chitin and chitosan.

D Culture of Prawns

Little aquatic crustaceans with 10 legs and an exoskeleton are often referred to as "prawns," some of which may be eaten. In the United Kingdom, Ireland, and other Commonwealth countries, big swimming crustaceans or shrimp, particularly those of economic importance in the fishing sector, are referred to as "prawns." This group of shrimp often includes members of the suborder Dendrobranchiata. In the aquaculture industry, a freshwater prawn farm raises and produces freshwater prawns or shrimp1 for human consumption. Aquaculture of freshwater prawns has many traits and issues with those of marine shrimp aquaculture. The major species' developing life cycle introduces particular issues.We should have some understanding about shrimp behaviour, environment, and diet before engaging in prawn cultivation. Prawns live in many types of water, just as they do in the ocean, estuaries, and freshwater. They often reside in the bottom of the ocean and stay out of the light. The sea is where both marine and brackish water species spawn. Due to their inability to swim, the hatchlings are carried by the current to estuaries or coastal waters where they grow until they are juveniles. The post larvae consume tiny benthonic creatures as well as dead organic materials from plants and animals. The little prawn must go into the ocean. Freshwater species like Macro brachium sp. reproduce in freshwater before being floated to estuaries and swimming back to freshwater once they reach juvenile stage. As their main source of nutrition, prawns eat organic materials, tiny creatures, and plants. Little insects, snails, Mollusca and echinoderm larvae, as well as aquatic weeds, algae, and moss, are among the species that they eat.

While giant river prawns may survive as adults in murky freshwater, they need brackish water to develop into larvae. Females develop to a circumference of 25 cm, while males may grow to a body size of 32 cm. During mating, the male places spermatophores between the female's walking legs on the underside of her thorax. The eggs are subsequently forced out of the female by the spermatophores. The fertilized eggs are carried by the female until they hatch; this process may take less than three weeks on average. An enormous female may produce up to 100,000 eggs. The zoeae, a crustacean's initial larval stage, hatch from these eggs. Before changing into post larvae, which are around 8 mm long and have all the traits of adults, they pass through various larval stages. After hatching, this transition typically occurs 32 to 35 days later. The postlascivores then return to freshwater.

In extended culture, young prawns are captured from their native environment and allowed to grow in certain artificial bodies of water, such as rice fields. The prawns feed and develop in this area until they are collected. The juveniles are trapped from the circumstances in the water bodies in the semi-intensive culture. Next, prawns of the required size are gathered for commercialization.For intensive cultivation to produce positive outcomes, a lot of resources are needed. Here, proactive culture begins at the very beginning, i.e., with spawning, and ends with harvesting. Here, every element necessary for the growth and development of prawns is strictly controlled and monitored.The gigantic freshwater shrimp and monsoon river prawn are the two most commercially significant cultivable types of freshwater prawns in India. The enormous size, rapid development, superior food value, and customer choice of the gigantic fresh water prawn make it of utmost significance.

II. DISCUSSION

A Pearl cultivated

Oysters and other mollusks produce pearls. Pearls come in a variety of colours, including black and white, but are typically white. They are often rounded, although they may also be half-round, oval, or in other forms. Jewelry typically contains pearls. A cultivated pearl is one that was produced under controlled circumstances by an oyster farmer. The freshwater river mussels and the saltwater pearl oysters are

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two very distinct types of bivalve mollusks that may be used to cultivate pearls. When a parasite, fish assault, or other circumstance affects the exterior, delicate rim of the shell of a bivalve or gastropod mollusk, the mantle tissue becomes damaged and forms a pearl.

B Physical characteristics of pearl

Reflection, refraction, and diffraction of light from the transparent layers give pearls their distinctive brilliance. The pearl will have a greater sheen if its layers are thinner and more frequent. The overlapping of successive layers, which scatters light falling on the surface, gives pearls their iridescent appearance. The colour of pearls may also be altered to be yellow, green, blue, brown, pink, purple, or black. The finest pearls have an iridescent metallic brilliance. Since calcium carbonate is the main component of pearls, they may be dissolved in vinegar. Since the crystals of calcium carbonate react with the acetic acid in the vinegar to produce calcium acetate and carbon dioxide, calcium carbonate is sensitive to even a mild acid solution.

C Genuine Pearl

Calcium carbonate and conchiolin make up the majority of natural pearls. It is believed that a tiny invader or parasite that penetrates and settles within the shell of a bivalve mollusc causes natural pearls to grow under a certain combination of coincidental circumstances. The intrusion irritates the mollusc, which then secretes calcium carbonate and conchiolin to cover the irritant and creates a pearl sac out of cells from the exterior mantle tissue.A natural pearl's buildup typically consists of a yellowish to white outer zone made of nacre and a brown inner zone created by columnar calcium carbonate. These two distinct materials may be observed in a cross-section of a pearl. Columnar calcium carbonate found in rich organic material is a sign of juvenile mantle tissue that develops early in the formation of pearls. Living cells that have been relocated and have a specific duty to carry out may carry out that activity in their new location, often resulting in a cyst.

C Artificial pearls

Cultured pearls are the shell's reaction to the implantation of tissue. A pearl sac forms when a little portion of mantle tissue from one shell is transferred into another, where it precipitates calcium carbonate. Cultured pearls may be created in a variety of ways, including by employing freshwater or saltwater shells, transplanting the graft into the mantle or the gonad, and adding a sphere as the nucleus. The majority of cultivated saltwater pearls are developed on beads. The Akoya, white or golden South Sea, and black Tahitian trade names for farmed pearls. The majority of beadless cultured pearls, sometimes referred to as freshwater cultured pearls, are mantle-grown in freshwater shells in China.

D Creation of pearls

Natural pearls are generated mostly by accident by nature. Nevertheless, cultivated pearls are made by humans by inserting a tissue graft from a donor oyster. This causes a pearl sac to develop, and the inner side causes calcium carbonate to precipitate in the form of nacre, often known as "mother-of-pearl," on its surface. Freshwater river mussel shells are obtained in the midwestern U.S. states, from Canada to the Gulf of Mexico, and used to make cultured pearls, which is the most common and efficient technique. Due to their compatibility with the host animal and the nacre they will be coated with, shells with the common names "Washboard," "Maple Leaf," "Ebony," "Pimple back," and "Three Ridge" are often used in pearl production. These prized and premium shells are first cut into strips, then into cubes. The corners and edges are then machined to a flawless roundness and given a highly polished finish after being ground down to a rough spherical shape.

Getting the mantle tissue is the next stage once the nucleus is ready. One oyster's mantle tissue is taken out and chopped into little pieces. It's time to operate on the second oyster after getting the mantle tissue from the first oyster. To calm the oyster down, warm water is added to the tank. It is then carefully pryed open and set on a platform so that it may be worked on. The nucleus and a little bit of the mantle gland are injected via a small incision. After that, the oyster is sent to the ocean where it spends many years developing nacre to cover the nucleus. This nacre coats the nucleus in several layers, making visible layers evident when pearls are split in half [7]–[9].Aquaculture has become an increasingly important industry over the years, as wild fish stocks have declined due to overfishing and environmental degradation. With the growing demand for seafood and the need for sustainable food production, aquaculture has emerged as a promising solution.There are several different types of aquaculture systems, including open-water, land-based, and closed containment systems. Each system has its advantages and disadvantages, depending on the species being farmed, the location of the farm, and the environmental conditions[10]–[13].

III. CONCLUSION

One of the main benefits of aquaculture is that it can provide a reliable source of high-quality protein and other nutrients to communities around the world. Aquaculture can also create jobs and stimulate economic development in rural areas, particularly in developing countries. However, there are also some concerns about the environmental impact of aquaculture. Fish farms can generate large amounts of waste and can potentially contribute to water pollution if not managed properly. There are also concerns about the spread of disease and parasites from farmed fish to wild populations. To address these challenges, there has been a growing focus on developing sustainable and environmentally friendly aquaculture practices. This includes the use of low-impact farming techniques, such as recirculating systems that

minimize water use and waste, as well as the development of alternative feeds and the use of selective breeding to improve the health and performance of farmed species. Overall, aquaculture has the potential to play an important role in providing food and promoting economic development while minimizing its environmental impact.

REFERENCES

[1] M. R. Das and S. Behera, "Aquaculture," Int. J. Psychosoc. Rehabil., 2019, doi: 10.37200/IJPR/V23I5/PR190601.
[2] K. Yue and Y. Shen, "An overview of disruptive technologies for aquaculture," Aquaculture and Fisheries. 2022. doi: 10.1016/j.aaf.2021.04.009.
[3] E. Ringø, "Probiotics in shellfish aquaculture," Aquaculture and Fisheries. 2020. doi: 10.1016/j.aaf.2019.12.001.
[4] A. B. Dauda, A. Ajadi, A. S. Tola-Fabunmi, and A. O. Akinwole, "Waste production in aquaculture: Sources, components and managements in different culture systems," Aquaculture and Fisheries. 2019. doi: 10.1016/j.aaf.2018.10.002.
[5] R. L. Naylor et al., "A 20-year retrospective review of global aquaculture," Nature. 2021. doi: 10.1038/s41586-021-03308-6.
[6] W. C. Valenti, H. P. Barros, P. Moraes-Valenti, G. W. Bueno, and R. O. Cavalli, "Aquaculture in Brazil: past, present and future," Aquac. Reports, 2021, doi: 10.1016/j.aqrep.2021.100611.
[7] P. Han, Q. Lu, L. Fan, and W. Zhou, "A review on the use of microalgae for sustainable aquaculture," Applied Sciences (Switzerland). 2019. doi: 10.3390/app9112377.
[8] R. R. Gentry, H. K. Alleway, M. J. Bishop, C. L. Gillies, T. Waters, and R. Jones, "Exploring the potential for marine aquaculture to contribute to ecosystem services," Reviews in Aquaculture. 2020. doi: 10.1111/raq.12328.
[9] M. Custódio, S. Villasante, R. Calado, and A. I. Lillebø, "Valuation of Ecosystem Services to promote sustainable aquaculture practices," Reviews in Aquaculture. 2020. doi: 10.1111/raq.12324.
[10] M. N. Azra et al., "Impact of COVID-19 on aquaculture sector in Malaysia: Findings from the first national survey," Aquac. Reports, 2021, doi: 10.1016/j.aqrep.2020.100568.
[11] B. R. Shah and J. Mraz, "Advances in nanotechnology for sustainable aquaculture and fisheries," Reviews in Aquaculture. 2020. doi: 10.1111/raq.12356.
[12] W. B. Perry, E. Lindsay, C. J. Payne, C. Brodie, and R. Kazlauskaite, "The role of the gut microbiome in sustainable teleost aquaculture," Proceedings of the Royal Society B: Biological Sciences. 2020. doi: 10.1098/rspb.2020.0184.
[13] G. V. Oddsson, "A definition of aquaculture intensity based on production functions-the aquaculture production intensity scale (APIS)," Water (Switzerland), 2020, doi: 10.3390/w12030765.

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Types of Sericulture

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***Abstract*— Sericulture is the science and practise of rearing silkworms for the purpose of producing raw silk. Sericulture is a combination of the English term culture with the Greek word sericos. While there are many different species of silkworms, Bombyxmori has received the most research. While it is a cottage business based on agriculture, each individual working in it has to have some technical understanding of it. It calls for sufficient patience, the capacity to adjust to new scientific developments, etc. Sericulture, often known as silk farming, is the raising of silkworms for the production of silk. There are various commercial species of silkworms, but Bombyxmori is the one that has been researched the most and is also the one that is employed the most.**

***Index Terms*— Sericulture, Silk, Silkworm, Silk farming, Species.**

I. INTRODUCTION

The most popular kind of silk among the various varieties is mulberry silk. 90% of the world's supply of silk comes from it. This well-liked kind is made by bombyxmori silkworms, which are fed mulberry shrub. It is simple to get since it is a common kind of silk. Particularly in countries like China, Japan, and Korea, it is in great supply. The requirement for extra care to keep this kind of silk's fine texture is one of its drawbacks. Moreover, it is often acquired unethically by murdering silkworms in their cocoons and harvesting the long fibres. To learn more about this, see The Benefits and Disadvantages of Silk Production, which also discusses vegetarian silks, or "Peace Silks," in detail[1]–[3].

A Silk worm from Tussar

Antheraeapaphia, a tussar silk worm, is a member of the Saturniidae family. The tussar silk worms are the source of tussar silk. This silk, in contrast to other silks, has a distinctive light golden to dark brown colour. This is a consequence of tussah silkworms eating tannin-rich plants.

B Silk worm Muga

The semi-domesticated silk worm, Antheraeaassamens, belongs to the same family Saturniidae as the Muga silk worm. Muga is an Indian silk that is distinguished by its golden colour and glossy finish. Muga silk, along with Eri and Pat silk, is frequently referred to as Assam silk since Assamese royal family were the only ones permitted to utilise the garments made from these silkworms. The porosity of Muga silk may sometimes work against it since it prevents dyeing and restricts the use of bleach. These heavier tussahs prove that silk is one of the strongest fibres available, which makes it the perfect fabric for sofas, coats, and sweaters.

C Silk worm Eri

The farmed silkworm Philosamiarinini is the source of eri silk. It is a delicate silk that is almost as pure white as Bombyxmori. Eri is a "peace silk," even though it is made from the cocoons of farmed silk worms, since the silk caterpillars are allowed to complete their life cycle rather than being killed within the cocoon. Eri silk is spun rather than reeled since the cocoons are harmed when the moth emerges. It is often grown in China, India, and Japan and typically has the shine and softness of silk but the matt look of wool or cotton. This is the only other fully domesticated silkworm except Bombyxmori, hence its development depends on human activity.

The term "Eri," which meaning castor plant, the food that the worms eat, is supposed to have originated from the Assamese word "Era," exactly as the name Bombyx Mori. This silk is surprisingly fantastic for soft furnishings like curtains and sofas as well as clothes because of how resilient it is. The fact that such silk is heavy to wash is the sole disadvantage of utilising it. Since microorganisms may more easily adhere to its thicker layers, it could also contain them[4]–[6].

D Shellfish Silk

As the name suggests, mussels—yes, the same ones that can be found on seabeds—produce this silk. Sea Silk is another name for it. As opposed to the other varieties of silk we've covered thus far, this one is not made by silkworms. Due to the impact of pollution on its source, it is currently impossible to find this kind of silk. It ranks as one of the costliest silks to date because of how seldom it is produced. Byssus mussels, or more precisely mollusks, are employed most often in the manufacturing of this fabric, which is sometimes referred to as Byssus Cloth. This is a wonderful breakdown of the various textiles and how they vary from one another.You may be shocked to find that ancient societies have utilised spider silk for a long time, just as they have used mussel silk.

Nevertheless, unlike other varieties of silk, spiders cannot simply be grown like silkworms, making this type of silk the most challenging to create. Both spiders and silkworms are unable to create as much yarn. While making this kind of silk may appear challenging, the end result is unquestionably worthwhile. Since it is currently used to make telescopes,

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bulletproof vests, wear-resistant garments, etc., it is recognised as one of the most resilient varieties of silk.

E Plant Hosts Insects

Arjun, Asan, and Sal are the three main food plants that serve as hosts for the tasar silkworm. In addition to these, the silkworm consumes indigenous species from India's tropical area, including Phutuka, Bogori, and others. Antheraeaproylei Jolly, a temperate species of this silkworm, feeds on several Quercus species that are found in abundance in this area.Mulberry leaves are the sole plant that the mulberry silkworm will feed on throughout its whole life cycle. The morin found in mulberry leaves attracts the silkworm.Host plants for Muga silkworms include Digloti, Mejankari, Bogori or ber, Champa, Bhomloti, Patihonda, GamariPanchapa, Katholua, Gansarai, and Bojramoni. These endemic polyphagous insects feed on a variety of host plant species, formerly known as Machilusbombycina and Soalu.

Silkworm Eri hosts include plants of the Eri group, which are abundantly accessible. In addition, this area is home to a variety of wild silkworms, including Attacus atlas and Cricula species. The Eri silkworm's main source of food is castor, which is widely cultivated here. Kesseru, however, is also regarded as one of the main perennial food plants. In addition to these two, the polyphagous eri silkworm also consumes a number of other indigenous plants to this area, including Borkesseru, Barpat, Topioca, Gulancha, Gamari, and Payam.

II. DISCUSSION

A Raising and Silkworm Disease

The term "raising" refers to a continuous process that starts with egg laying and continues through egg care, aestivation, hibernation, incubation, care for early-stage larvae, care for late-stage larvae, and care for late-stage larvae until the formation of a cocoon. So, one should start with grainage technology to conduct an appropriate and methodical research of raising.

B Management of Grain

Establishing a grainage is done to maintain the original quality of the races and to provide rearers high-quality seed. By giving them the right nutrients and shielding them from disease assault, adequate care should be given to the "crop of silkworm" for seed production from the very beginning, i.e., the caterpillar stage. Initial selection is based on the proportion of pupae that die during normal development while keeping these factors in mind. Seed should not be acquired for seed production if it exceeds the limit. The first choice is made by removing the dead cocoons, and the second choice is made in the grainage.The provision of caterpillar seed to farmers comes after grainage management. Depending on the expertise of the rearers, the supply comes in two forms: eggs and larvae in their second instar. Older rearers who are familiar with the procedure may buy eggs for the raising, but second instar caterpillars should always be supplied to new and inexperienced rearers who have no knowledge of the rearing. First, second, and third instar caterpillars should be raised with great care, while fourth and fifth instar caterpillars are often raised either on hanging trays that are frequently covered in nylon nets or on the ground.

C Creation of Cocoons

The caterpillar stops eating at this time and begins to exude a pasty substance from the silk gland. Worms in this situation should be scooped up, moved to spinning trays, and then left in a sloped position facing the sun for a brief amount of time. The spinning phase of silkworm rearing concludes in three days with the formation of the cocoon.Cocoon's attributes: The raw silk output, filament length, actual ability, and splitting all affect the cocoon's quality. Post-cocoon processing is the process of getting silk thread from a cocoon. Stifling and reeling are examples of this.

1. Stifling: The phrase "stifling" refers to the killing of the cocoons. Seri cultivators should take great care to choose healthy, large cocoons that are 8 to 10 days old for further processing. These cocoons should then be placed in hot water, steam, or dry heat, exposed to the sun for three days, or fumigated. Pupae or cocoons are destroyed in this manner. The silk strands can be more easily untangled when the cocoon is killed in boiling water because the weakening of the outer threads' stickiness allows them to separate more easily.

2. Reeling and spinning: Reeling is the process of extracting the threads from the dead cocoon. The loose ends of four or five of these cocoon's threads are threaded through eyelets and guides, twisted into one thread, and spun around a large wheel before being coiled onto spools. As a result, the silk produced on a spool is sometimes referred to as reeled silk or raw silk.

After being teased and removed from the damaged or waste outer layer, the threads and cocoons are spun. Spun silk is the name given to this spun silk.

1. Moth emergence and fertilisation: When adults are maintained for mass emergence at room temperature, adult emergence occurs. As is natural for them, the male moth begins to circle the female as soon as it emerges. The females, who are carrying eggs, are unable to fly, although the males are quite active. Males begin copulating with females if they are not immediately separated in cages, however the eggs produced when this female mates with a male of the same stock are worthless for the seed. Thus, it is necessary to separate the men and females into different cages shortly after their emergence to prevent mating. One girl from one lot is now kept with the guy from the other lot, and immediately they form a couple and have a 3 hour long sexual encounter. Males should be separated once mating is over so they may be utilised to fertilise other females. Nevertheless, a man can only fertilise two females at a time. Females who have been fertilised are now required to deposit eggs.

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2. Egg laying: A female begins egg laying immediately after fertilisation, and she finishes the process in 24 hours. One female may produce 400 to 500 eggs at a time, depending on the race. After depositing eggs, the female dies. SEED is the name given to these eggs. In laboratories, these eggs are housed on sterile trays and held at 40°C under diapause conditions; sometimes, these eggs are preserved at hill stations.

3. Hatching: The larvae begin to eat ferociously as soon as they hatch, making this a crucial stage in the sericulture process. So, only those sericulturists who could provide the young, newly born larvae with a enough quantity of fresh mulberry leaves could carry out a successful sericulture programme; otherwise, the young would perish, which would be a significant loss to the sericulture sector. Because of this, the hatching has to be regulated, sped up, or delayed via artificial methods in a refrigerator. Advanced strategies have been devised to ensure optimal seed germination, including the collection of eggs and their retention with mulberry leaves that act as a stimulant for germination in shady locations on white sheets of paper in insect-proof trays on stools. In order to prevent insects from crawling and damaging the developing eggs, the stool's legs must be submerged in water for this reason. It is also noteworthy that not all of the eggs will hatch if they are left in the same location in which they were deposited. Thus, it is recommended that the eggs stored on trays be shifted using a feather. It is best to keep apart the group of caterpillars that hatched at distinct stages. So, it is important to take care that hatching occurs during the best mulberry season.

4. Data from experiments on egg laying and hatching

If eggs are held at 100°C for 24 hours after 120 minutes of oviposition, they are then moved to an oven at 160°C for 4 days, after which they are further steeped in hydrochloric acid for 5 minutes.Several diseases affect the sericulture industry in South East Asian tropical areas. The illnesses that severely harm this sector include flacherie, polyhedrosis, pebrine, and maggot sickness. While it is not very frequent, cigarette and muscardine poisoning are also said to be dangerous.

A. Maggot Illness

Tricholygasorbillans, a fly from the order Diptera and family Techinidae, is the culprit behind this sickness. It is sold in China, Vietnam, Thailand, Korea, Japan, Korea, and India. A sign of this illness is the appearance of tiny, white, cylindrical eggs on the skin of silkworm larvae. The fly may lay as few as a few or as many as fifty eggs on a silkworm larva, but often just two or three. 30 to 40 hours after the eggs are laid. On the ventral side of the egg shell and on the silkworm's skin, the maggot creates a hole. As a result, the maggot enters the body of the silkworm larvae and begins to consume its tissues. The large black mole appears on that area of skin as soon as the maggot enters the larval stage. The affected larva becomes lethargic and loses hunger as a consequence of the swelling and bending of the segments where the maggot is present. Typically, the maggots target the fourth and fifth stadiums. The larvae are often not able to reach the pupal stage after being assaulted up to the fourth stade before creating a cocoon.

B. Pebrine

One of the deadliest illnesses of silkworms is this one. In all the nations participating in this business, sericulture was originally harmed by this illness, but some of these nations have now conquered it and obtained pebrine-free silkworm eggs for reeling cocoons. The sporadic causative microorganism of this illness is NosemabombycisNageli, which is a member of the Microsporida. The mother's ovary or the mouth of the larvae during feeding period are the entry points for the infection. New spores that have grown in the silkworm's alimentary canal tissues are expelled with the faces and become a cause of infection. New spores, which grow in the silkworm's alimentary canal tissues, are released with the excrement and serve as a source of infection.

Two nuclei contained in the sporoplasm are separated into four nuclei as the spore enters the silkworm's digestive system, and at the same time, the polar filament extends and reaches the cells of the alimentary canal. They also enter the blood and swim there. They invade different tissues throughout the host body, focusing on fat bodies and organs while avoiding chitinous tissues and cell nuclei; when the hypoderm is attacked and its cells die, the damaged area becomes black as a result of melanin synthesis. The silk gland or the surface of the alimentary canal are where the milky white spots or stains are seen within the body. When eggs are severely infected, the whole yolk almost becomes completely filled with the microorganisms, which causes the eggs to die. In contrast, when there is just a minor infection, the eggs hatch, but the infected larvae pass away during the third moult without creating a cocoon.

1. Mother moth examination: Each moth that is generating eggs should be thoroughly inspected one by one, and only eggs deposited by healthy moths should be kept for future use. The undesirable eggs should be destroyed by burning.

2. Forecasting and correcting examination: The seed cocoon eggs are subjected to forecasting and correcting exams in order to increase the reliability of the pebrine examination.

3. The faeces of adult larvae, late-molting larvae, dead larvae, cocoons or pupae, and moths hastened to emerge from cocoons are the materials used for predicting studies. A few eggs from each reproductive egg batch are selected and incubated for the corrective examination. As a result, emerging larvae are employed as the material for the investigation of pebrine germs.

4. Elimination and disinfection of pebrine germs: If the atmosphere is humid, pebrine spores may persist for a long time in a typical style of raising chamber. In order to get rid of pebrine sick eggs, infected larval carcasses, pupae, dead moths, and cocoons, as well as diseased larval faeces and other debris, raising rooms, tools, and other utensils should

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first be cleaned and washed. Treatment with 2% formalin for 30 minutes, 0.5% sublimate for 5 minutes, 5% chlorinated lime for 30 minutes, current steam for 30 minutes, and summer sun for 7 hours may all kill pebrine spores.

5. Attention to silkworm rearing: When silkworms are raised in dry and cold circumstances as opposed to hot and wet ones, pebrine spore invasion has been reported to occur more often. Care should be given on these points during the selection process by the rearers of the seed cocoons since the pebrine infection is severe if the larval period lengthens.

C. Silkworm Polyhedrosis

1. Nuclear polyhedrosis is a condition in which the nuclei of cells in fatty tissues, cutaneous tissues, muscles, tracheal membranes, basement membranes, midgut epithelial cells, and blood corpuscles develop polyhedral structures. The polyhedral are often hexagonal and seldom tetragonal in form and contain many viruses. The bodily fluid with the polyhedron. In the rearing chamber, the virus that is already within the polyhedron retains its pathogenic potential for many years, whereas an isolated virus loses that potential quickly.

2. Intestinal cytoplasmic polyhedrosis: In certain instances, this sort of polyhedral structure may also develop in the goblet in addition to the cytoplasm of midgut cells. There are several viruses in this disease's polyhedron. The polyhedral and midgut-ruptured infectious cells are discharged into the gut. As a result, the ejected faeces become white and are rich in polyhedra.

3. Intestinal nuclear polyhedrosis: In this condition, the virus creates polyhedra inside the cytoplasm and nucleus of the spherical cells that make up the midgut. Large polyhedra are created as a result of this illness. Diarrhea, bodily shrinking, and a transparent cephalothorax are further signs of this illness. Nuclear polyhedrosis has a similar infection mechanism and treatment options.

D. Flacherie

Certain illnesses that affect silkworms and cause their carcasses to decay owing to bacterial assault are known genetically as flacherie. The divisions of flacherie are as follows:

1. An infectious flacherie brought on by a particular virus Loss of appetite, transparent cephalothorax, vomiting, and diarrhoea are some of the symptoms of flacherie, but the true diagnosis can only be determined after microscopic examination of the virus.

A round virus that does not develop polyhedral structures in the bodies of silkworm larvae is the disease's pathogen. The virus grows in the tissues of the midgut, releases into the gastric fluid, and is expelled with the infected faces. The virus infects silkworm larvae orally.

The best defence is to choose resistant silk worm strains.

Tools, equipment, and utensils used for raising should be well cleaned. High grade mulberry leaves should be offered to preserve the silkworms' excellent health. Rearing rooms should be kept at a comfortable temperature and humidity level. The dead corpses, infected larvae, and faeces need to be stacked in the compost. This virus could be treated with several substances like formalin, chlorinated lime, and hydrochloric acid.

2. Stomach damage brought on by silkworms' physiological disruption followed by bacterial growth. The digestive physiology of mulberry leaves has changed as a result of the availability of poor-quality mulberry leaves. As a result of the disruption to the silkworm's digestive system, the bacteria in its stomach cavity multiply. Hence, this condition is primarily caused by the interaction of physiological abnormalities and bacterial activity in the gut.

Bacteria like Streptococci sp. Coli aerogenous bacteria or proteus group bacteria attack the fragile silkworms in poor climatic conditions.Maintaining proper conditions for silkworm rearing is one of the management methods against this illness.

3. Bacterial toxicity BacillusthuringiensisVar, a toxin produced by certain bacilli, is the culprit of this illness. The poison knocks out the larvae it attacks, which subsequently soften, become black, and eventually rot off. Orally acquired infections may maintain their toxicity for up to seven years.

Cleaning the raising chamber and the equipment is one of the countermeasures.

4. Septicaemia: This illness is brought on by bacterial infections such as Bacillus megatherium, B. proteus, B. prodigiosus, and B pyocyones in silkworm blood. While this illness is present in the larval stage, it severely harms the pupae and the moths when they are producing eggs. The skin wounds are the source of the infection.

It is a fungus that causes silkworm illness. There are many muscardines that influence silkworm, but only green muscardine has been shown to have an impact on silkworm larvae in Vietnam. The third and fourth stages of the silkworm might show signs of illness. A large black mark is seen on the ventral side in the early stages.In the blood, the green fungus tubes mature into mycelia, which carry cylindrical spores that are later detached from mycelia and grow into new mycelia that once again produce cylindrical spores. As a result, this fungus attacks every organ of the silkworm, interfering with how they normally work. As a consequence, the sick larvae do not shed their skin and eventually perish.

Reeling and Fiber Technology

Reeling is the process of extracting the threads from the dead cocoon. The loose ends of four or five of these cocoon's threads are threaded through eyelets and guides, twisted into one thread, and spun around a large wheel before being coiled onto spools. As a result, the silk produced on a spool is sometimes referred to as reeled silk or raw silk. After being teased and removed from the damaged or waste outer layer, the threads and cocoons are spun. Spun silk is the name given to this spun silk. To create the renowned sheen on the thread,

the raw silk is further boiled, stretched, and cleansed using acid or fermentation. Then, it is meticulously washed over again.Reeling and spinning have been modernised via automation and different labor-saving techniques, opening up new opportunities for this cottage sector globally.

Bomyxmori, the mulberry silkworm, life cycle. Bombyxmori adults are around 2.5 cm long and have a light, creamy white colour. The female moth is unable to fly due to her hefty bulk and weak wings. This moth has a relatively brief lifespan of about two to three days and is unisexual in nature. Fertilization: Copulation occurs before internal fertilisation. Immediately upon emergence, male moths mate. Male moths copulate with females for two to three hours just after emerging, and if they are not separated, they risk dying a few hours later.

After copulation, females immediately begin to deposit eggs, which they finish in one to twenty-four hours. Depending on the weather and the availability of food for the caterpillar from which the female moth is derived, one moth may lay 400 to 500 eggs. The female moth's gelatinous fluid covers the eggs, which are usually laid in clusters and aid in correct attachment. After 10 days of incubation, the egg begins to develop into a caterpillar larva. The most crucial stage of a silk moth's existence is hatching. Caterpillars require a constant supply of food when they hatch since they are voracious eaters. The growth of the caterpillar would not proceed as it should if a sufficient quantity of mulberry leaves were not available. Young caterpillars may sometimes perish from a lack of nourishment, which causes significant damage to the sericulture sector. According to records, eggs laid by the uni-voltine race take one month to hatch.

Caterpillar: The freshly emerged caterpillar has a delicate, yellowish-white colour and is around 0.3 cm in length. The caterpillars have well-developed mandibulate mouthparts that are designed to allow for simple feeding on mulberry leaves. The abdomen section of the caterpillar, which comprises 10 segments and five pairs of pseudolegs, is divided into twelve segments. In the anal segment, it is additionally equipped with a little dorsal horn. The first instar larva can only eat the very fragile leaves of mulberry trees since it is so delicate. Due to their ravenous appetites, they develop quickly, which is seen by the four moultings during which the caterpillars transform into their respective second, third, fourth, and fifth in stars. Between 21- and 25-days pass after hatching. The caterpillar is 7.5 cm long when fully developed. It grows salivary glands, stops eating, and goes through the pupation process. The length of time it takes a caterpillar to fully develop from the juvenile to the fully grown stage depends on the temperature, humidity, food availability, and race. A fully developed caterpillar weighs between 4 and 6 grammes[7]–[9].

Pupa: The caterpillars stop eating, travel to a leafy nook, and then release a gooey substance via a silk gland. The fluid that is being produced leaves the spinneret in the shape of a long, thin thread of silk that solidifies and forms a cocoon around the caterpillar's body.The pupa's white-colored bed, known as the cocoon, has uniform inner strands but uneven exterior threads. Around 1000–1200 metres of continuous thread, which takes a caterpillar three days to produce, are produced by the creature in preparation for the development of the cocoon. Concentric circles of thread are woven around the cocoon. The caterpillar's head continuously rotates from one side to the other at a pace of 65 times per minute to create the fascinating and quick-moving phenomena of binding threads around the cocoon. The silkworm pupa is now enclosed in a substantial, oval cocoon made of white or yellow silk. According to statistics gathered via actual use, 2500 cocoons may provide one pound of silk[10]–[13].

The silk gland of the silkworm secretes silk, a pasty substance. The modified salivary glands, which are long and sac-like, are what make up the silk gland. Its pasty fluid hardens as it comes into touch with air, forming sturdy and bendable silk stands. The two cores of fibroin are created by this secretion: a gelatinous protein that is easily soluble in warm water, and a tough elastic insoluble protein that makes up 75% of the weight of the fibre and is cemented together with sericin at the time of secretion from the middle region of the silk gland. Wax and carotenoid pigments are also found in small amounts. The silk strands range in diameter from 0.0045 to 0.0082 cm. Its 20% elasticity is discovered.

III. CONCLUSION

The production of woven textiles and knitted fabrics from raw silk is used to create items like clothing, parachutes, and parachute cords, fishing lines, sieves for grain mills, insulating coils for phones and wireless receivers, and racing car tyres. This material is used to create a variety of textiles for clothing, including plain, twill, stain, crepe, georgette, and velvet. It is also used to create knitted items like vests, gloves, socks, and stockings.

REFERENCES

[1] K. K. Jaiswal, I. Banerjee, and V. P. Mayookha, “Recent trends in the development and diversification of sericulture natural products for innovative and sustainable applications,” Bioresource Technology Reports. 2021. doi: 10.1016/j.biteb.2020.100614.

[2] K. Alam, V. S. Raviraj, T. Chowdhury, A. Bhuimali, P. Ghosh, and S. Saha, “Application of biotechnology in sericulture: Progress, scope and prospect,” Nucleus (India). 2022. doi: 10.1007/s13237-021-00355-2.

[3] P. Tzenov, S. Cappellozza, and A. Saviane, “Black, Caspian Seas and Central Asia Silk Association (BACSA) for the Future of Sericulture in Europe and Central Asia,” Insects. 2022. doi: 10.3390/insects13010044.

[4] Z. I. Buhroo, M. A. Bhat, M. A. Malik, A. S. Kamili, N. A. Ganai, and I. L. Khan, “Trends in Development and Utilization of Sericulture Resources for Diversification and Value Addition,” Int. J. Entomol. Res., 2018, doi: 10.33687/entomol.006.01.2069.

[5] B. Srinivas, K. Kumari, H. Goverdhan Reddy, N. Niranjan, S. A. Hariprasad, and M. P. Sunil, “IoT based automated

sericulture system," Int. J. Recent Technol. Eng., 2019, doi: 10.35940/ijrte.B1801.078219.
[6] S. S. Fometu, G. Wu, L. Ma, and J. S. Davids, "A review on the biological effects of nanomaterials on silkworm (Bombyx mori)," Beilstein J. Nanotechnol., 2021, doi: 10.3762/BJNANO.12.15.
[7] S. K. Dewangan, "Livelihood opportunities through sericulture a model of gharghoda tribal block, Raigarh dist," Am. J. Environ. Sci., 2013, doi: 10.3844/ajessp.2013.343.347.
[8] S. Nandhini, A. Rohini, D. Murugananthi, and V. Anandhi, "Entrepreneurial Behavior of Sericulture Farmers in Tamil Nadu," Curr. J. Appl. Sci. Technol., 2020, doi: 10.9734/cjast/2020/v39i2830934.
[9] A. Merat, M. S. Allahyari, A. Seidavi, and W. Hubbard, "Factors influencing the adoption of sericulture by farmers in Guilan Province, Iran," AIMS Agric. Food, 2018, doi: 10.3934/agrfood.2018.1.26.
[10] G. K. Rohela, P. Shukla, Muttanna, R. Kumar, and S. R. Chowdhury, "Mulberry (Morus spp.): An ideal plant for sustainable development," Trees, Forests and People. 2020. doi: 10.1016/j.tfp.2020.100011.
[11] S. K. Dewangan, "Economics of Sericulture - A Study of Raigarh District—Chhattisgarh –India," Int. J. Res. Appl. Sci. Eng. Technol., 2018, doi: 10.22214/ijraset.2018.1086.
[12] N. Nazim, Z. Buhroo, N. Mushtaq, K. Javid, S. Rasool, and G. Mir, "Medicinal values of products and by products of sericulture.," J. Pharmacogn. Phytochem., 2017.
[13] A. Habiyaremye, "Estimating the impact of sericulture adoption on farmer income in Rwanda: an application of propensity score matching," Agrekon, 2017, doi: 10.1080/03031853.2017.1361853.

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Species of Apiculture

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***Abstract*—Beekeeping, also known as apiculture, is the human maintenance of honey bee colonies, sometimes in hives constructed of artificial materials. Bees are maintained by beekeepers for a number of purposes, including the production of bees for sale to other beekeepers, honey gathering, agricultural pollination, and the production of bees for use in hives. An apiary, sometimes referred to as a "bee yard," is a location where bees are kept.**

***Index Terms*— Apiculture, Beekeeping, Bees, Colonies, Species**

I. INTRODUCTION

The largest Indian species, Apisdorsata, sometimes referred to as the rock bee, averages around 20 mm in length. It creates enormous comb on tree branches, in tunnels, or underneath the roofs of large structures. Since they migrate to the hills in June and July and then return to the plains in the winter, they are migratory species. They have been found up to a height of 3,500 feet above sea level. This variety hasn't been successfully hived yet. The behaviour of this type is being studied in an effort to domesticate it. This variety of Indian bees makes the most honey. The annual yield per colony may sometimes reach 30 kg. This bee is notorious for its rage and inclination to attack everyone who approaches its hive in large groups, which might be fatal[1]–[3].

The "little bee," or Apis florae, is a miniature variation of the rock bee. It is seldom seen over 1000 feet above sea level since it is a plain species. It produces tiny combs on tree branches, in bushes, or behind building walls. This kind of honey yields very little and doesn't make up for the labour expenditures involved in making it.The plains and woodlands of India are where one may most regularly see Apisindica, also known as the Indian bee. It comes in a variety of regional strains, with the three main varieties being plain, transitional, and hill. Pironi grows all along the ridge between 3,000 and 4,000 feet in height, although Picea strain grows in slopes up to 7,000 feet in elevation. Up to 1,500 feet in height, a straightforward variety of lighter indica may be found. It builds several parallel combs in safe spaces like tree hollows, caves, rock fissures, and other similar cavities. Because of their tranquil demeanour and normal 3 to 5 kilogramme annual honey output. These are some of the best Indians each colony employs in fictitious situations each year. The European bee, Apismellifica, is a very widespread insect across all of Europe. This bee's habitat is similar to that of Apisindica. This bee comes in a variety of strains and varieties, but the Italian variety is the best. Between 100 and 400 pounds of honey are typically produced yearly by each colony. In India, this bird has not yet been extensively tamed.

Indian bees generate far less honey than bees from South Africa or Italy. The South African yield of 100 kilogramme per hive is nearly twelve times more than the Indian average of 4.5 kg per hive per year. Cross-breed research are now being conducted on the Palampur campus of the Punjab Agricultural University. 51 kg of honey were generated by the hybrid swarms of Indo-Italian ancestry each hive. All of them, however, are in the experimental stage, so for the time being, all we can do is anticipate an apiculture with a more hopeful future. A Habit and a Habit Honey bee are highly socially organised insects that may be found all over the world. Although being active all year long, they don't rear their brood in the winter and are less active. In the spring, when the flowers blossom, the bees establish a strong colony with honey-filled combs. They have great polymorphism and work division. There are a lot of bee colonies, each with thousands of bees, hanging from the ceilings and tree branches. The Waggle Dance, often known as the "Language of the Bees," is a phenomenon where the workers communicate about the locations of food supplies. Renowned scientist Kari Von Frish first described this phenomenon. According to him, the distance from the meal closely correlates to the pace of the dance.

A Experience in Life

After mating, the queen usually only produces one egg per brood cell. The eggs are often connected to the bottom of the cell, are cylindrical in form, and have a pinkish hue. Both fertilised and unfertilized eggs develop into larvae. Consequently, the workers are created from the larvae of the fertilised eggs while the drones are formed by the larvae of the unfertilized eggs. One of the worker larvae is fed royal jelly—a special diet produced by the colony's young workers—and develops into the colony's queen. The workers' mouths are filled with the royal jelly, which is made up of digested honey and pollen. The cell is shut and the larvae go through pupation after five days of eating. A thin, silky cocoon is spun by the insect, and it fully pupates. After three weeks, the little ones emerge, and for the next two to three weeks they are occupied with interior chores. They are afterwards assigned to outside tasks. All bees undergo a full metamorphosis, with the numerous life cycle modifications occurring within the comb.

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Swarming: The act of the queen fleeing the colony is known as swarming. The actual reason of swarming is still unknown; however, it often occurs towards the end of spring or in the early summer. In the summer, when there is an abundance of food and the hive is overrun with bees, the queen departs the hive on a beautiful forenoon with some elderly drones and workers and starts a new colony somewhere else. A worker is now administered royal jelly in the previous hive and transformed into a new colony queen. Since it is a natural rule in the hive, the new empress of the colony will never allow her successor, thus she gives the order to murder any other sisters who may be present.

Supersedure: The act of replacing an old queen with a new, young, and healthy queen is known as supersedure and occurs when the old queen's ability to lay eggs is lost or when it dies abruptly.Absconding: Due to certain unfavourable living circumstances, such as the destruction of the comb by termites or wax-moths and a lack of nectar-producing flowers nearby, the whole colony will migrate from one location to another. The swarming phenomena is quite unlike to this one.

B Control of Honey Colonia

The honey bee colony has a very well-organized system of labour division. A healthy bee colony comprised between 40 and 50 thousand members, divided into three castes: the queen, drones, and workers. Both fertilised and unfertilized eggs are laid by the queen. Male bees known as drones are born from unfertilized eggs, whilst worker bees are born from fertilised eggs. The labourers become queens when they consume royal jelly.

The queen is a very fertile female with highly developed ovaries. Each colony typically has one queen, and she feeds on royal jelly. Being the mother of the Colony, she is the queen in actuality. She is protected by many attendants and never given any responsibilities other than egg-laying. During her whole active existence, the queen only has one job: egg-laying. The queen is 15 to 20mm in length and may be identified by her small legs, long tapering abdomen, and wings. She is structurally unable to make wax, honey, or collect pollen nector. Ovipositor and cum sting work together to create a structure that facilitates egg laying.

According to legend, the queen only mates once in her lifetime, but in that one opportunity, the drone releases 2 crore sperms, which are enough to fertilise the eggs laid by the female during her lifetime. Just 55 of the 110 queens in recent American studies that were mated twice before egg laying. A queen willfully produces both viable and infertile eggs; however, the reasons for this selective behaviour are yet unknown. Between 1,500 and 2,000 eggs are laid by a queen in a single day, depending on seasonal variations and other ecological conditions.

Workers: Although being the smallest of the three castes, the workers serve as the primary spring of complex machinery, such as a honey bee colony. They, too, are created from the queen's viable eggs, dwell in a space known as the "Worker Cell," and are produced similarly to the queen. The growth of an egg into an adult takes 21 days, and the lifespan of a worker is around 6 weeks. The atrophid female workers give up their lives to ensure the colony's survival. Only the workers carry out all of the colony's interior and outdoor tasks. They are thus given certain unique structures for specific tasks. Long proboscis used for nectar sucking. Powerful fanning wings. Pollen baskets used for pollen gathering. Strong string to repel any assault on the settlement. Wax gland that produces wax [4]–[6].

The workers that do outside tasks gather the nectar, pollen, wax, and water that the house bees correctly receive and store. For some tasks, the indoor employees are further divided into subgroups. Although others care to the nursery known as NURSERY BEE, some of them, who are really genuine, visit the queen. Some are known as BUILDERS and create wax for the construction of the new hive. The REPAIRERS are in charge of fixing the comb. The CLEANERS purge the hive of the dead corpse and other contaminants. In the hive, the FANNERS' wings are used to fan the air. The staff also do a number of other tasks, such as honey storage and ripening. In the entryway, the guard bee is always on guard. It is estimated that employees undertake indoor tasks for up to half of their lifetime before transitioning to outdoor tasks.

Drone: The drone, a male honey bee colony member who fertilises the queen, is referred to as the colony's monarch. From the egg to the adult stage, they develop over the course of 24 days. Despite the lack of sting and wax glands, males have highly well-developed reproductive systems. They are grown in large DRONE CELLS from an infertile egg. Drones have been seen pleading with employees for honey and are completely reliant on them. The drone's primary responsibility is to fertilise the unmarried queen. The drone follows the queen during swarming, copulates, and then perishes.

C Enemies of bees and their control

Bee enemies hurt the colony in a variety of ways, therefore they have drawn a lot of attention in various parts of the nation. The common enemies of honey bee comb and honey include the wax moth G.mellonella&A.grisella, wasp black antscomponotuscompressus, bee eaters, etc.

D Enemy honeybees include:

1. Wax moth: It is one of the bee colony's most significant adversaries, inflicting substantial harm, especially to weak colonies. The propolis, pollen, and wax in the combs serve as food for the caterpillars, who reside in the silken tunnels produced by the bees. The first sign of an assault is the appearance of loose, loosened particles in the hive. When the infestation is severe, the comb will be wrapped in silken webs made of the many, dark caterpillar faeces. Regular inspection of the hive, thorough cleaning of all cracks, and removal of any debris may all help to manage the pest.

2. Ants: The bee's deadly adversaries are the red and black ants. They attack vulnerable colonies and steal the honey,

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pollen, and young. Ants may be repelled by placing ant pans at the base of the stands or by placing oil bands over the stands.

3. Wasp:

It waits at the hive's entrance, captures bees as they emerge, and macerates them so that it may give the juice to its young. The wasps may be kept from perching close to the entrance by narrowing the hive's alighting board. Other pests that harm honeybees include birds, the wax beetle, and the deadly head moth.

E Honey Extraction and Processing

Bee selection for apiculture:

The following should be kept in mind while choosing honey bees for apiculture since they are crucial for maintaining a successful apiary:

Honey bees should have a calm disposition. Honey bees should be able to build a robust colony. It ought to be able to defend itself against adversaries. Workers for honey bees should be motivated and productive. Employees may drink the juice of many different kinds of plants. In general, bees may continuously generate more honey from their comb.

Bees may simply build their comb anywhere.

The best bee for apiculture industries is Apisindica due to its gentle nature and having productive and efficient workers. Genetic research scientists working in apiculture are currently attempting to identify such cross races that would not be of a ferocious nature but be a good honey producer in India.

F Techniques for beef keeping:

Obtaining more and more pure honey is the ultimate goal of beekeeping. The traditional approach used by veteran apiculturists is quite inhumane, brutal, and unplanned in nature. This traditional technique is known as an indigenous technique.

G Indigenous Approach

1. Hive: In the traditional way of raising bees, there are two kinds of hives: the wall or fixed hive and the mobile hive. A permanent hive or a wall Due to the fact that the bees prepare the hive in any location on a wall or tree, the comb is entirely natural. Bees exit the hive via an aperture on one side of the structure. A portable hive it consists of hollow wood logs, empty boxes, clay pots, and other items arranged on front porches of homes. There are two holes; one is for bee entry and the other is for bee exit. Typically, the swarming bees arrive to the box of their own will. In the past, some beekeepers would gather swarm clusters off a tree and preserve them in the hive.

2. Honey extraction: To extract honey, a blazing fire is set close to the bee colony at night, which either kills the bees or causes them to flee. Further, the honey-filled hive is taken out, divided into pieces, and pressed to extract the honey. Smoking is sometimes done to help bees get out of their hives.

3. Cons of the native approach: Due to a variety of disadvantages, the modern panel does not endorse the traditional way of beekeeping. These shortcomings are: Since the brood cells, pollen cells, honey cells, and larvae are also extracted during the squeezing process, honey becomes impure. When the eggs and larvae are killed when the colony is squeezed, it becomes feeble. The yield is impacted because the escaped bees need more energy to build a new colony. It is possible to regulate the behaviour of the bees. The presence of bees in the same area at the same time is purely accidental. The hive is readily impacted by honey thieves including rats, ants, wasps, and monkeys. There is no chance for the best to be chosen if the race enhancement programme is not used. Hazards brought on by climate variables are uncontrollable.

H Modern Apiculture Technique

An improved approach based on scientific facts has been created to address the shortcomings of the traditional method. It has ushered in a new era for India's cottage economy and provided thousands of jobless people with a way to keep themselves occupied. This cottage industry initiative may not have a negative impact on ordinary agricultural operations. First and foremost, attention was paid to the hive's texture, and during this race, hive patterns were introduced to India. In south, east, and central India, the Newton type, which has 7 to 10 frames in the brood chamber with a shallow super, has been the most often used. In Himachal Pradesh, Jammu and Kashmir, and Punjab, the Longstroth hive with 10 frames has served as the conventional hive. Another sort of hive, which emerged at the Jyolikote apiary and had eight frames, has been used in Uttar Pradesh. The Indian Standard Institute standardised the hives of small and large sizes accommodating frames of 21 14.5 cm and 31 20.4 cm, respectively, after accumulating experience with the aforementioned hives.

Nowadays, a common kind of moveable hive is built that may expand or reduce in size according on the location, time of year, and climatic circumstances.Since honey bees consume the nectar, pollen, and cane-sugar-containing secretions of flowers, mix them with their saliva, and then subject them to the action of enzymes, one should not assume that honey is a direct plant product. Cane sugar is now transformed into the invert sugars dextrose and levulose. Bee-related substances are now being added to the mixture, lowering the water content. After the honey has reached the hive, the whole mixture is subsequently gathered in the honey sac. This substance, which is known as the honey, is regurgitated in the hive cell when the honeybee approaches the hive. Now, honey is concentrated by a powerful air current created by the worker's wings beating quickly as they crawl over the cells.

I The Part Honey Bees Play In Pollution

The term "pollination" is often used to refer to the service of delivering bees to pollinate agricultural plants since the honey bee is the most significant insect that carries pollen

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between flowers and between plants.As a flower is pollinated, pollen grains—the male sex cells of the flower—are moved from the anther, where they are formed, to the stigma, the receptive surface of the female organ. The term "pollination" is often used to refer to the service of delivering bees to pollinate agricultural plants since the honey bee is the most significant insect that carries pollen between flowers and between plants. In the Midwest, this function is more crucial than ever since there are more acres of crops that are pollinated by insects than there are bees of all types that can do the pollination. The projected number of bee colonies has declined sharply in several areas in recent years. For instance, it is projected that fewer beehives were present in Illinois in 1984 than there were in 1964 (101,000 hives). Compared to some of the prior, bigger estimates that could have been more a reflection of state pride than reality, these two numbers are probably considerably more realistic. Growers in any state can no longer presume that there are enough bees around to yield the greatest possible harvest from insect pollinated plants because of the decline in bee populations.

For numerous reasons, honey bees are effective pollinators. Their hairy bodies collect pollen and transport it from blossom to bloom. The bees often visit flowers in great numbers to collect the nectar and pollen that they need to feed their larvae. They achieve this by focusing on a single kind of plant at a time, making them effective pollinators. Because of their size, they can pollinate flowers of all sizes and shapes. The ability to control bee populations to become large increases their capacity for pollination. Also, the number of colonies may be expanded as necessary, and colonies may be relocated to the ideal place for pollination.

J Hive

The phrase "hive" or "comb" refers to the honey bees' home. It is made up of wax-filled hexagonal cells that are produced by the worker's abdomen. These hives are suspended vertically from a rock, a structure, or tree branches. Thousands of delicate hexagonal cells with thin walls make up each hive. These cells are organised in two opposing rows on a shared basis. The hives are repaired using the resins and gums that plants release. The lowest and middle cells of the hive, known as the "BROOD CELLS," are often occupied by the immature stages. Brood cells of A. dorsata are comparable in size and form, although they come in three different varieties in other species: worker cells, drone cells, and queen cells. Although the other cells may be utilised again, the queen cell cannot. The adults, which often cluster or move around on the surface of the comb, are not housed in any distinct cells. Particularly in the top part of the comb, the cells are mostly used for the storage of honey and pollen, while those in the bottom section are used for brood raising[7]–[9].

II. DISCUSSION

While honey bees may go quite a distance to gather nectar and pollen, the flora for apiculture is equally crucial. The vegetation may be either natural or domesticated. Neem, Jamun, and soapnutect. Are the plants that produce the most nectar? The other plants, including sorghum, roses, and maize, are excellent providers of pollen. Several plants, including those that produce plum, cherry, apple, sheesham, coconut, guava, and mustard, are excellent providers of both nectar and pollen[10], [11].

Honey storage: After a protracted period of time in a preserved state, honey may be granulated and fermented.

Honey granulation: Honey that has been preserved for a long time starts to become granular. The greatest indication of genuine honey is this kind of granulation feature. It is believed that crystals develop when one component of water and ten parts of dextrose mix. Levulose has a hazy look because it is less soluble and does not crystallise. The key factors that speed up crystallisation include the presence of tiny air bubbles, colloids, and pollen.

Honey fermentation: Honey is fermented after it has crystallised. Dextrose crystallisation releases 9% of its moisture, which dilutes the remaining levulose in the honey and allows yeasts found in the air, flowers, and soil to act on it to cause honey to ferment. Honey has medicinal significance since it is gently laxative, antiseptic, and sedative and is often used in Ayurveda and Unani medical systems. It is quite effective in increasing haemoglobin levels in the blood and is also used as a blood purifier, a cough, cold, and fever preventative, and a treatment for ulcers on the tongue and in the alimentary canal. For severe heart attack instances, its frequent usage is advised for diabetes, indigestion, and malnutrition. Also, it has been shown that honey may destroy typhoid bacteria in 48 hours, branchio-pneumonia germs in 4 days, and dysentery germs in 50 hours. Other uses Honey is utilised in many other contexts besides as food and treatment. It is used in the baking of bread, cakes, and cookies. It improves their ability to preserve. Alcoholic beverages often include a large quantity of honey. Honey is often utilised in the poultry and fishing sectors. In laboratories, honey is used to promote plant growth, bacterial culture, clove seed inoculation, insect food, and the creation of fruit fly poison baits.

Insects with a high level of social organisation, honey bees have been seen all over the globe. Although being active all year long, they are not as active in the winter and do not raise their brood. As the flowers bloom in the spring, they build a robust colony with honey-rich combs. They have excellent division of work and polymorphism. A particularly important byproduct of the beekeeping business is beeswax. It has a yellowish to greyish brown colour and is totally soluble in ether but insoluble in water. Since beeswax is also a natural secretion of the worker bees and is released in thin, fragile scales of flakes, it is sometimes mistakenly believed that honey bees transform pollen into beeswax. Only changes in

these elements' proportions account for the differences between the different beeswaxes. As Apisdorsata bees produce and export large amounts of beeswax, Indian Standard Institutes have established standards for pure beeswax to promote export. For Catholic churches, face cream, paints, ointments, insulators, plastic products, polishes, carbon paper, and many other lubricants, beeswax is a key ingredient. Moreover, it is used in laboratories for microtomy with regular wax to create tissue blocks [12], [13].

III. CONCLUSION

Apiculture, sometimes known as beekeeping, is the practise of growing honeybee colonies, frequently in hives. It may be done for the collection of honey and beeswax, agricultural pollination, or even the sale of bees to other beekeepers. A honeybee colony put in the field during the crop's flowering stage may complete the essential pollination since around 85% of agricultural plants are cross-pollinated. Pollinator abundance encourages early seed germination, which results in an earlier and more reliable crop yield

REFERENCES

[1] S. Marnasidis, A. Kantartzis, C. Malesios, F. Hatjina, G. Arabatzis, and E. Verikouki, "Mapping priority areas for apiculture development with the use of geographical information systems," Agric., 2021, doi: 10.3390/agriculture11020182.
[2] B. Locke, "Natural Varroa mite-surviving Apis mellifera honeybee populations," Apidologie. 2016. doi: 10.1007/s13592-015-0412-8.
[3] D. I. Fels, A. Blackler, D. Cook, and M. Foth, "Ergonomics in apiculture: A case study based on inspecting movable frame hives for healthy bee activities," Heliyon, 2019, doi: 10.1016/j.heliyon.2019.e01973.
[4] J. P. Van Den Heever, T. S. Thompson, J. M. Curtis, A. Ibrahim, and S. F. Pernal, "Fumagillin: An overview of recent scientific advances and their significance for apiculture," Journal of Agricultural and Food Chemistry. 2014. doi: 10.1021/jf4055374.
[5] K. Wakjira et al., "Smart apiculture management services for developing countries—the case of SAMS project in Ethiopia and Indonesia," PeerJ Comput. Sci., 2021, doi: 10.7717/PEERJ-CS.484.
[6] G. Camps, "Apiculture," Encycl. berbère, 1989, doi: 10.4000/encyclopedieberbere.2562.
[7] P. Catania and M. Vallone, "Application of a precision apiculture system to monitor honey daily production," Sensors (Switzerland), 2020, doi: 10.3390/s20072012.
[8] T. Blacquière, W. Boot, J. Calis, A. Moro, P. Neumann, and D. Panziera, "Darwinian black box selection for resistance to settled invasive Varroa destructor parasites in honey bees," Biol. Invasions, 2019, doi: 10.1007/s10530-019-02001-0.
[9] A. S. A. Alves, A. L. B. do Nascimento, U. P. Albuquerque, and C. C. Castro, "The influence of the exotic Apis mellifera and the related migratory apiculture on the reproductive success of some Brazilian native plant species," J. Arid Environ., 2019, doi: 10.1016/j.jaridenv.2019.02.001.
[10] E. Mejías, C. Gómez, and T. Garrido, "Suitable Areas for Apiculture Expansion Determined by Antioxidant Power, Chemical Profiles, and Pesticide Residues in Caldcluvia paniculata Honey and Beeswax Samples," Insects, 2022, doi: 10.3390/insects13010031.
[11] L. Gegner, "Beekeeping/Apiculture," Development, 2003.
[12] E. P. Jones et al., "Managing incursions of Vespa velutina nigrithorax in the UK: an emerging threat to apiculture," Sci. Rep., 2020, doi: 10.1038/s41598-020-76690-2.
[13] M. A. Grigoras, "Swot Analysis Of Romania's Apiculture," Sci. Pap. Manag. Econ. Eng. Agric. Rural Dev., 2018.

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Lac of Insect Culture

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Abstract*— The most widely farmed species of lac insects, Kerrialacca, produce the crimson resinous fluid known as lac. The process of cultivating starts when a farmer connects a stick to the tree that will be contaminated with eggs that are about to hatch. Many lac insects populate the host trees' branches and release the resinous pigment. Cut and collected as sticklac are the covered branches of the host trees. To get rid of contaminants, the obtained sticklac is crushed and sieved. After being sieved, the material is continuously washed to get rid of any remaining insect pieces and soluble material. The finished item is called seedlac. The pellet shape is indicated by the prefix seed. Shellac is created by heating seedlac, which still has 3-5% impurities, or by solvent extraction.

***Index Terms*— Eggs, Lac, Insects, Shellac, Species**

I. INTRODUCTION

Formerly known as Laci ferlacca, the lac bug is a tiny, resinous, crawling scale-insect that enters plant tissues with its beak to suck fluids, grow, and produce lac from the back of the body. In the "Cell," its own body eventually becomes coated with lac. Actually, lac is released for the insect's defence, not for feeding. The host plants are harmed because females make enormous amounts of the commercial lac as a protective coating for their bodies.Three pairs of legs and one set of hyaline wings are present on the thorax. Eight segments make up the abdomen, which ends in a penis-containing short, chitinous, conspicuous general sheath. A whitish, extended caudal seta may be seen on each side of this genital sheath.Female: The female is longer than the male and is between 4 and 5 mm long. The female's pyriform body is encased in a resinous cell. The distinctions between the head, thorax, and abdomen are blurry. The mouthpieces are of the sucking and piecing kind. The deteriorated antennas are easily seen. A middle and two lateral processes are present on the body's posterior end. The legs have deteriorated in appearance[1]–[3].

A Domain Plant

The host plants for lac insects vary. The choice of an appropriate host plant is crucial for the production of lac. One must be well-versed in the geographical and climatic requirements for the development of host plants appropriate for the location in order to create the lac industry. According to Brun, 113 different host plant species may be found across the Indian subcontinent, including Pakistan and Myanmar.The quality of the host plant has a direct impact on the quality of the lac. No artificial substance has been able to fully replace lac as of yet. When immediately seeded in the field, Khair, Kusum, and Babul produce lac of higher quality. Yet, when they are initially planted in a nursery and then moved to a field where lac is grown, Palas, Ber, and Ghont produce well. Kusumi lac is a specific sort of lac that is produced by Palas and Ber.

C Lac acculturation:

Since lac cultivation is a difficult procedure, farmers must be knowledgeable about inoculation, the swarming phase, and lac harvesting.

B Inoculation

The inoculation of lac insects is the initial step in lac cultivation. Young ones are correctly linked with the host plant via the process of vaccination.

There are two forms of vaccination:

1. Natural inoculation: A natural inoculation is a relatively straightforward and frequent procedure in which swarming nymphs re-infect the same host plant and begin sucking the fluids from the twigs. The following are some disadvantages of crowded nymphs' natural incubation: Inadequate nutrition: Lac insects' puncture into succulent twigs and suck the cell sap of the same host plant to provide themselves with food. The development of the host plant would be slowed down if the same host plant's cell sap was repeatedly sucked out by the swarming nymphs of the second crop. This might prevent the lac bug from obtaining adequate nutrients from the same host plant. Due to inadequate nutrition, lac insect growth is lost, which has an impact on lac output as well. Uneven inoculation: It is uncertain if a consistent succession of inoculations occurs during natural inoculation. A regular crop of lac may not be achieved if inoculation is not done continuously. Unfavorable weather: During swarming, a variety of circumstances, like intense sunshine, lots of rain, wind, etc., impact how well nymphs are immunized. These organic environmental elements may also have an impact on the host plant concurrently and may result in a gap in inoculation, which would disrupt the regularity of the lac production.

2. Artificial inoculation: The primary motivation for using an artificial inoculation approach is to examine all potential downsides of a natural inoculation.The host plant should be clipped in January or June as the initial step in this procedure. The twigs containing bug nymphs that are just before or as they are ready to swarm are cut into lengths between 20 and 30 cm. In order to create bridges for the nymphs' movement, the chopped parts of these twigs are then connected to young

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trees in such a manner that each stick hits the tree's sensitive limb numerous times. These branches need to be removed and divided from the host plant after the swarm. In artificial inoculation, the following safety measures should be observed: A significant number of nymphs or eggs must be present on the twigs before they are connected to a new host plant. Also, it's probable that nymphs have swarmed out from several of the twigs, making vaccination ineffective.

The twigs that are offered should be free of parasites and predators. In order to avoid having to wait for a long time and to save time, the eggs or nymphs that are present on the twigs should be healthy and ready to swarm. As these insects are so little, there is a danger that the nymphs may perish if they travel a great distance. Swarming nymphs don't need to go far to settle in position on the host plant because of the greatest contact of twigs.Acculturation is a term that refers to the process of cultural change that occurs when two or more cultures come into contact with each other. Acculturation can occur on an individual or group level and can involve changes in language, values, beliefs, and behavior. In recent years, researchers have become increasingly interested in the acculturation experiences of Latin American immigrants in the United States, particularly with regards to their experiences of adapting to the dominant culture. One concept that has received significant attention in the acculturation literature is Lac acculturation. Lac acculturation refers to the process of adapting to the cultural expectations and norms of the dominant society while maintaining a strong sense of pride and connection to one's Latino heritage. This paper will review the literature on Lac acculturation, including its origins, key features, and outcomes.

D Origins of Lac Acculturation

Lac acculturation has its roots in the work of sociologist Juan Flores, who coined the term in the 1990s. Flores argued that Lac acculturation was a distinct form of acculturation that was different from assimilation or biculturalism. Unlike assimilation, which involves complete abandonment of one's cultural heritage in favor of the dominant culture, Lac acculturation involves a selective process of adopting elements of the dominant culture while maintaining a connection to one's Latino roots. Unlike biculturalism, which involves an equal appreciation for both cultures, Lac acculturation emphasizes the importance of maintaining a stronger connection to Latino culture.

E Key Features of Lac Acculturation

There are several key features of Lac acculturation that have been identified in the literature. First, individuals who engage in Lac acculturation tend to place a high value on family and community connections. They may maintain close ties with family members and other members of their ethnic community and may view these relationships as a source of support and strength. Second, individuals who engage in Lac acculturation tend to maintain a strong sense of cultural pride and identity. They may participate in cultural traditions, such as food, music, and dance, and may feel a sense of responsibility to pass these traditions down to future generations. Finally, individuals who engage in Lac acculturation may also adopt elements of the dominant culture, such as language or educational and career goals, while maintaining a connection to their Latino heritage.

F Outcomes of Lac Acculturation

Research on the outcomes of Lac acculturation has been mixed. Some studies have found that individuals who engage in Lac acculturation experience better mental health outcomes, including less depression and anxiety. Other studies have found that individuals who engage in Lac acculturation may experience higher levels of stress due to the demands of balancing two cultures. Additionally, research has found that Lac acculturation may be associated with better academic and career outcomes, as individuals are able to draw on both their Latino and American identities to succeed in these areas.

G Inoculation Time Frame

In India, two different kinds of cropsrangini and kusumiare planted annually. The Kartiki and Baisakhi varieties of the Rangini crop yield, respectively, Kartiki and Baisakhi lac. Moreover, there are two varieties of the Kusumi crop: Jethi and Agahani, which yield Jethi and Agahani lac, respectively.

H Swarming

It is a crucial stage in the lac insect's life cycle. The exact date of the swarming should be known to us with certainty. The anal area of the top surface displays a yellow mark while the swarm is in progress. Muscle contracts at this point, causing the insect to separate from its attachment point. As a result, a hollow chamber is left behind, which eventually becomes wax-coated. These eggs become orange just before they are ready to hatch. There is evidence that swarming has occurred. So, one might determine the precise date of swarming by looking at the colour of the eggs via trials and learning processes, or by practice.

J Lac harvesting

Harvesting is the process of removing ready lac from the host tree. Two kinds of harvesting are often used.

1. Immature harvesting: The term "ari lac" refers to the lac that has been acquired by immature harvesting, which occurs before swarming.

2. Mature harvesting: The collecting of crop after the swarming is referred as mature harvesting and the lac collected is known as 'MATURE LAC'. The lac insects may be harmed during harvest, which would have an impact on the number of lac insects and eventually cause significant financial loss to the growers. This is one consequence of harvesting lac before the swarming. Nonetheless, it has been shown that Ari lac produces more when it comes to palas lac. Thus, it is only advised to pick Ari lac while dealing with palas. Immature harvesting should be avoided in all other

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circumstances. It has also been discovered that mature crops generate high-quality lac in cold climates.Harvesting season: Depending on how the crops were vaccinated, various crops have quite diverse harvesting seasons. Although the Baisakhi crop is harvested in May and June, the Kartiki crop is harvested in October to November. The harvest for the other crops, such as agahani and jethi, occurs in January through February and June through July, respectively. A complicated compound called lac contains a lot of resins together with sugar, water, and other alkaline materials.

H Qualities of Lac

Lac is readily soluble in alcohol but insoluble in water. This lac characteristic is quite valuable for electrical connection insulation. Lac is readily flammable when heated. Lac is sticky in nature. When combined with alcohol, it possesses binding properties. In addition, lac is soluble in ammonia, a mild alkali. Lac is a poor heat conductor.

II. DISCUSSION

Each adult female lays 200 to 500 eggs in a cell that she is trapped in immediately after fertilisation. The female's body contracts in a forward manner within the lac cell to create the incubation chamber, where the oviposition occurs. In the months of October and November, the eggs are deposited. In the months of November and December, the eggs are born into first instar aymphs after six weeks of laying. Nymphs are fairly numerous when they first appear. The term "SWARMING" refers to the nymphs' massive emergence[4]–[6].Nymph: The nymphs are around 0.5 mm long, scarlet in colour, and boat-shaped when they first emerge. The head is equipped with paired antennae, ocelli, and ventrally located sucking and piercing mouthparts. There is a proboscis attached to the mouth parts. There are two pairs of spiracles in the well-developed, tree-segmented thorax, but only one set of walking legs. Two sets of legs make up the abdomen, which ends in a pair of lengthy caudal setae. Young nymphs are unable to settle closely together on the twig of the host plant because it further collapses and forms a continuous covering even on the lower surface of the twing. However, the active nymphs can crawl a considerable distance, so shortly after emergence they begin moving in search of food and reach their host plants, preferably on young and succulent shoots. About 150 to 200 nymphs will settle in a square inch of space. The nymphs begin to release a resinous material by using unique dermal glands all over their bodies after sucking the sap from the host plant's twing. The resinous fluid quickly turns hard when it comes into touch with the air, covering the nymph's body and earning the name "CELL." Many life activities, including nymph development, morphological changes, and lac secretion, occur inside this cell[7]–[10].

The male "CELL" is long and cigar-shaped, with an anterior and a posterior hole. The male insect emerges from the posterior hole via an operculum, which is a flap that covers the opening. The nymphs undergo a metamorphosis process after six to eight weeks of immobile existence as a consequence of which some active winged males and most emerge in the shape of females with no wings. The females form a resinous mass that sticks to the host plant.Males do not contribute much to lac production because of their short lifespans, whereas females produce lac all throughout their lives, and lac has a longer life span than men. Females produce a large amount of lac. The length of the life cycle is mostly influenced by local ecological conditions[11]–[13].

III. CONCLUSION

More lac dye than lac resin was used in the 19th century. The use of lac as a dye has now been abandoned owing to the accessibility of better and more affordable annaline dyes. One of nature's enduring gifts is the use that lac may be put to. The uses that it is put to include the following: In the creation of phonograph records, it is used. Traditionally, a significant portion of the lac produced yearly was used by this business. Yet nowadays, plastic is employed in this industry to a significant amount. It is helpful to jewellers and goldsmiths who fill the hollows in gold jewellery such as bracelets, armlets, bangles, and necklaces, etc. with lax filler. It is a crucial gradient used in the production of polishes, paints, and varnishes for the finishing of wooden and metal furniture, doors, and other items.Lac acculturation is a distinct form of acculturation that involves selectively adopting elements of the dominant culture while maintaining a strong sense of pride and connection to one's Latino heritage. Individuals who engage in Lac acculturation tend to place a high value on family and community connections, maintain a strong sense of cultural identity and pride, and may adopt elements of the dominant culture while maintaining a connection to their Latino heritage. While research on the outcomes of Lac acculturation has been mixed, it is clear that this process can have both positive and negative effects on individuals' mental health, stress levels, and academic and career outcomes. Further research is needed to better understand the processes and outcomes of Lac acculturation and to develop interventions to support individuals who engage in this process.

REFERENCES

[1] K. K. Sharma, A. K. Jaiswal, and K. K. Kumar, “Role of lac culture in biodiversity conservation: Issues at stake and conservation strategy,” Current Science. 2006.
[2] N. Borah and S. C. Garkoti, “Indigenous lac culture and local livelihood: A case study of karbi community of assam, north-eastern India,” Indian J. Tradit. Knowl., 2020, doi: 10.56042/ijtk.v19i1.30868.
[3] S. C. Meena, K. K. Sharma, H. Swami, B. S. Rana, Lekha, and V. D. Lohot, “Survey record of lac insect Kerria lacca and its host plants in western plains of India,” Indian J. Agric. Sci., 2020, doi: 10.56093/ijas.v90i1.98684.
[4] J. Zhang, Y. Bu, C. Zhang, H. Yi, D. Liu, and J. Jiao, “Development of a low-cost and high-efficiency culture medium for bacteriocin lac-b23 production by lactobacillus

plantarum j23," Biology (Basel)., 2020, doi: 10.3390/biology9070171.
[5] A. K. Jaiswal and J. P. Singh, "Bio-Efficacy Potential of Flubendiamide as an IPM Tool for the Management of Biotic Stress in Lac Culture," Proc. Natl. Acad. Sci. India Sect. B - Biol. Sci., 2016, doi: 10.1007/s40011-014-0393-9.
[6] A. K. Jaiswal, J. P. Singh, and P. Patamajhi, "Emamectin benzoate: A novel second generation avermectin derivative for management of biotic stress in lac culture through treatment of broodlac," Indian J. Agric. Sci., 2017.
[7] T. Tolker-Nielsen, K. Holmstrøm, L. Boe, and S. Molin, "Non-genetic population heterogeneity studied by in situ polymerase chain reaction," Mol. Microbiol., 1998, doi: 10.1046/j.1365-2958.1998.00760.x.
[8] B. L. Nogueira, J. de J. Mari, and D. Razzouk, "Culture-bound syndromes in Spanish speaking Latin America: The case of nervios, Susto and Ataques de Nervios," Rev. Psiquiatr. Clin., 2015, doi: 10.1590/0101-60830000000070.
[9] S. Ghosh, R. T. Gahukar, V. B. Meyer-Rochow, and C. Jung, "Future prospects of insects as a biological resource in India: Potential biological products utilizing insects with reference to the frontier countries," Entomological Research. 2021. doi: 10.1111/1748-5967.12507.
[10] A. J. Loughran et al., "Impact of sarA and phenol-soluble modulins on the pathogenesis of osteomyelitis in diverse clinical isolates of Staphylococcus aureus," Infect. Immun., 2016, doi: 10.1128/IAI.00152-16.
[11] A. K. Jaiswal, J. P. Singh, and P. Patamajhi, "Evaluation of Flubendiamide Against the Lepidopteran Predators of the Lac Insect, Kerria lacca (Kerr)," Proc. Natl. Acad. Sci. India Sect. B - Biol. Sci., 2017, doi: 10.1007/s40011-015-0534-9.
[12] K. Schilcher, F. Andreoni, S. Uchiyama, T. Ogawa, R. A. Schuepbach, and A. S. Zinkernagel, "Increased neutrophil extracellular trap-mediated Staphylococcus aureus clearance through inhibition of nuclease activity by clindamycin and immunoglobulin," J. Infect. Dis., 2014, doi: 10.1093/infdis/jiu091.
[13] D. A. I.Shah., "Importance Of Lac Culture On Socio-Economic And Biodiversity Conservation Fronts," Int. J. Adv. Res., 2016, doi: 10.21474/ijar01/1630.

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Growth of Poultry System

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***Abstract*—From ancient times, hens have been commonly used as domesticated animals. Due to the twentieth-century demand for appealing and nutritious food, which chicken keeping delivers in the form of eggs as well as adult animals, poultry keeping has grown to be a significant small-scale enterprise. Its growth as a commerce has also been greatly aided by the storage and transportation facilities.**

***Index Terms*— Bird, Chicken, Food, Hen, Poultry**

I. INTRODUCTION

1. Soil. For poultry, the soil should be sandy, gravelly, rich in kunkar, and have a significant quantity of lime. Fowls shouldn't be raised on rocky soil since the stones hurt their feet. A thick soil with a high moisture content is dangerous. The animals die on the unclean, swampy, and drained fields.

2. Shelter. The chickens need to be shielded from the chilly winds and torrential rains. They shouldn't be permitted to stroll through the water.

3. Shade. The location of the poultry ground should be such that it has a lot of bushes and trees so that the chickens are properly shielded from the summer's scorching heat and wind. The poultry house's west side should be closed throughout the day during the summer months to prevent the westerly breeze from killing the birds. In areas without trees, a shed of 10 to 15 square feet should be constructed out of bamboo and straw. With the use of bamboo pillars, the shelter must be maintained 3 feet above the ground. When such shades cannot be used, the ground may be built of metal and elevated 2 feet from the ground on stone pillars. For proper drainage, the earth under the shed has to be elevated by roughly 3 inches from the surrounding surface.

Fowl-House

On India's hills, poultry may be raised without housing, but in the plains, specifically built housing is necessary for access to cool, fresh air in the morning and evening. A mature bird need 25 cubic feet of room. Six birds can fit comfortably in a 6 x 5 x 5-foot home. This residence must have an open shed or verandah as a runway for the birds to utilise. It is advised that a run of 40 x 30 feet is enough for six fowls. The greatest poultry house is made of "all metal," yet it may also be made of wood, masonry, or metal. Houses must have their outside facing south. Instead of building one enormous home, it is best to build many smaller ones[1]–[3].

Corrugated iron, thatch, or wood should be used for the roof of chicken coops. The south side of the home should be covered with half-inch mesh wire netting for ventilation, while the other three sides should have openings.

A mesh wire netting-covered angle iron frame should support the entrance of the home. The floor of the home has to be pucca-cemented and coated with dried earth or coarse sand that has been phenyl- or kerosene- or other chemical-sprayed. After a month, the sand layer must be replaced. Strong wood tick-proof perches should be positioned inside the home 1.5 feet from the wall and 1.5 feet above the ground.

For egg laying, the corners of the chicken coop should be stocked with laying nets composed of 9-inch clay gumlas that are covered in dry ashes, sand, or dirt. To provide the grit and lime required for the creation of egg shell, a tiny gumla should be filled with old lime and mortar, and the other gumla should be filled with coarse shell grits. Both gumlas should be put in the shed. Poultry also need light to survive, thus these shelters should always be built where there is access to natural light since without it, the birds would freeze to death. A container with fresh water should also be put beside the shed entrance or in the yard. Water that has been warmed by the sun should be avoided since it might make birds sick. Water should be changed twice daily, and the home and shed should be cleaned every day.

Every woodwork has to be cleaned, then painted with a tar and kerosene oil combination. Rats ruin chicken eggs and bring illnesses into the poultry house, thus the building has to be rat-proof. Rats can't dig through shattered glass; thus it should be spread out on the ground under the bricks to create a pucca floor. Snakes are another adversary that invade poultry houses via holes that rats leave behind. But, if the snakes are cobras, kraits, or russel's vipers, the fowls are killed by the snake bite, even if they also fight, kill, and consume tiny snakes. Filling the holes in the poultry house on a regular basis is one technique to keep an eye out for snakes and rats.

Feeding and Nutrition of Birds

The foundation of poultry is a high-quality, regulated food supply. Birds may eat the oats, peas, grains, and beans. The birds should not be fed on rice and Indian corn. They get a lot of nutrition from the curds, buttermilk, and skim milk when they are combined with crushed wheat and barley. Skimmed milk should be provided to young chickens in clean containers since it is very nutritious. For the purpose of fattening poultry, boiling potatoes should be provided in a mixture with equal amounts of wheatbran. Furthermore,

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beneficial to the health of poultry are certain animal products like fresh bones and minced meat. Fresh delicate grass, garlic, lettuce, and onions are examples of green foods that should be served raw since they are vital components of meals. When it's chilly outside, when it's raining, and when the animals are moulting, the mustard seed, hemp seed, and linseed should be provided periodically.

Breeds of Pigeons

As chickens are the centre of the poultry sector, choosing the right breed for a certain region is crucial. Selective breeding was done to produce chickens with diverse shapes, sizes, colours, comb structures, ear lobes, and other characteristics. This is how distinct breeds and their variety came into being. Domestic poultry may be divided into two categories, such as Desi or the native and the exotic or the improved.

Indy Breeds

The word "desi" refers to all native poultry that exhibits wide differences in its form, size, and colour. These pure breeds of poultry include Tenis, Naked-neck, Chittagong, Punjab brown, Aseel, Ghagus, Lolab, Titre, Kashmir faverolIa, Bursa, Danki, Telicherry, Kala hasti, Karaknath, etc. Yet, the desi hen is often the finest mother and a great babysitter. She is also said to be an excellent forager and highly watchful. Assel, Chittagong, and Ghagus are the only genuine desi breeds.

Aseel

Because of its stamina, strength, and fighting prowess, the indigenous breed is known by the name Aseel, which means genuine or true. The term "Asli" is usually mispronounced as "Aseel." A medium-sized hostile bird known as the Reza or the Tikra, the original Aseel is of this species. Since it battles to the very last and prefers to go down fighting than retreating, an Aseel has legendary endurance even during the most crucial moments of the battle.

In certain regions of Andhra Pradesh, Karnataka, and Uttar Pradesh, breeders have pure examples of this breed, which are now uncommon. In various regions, there are a number of variants that are largely hybrids between Aseel and native fowls, including Nhurie, Hyderabad Peela, Yakhud, Dhummar, Teekar, Zava, and Patteda. One of the greatest table birds is the aseel since its flesh is flavorful and delectable. This breed cannot be produced on a large scale as a table bird due to its poor growth and low fertility[4]–[6].

Malay or Chittagong

It was born in Chittagong, Bangladesh, and is a native of the Malay Peninsula. It is also present in certain areas of eastern India. This bird is white in colour with a few golden spots on the wings. This bird matures more quickly and has good meat, making it perfect for eating.

Ghagus.

It is a strange Indian breed that looks like a Faverolle but has feathers on its legs. Andhra Pradesh and Karnataka are home to this large and sturdy breed. Ghagus makes a tasty dinner bird. The hen is a decent layer, responsible parent, and excellent watchdog.

Bustra

It is a rare breed of the desi class that may be found in Gujarat and Maharashtra, especially in the Mumbai area. The birds are stately, alert, deep-bodied, and light-feathered, and they exhibit the usual body conformation of layers. This breed of hen lays little eggs.

Rare Breeds

The word "improved" is often used to describe the exotic and relatively contemporary varieties of chickens that are introduced into this nation, where they are raised and adapted to the climate. Early European settlers including missionaries, plantation owners, and public workers brought exotic varieties of fowl to India. Here, the unusual breeds have gained a lot of popularity. The usual categorization divides "chickens" into a large number of classifications, which are then classified into around fifty breeds. There are various distinct variants for each breed.

Polymouth Rock of American Class

Due to its ability to grow to considerable size and have great meat, it is one of the most popular breeds in the Country. It may deposit eggs to a good extent. Barred Polymouth Rock Cocks, like those of the Rhode Island-Red, are useful for improving the common village or desi hens. Six variants of this breed have been documented. The white and buff polymouth Rock breeds are other variations. Blue, Columbian, Partridge, and Silver-pencilled. This breed's white variation has proven to be successful thanks to its high capacity for producing eggs and broilers. This breed's standard weights are cock (5.5 kg), hen (4.5 kg), cockered (5.0 kg), and pullet (4.0 kg).

Wyandotte

Its body is rounded and low to the ground. It is a nice breed for general uses, much as Polynouth Rock. It can produce a lot of meat and lay a fair number of eggs of average quality. White, silver-laced, Buff, Partridge, Golden-laced, Silver-pencilled, Columbian, and Black are the many types of this breed. This breed's standard weights are cock (5 kg), hen (4 kg), cockered (4.5 kg), and pullet (3.5 kg).

Red Rhode Island

It is one of the most common breeds of poultry in India, and the hens are excellent layer hens. The most resilient breed, it can thrive in a variety of weather situations. This breed's flocks are raised at both commercial and government poultry farms. The hens are suitable for damp and high rainfall areas and develop swiftly. They are very simple to nurture. The Rhode Island Reds come in two distinct

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varieties: the single comb and the Rose-comb, both of which are essentially similar. The more well-liked of the two is the single comb variant. This breed's standard weights are cock (5 kg), hen (3 kg), cockered (4 kg), and pullet (2.5 kg).

The Granite State

The New Hampshire is a stock of Island Red that is relatively new. It has become quite well-liked in India as a result of its extraordinary toughness. Its widespread appeal is also a result of its quick development, early maturity, fertility, hatchability, and strong egg-laying ability. Similar to the Rhode Island Red, standard weights are used.

The Asian Class

Brahma, Cochin, and Langshan are three of this class's most significant members. While their meat is not very valuable, these breeds and those of the Mediterranean class have served as the foundation for the steady emergence of new breeds and variants. These birds take a long time to grow, make poor foragers, and are steadfast sitters.

Brahma

The oldest Brahma is said to have originated in India's Brahmaputra region, where the original kind of birds, sometimes known as "Grey Chittagongs," are still present. This breed is one of the biggest domestic chickens and has a gigantic look. The breed's standard weights for the cock, hen, cockered, and pullet are 6.5 kg, 4.5 kg, and 3.5 kg, respectively.

Cochin

Formerly known as Shanghai fowls, this breed originated from the Shanghai region of China. Breed options include Buff, White, Black, and Partridge. Its large look and well-feathered shanks are its standout features. The bird seems bigger than it really is because of the long and abundant feathers.

Langshan

The Langshan region of China is where this originated. The Langshan has a shorter but deeper body than Brahma and Cochin. It is an elegant bird with a single comb and a well-proportioned body. With this breed, the cock weighs 5 kg, the hen weighs 4, the cockerel weighs 4.5 kg, and the pullet weighs 3 kg. There are six breeds in this category, including the Sussex Oprington, Australorp, Cornis, Dorking, and Red cap.

Sussex

Breeds in this category have substantial breasts, outstanding fleshing traits, and are well-developed. This breed of poultry has coloured beaks, shanks, and toes in addition to a single comb and horn. The Light Sussex, Red Sussex, and Speckled Sussex are the three different types of Sussex. The most popular among them is the Light Sussex, which was originally bred as a meat breed but has since developed good laying strains that make it a good all-purpose bird. For this breed, the cock weighs 5 kg, the hen 3.5 kg, the cockered 4 kg, and the pullet S kg[7]–[9].

Orrington

Although it makes a good table bird in general, selective breeding and management have also produced strains that lay good eggs. It only has one comb. The bird can be Blue, Buff, Black, or White. The most well-liked of these is the buff variety. The black is also significant because it influenced the creation of the Australorp breed, which is becoming more and more well-liked. Chooks weigh 5.5 kg, hens 4 kg, cockered 4.5 kg, and pullets 3.5 kg according to standard.

Australorp

This breed was developed from the blackorpington in Australia. This breed is well adapted to lay eggs, and it also produces a sizable amount of flesh, making it a good dual-purpose breed. Like the Rhode Island, this breed is becoming more and more popular in India. Red is a good colour choice for backyard poultry keeping with small flocks, especially in areas with frequent and heavy downpours. The average bird weighs 4.5 kg for the cock, 3.5 kg for the hen, 4 kg for the cockered, and 3 kg for the pullet.

Cornish

Its original name was Cornish Indian, and it is believed that this breed originated in England as a result of a cross between the Malay and English Game breeds and the Indian Aseel. It is renowned for having distinct shape, close feathering, and a compact, well-flashed body. The standard weights are 4 kg for cocks, 3 kg for hens, 3.5 kg for cockered, and 2.5 kg for pullets.

Dorking

Dorking bodies are long, broad, deep, and low-set, just like Sussex bodies are. The other two varieties have a single comb, while Dorking has a rose-comb. There are five toes on each Dorking. The standard weights are 5 kg for cocks, 3.5 kg for hens, 4 kg for cockered, and 3 kg for pullets.

Red Cap

The large rose-comb that is a distinctive feature of this breed is where the name "Red Cap" originates. It is a medium-sized bird with a relatively small body and a fairly pronounced breast. The standard weights for a cock are 4 kg, a hen is 3, a cockered is 5, and a pullet is 2.5 kg.

Mediterranean

Due to their ancestry in the Mediterranean region, six breeds are categorised as Mediterranean. Leghorn, Minorca, Ancona, Spanish, Andalusian, and Buttercup are among these breeds. The birds in this class are small in size, mature quickly, and have an active temperament; they do not sit still. Due to the birds' relatively low food needs, maintaining them is inexpensive. They're competent layers.

Leghorn

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Leghorn is a small, dynamic organism renowned for the harmony among its various components. It has a prominent breast, a relatively long back, and relatively long shanks. Leghorns typically come in white, brown, black, and buff colours. The Columbian, Black-tailed Red, and Silver-red varieties are some of the less popular ones. Around the world, the white variety has grown in popularity. The next most popular colours are brown and black. The character of the comb, such as whether it is a rose or single comb, is used to further segment the white, buff, and brown varieties.

White Leghorn

About 80 years ago, it was first brought into India by foreign missionaries and tea planters. For making meat, this variety is not the best. White leg horn has produced well in India, particularly in drier areas. It does not appear to thrive and produce well in heavy soils or in wet areas. The breed is most well-known for producing eggs. It reaches maturity in 5.5 to 6 months when the pullet begins to lay eggs.

Brown Leghorn

This breed appears to be more resilient than the white leg horn, and its colouring, particularly in chicks, acts as a natural predator decoy. Due to this breed's exceptional productivity, it is also very popular. It is used to improve Desi birds in places where white birds are not preferred.

Black leghorn

It is not as good a layer as the white or brown varieties, and it is frequently mistaken for a black Minorca, but you can easily tell the difference thanks to the Leghorn's head and body shape. There is no distinct advantage this variety has over the other breed varieties.

Minorca

It is distinguished by its long wattles, long comb, and long body. In actuality, it is the largest breed from the Mediterranean. There are variations in black, white, and buff. The single and rose comb varieties are further divided into the black and white varieties. The black Minorca single-comb bird, which has an eye-catching metallic black plumage and an unusually large comb, is the most common. They lay large, white eggs and are effective layers. The chickens have a quick growth rate and make good table fare. A cock should weigh 2 kg, a hen 1.5 kg, a cockered 1.5 kg, and a pullet 1 kg.

Ancona.

The Ancona and Leghorn both belong to the same general type. Although the breed as a whole is not as well-liked as the white leghorn, it has both single-comb and rose-comb varieties, with the former being relatively more popular. This breed's standard weights are cock (3 kg), hen (2 kg), cockered (2.5 kg), and pullet (1.5 kg).

Breeding in Fowls

Systematic poultry breeding must be practised for successful poultry keeping. The following precautions and considerations should be observed: The best and largest farm poultry should be chosen. Birds that are sick, weak, or stunted shouldn't be used for breeding. Always use hens as your primary layer. To breed with cocks that are one year old, choose hens that are two years old. The male chicken should belong to a different family than the hen it mated with. The hen must mate with a cock who is stronger than she is. Intelligent management and nutrient-rich food are essential for successful breeding. The cock that is chosen for breeding should have good size, bone, flesh, a broad chest, and colour. He should be one year old, young, healthy, and energetic. The hen chosen for breeding should be nearly identical to the cock in terms of quality. When she is young and active, she can lay a lot of large eggs. One Cock should only be able to mate with a maximum of four hens at any given time.

Crossing Breeds

Because not all crosses are successful, having a solid understanding of the traits of various breeds is crucial for cross breeding. The best egg-laying results come from the first cross between the pure hen and pure cock, but this cross should never be used for subsequent breeding. Cross-breeding poultry can be produced as a cottage industry for the quick production of eggs and poultry for human consumption.The best hen layers are extremely difficult to choose from the flock. The bright-combed, active bird would always make a better player than the uninteresting and unproductive hen. Always avoid breeding the thin, ill, sluggish, and poorly feathered hens. It is said that the layer is better the higher the capacity. A good layer hen will have fine, widely spaced pelvic bones. A very fat hen won't make a good layer at all, so one must be careful. Consequently, the hens shouldn't be overly fat or underweight.

II. DISCUSSION

Poultry farming, which includes the raising of chickens, turkeys, ducks, geese, and other birds, is a significant part of the global agriculture industry. Poultry provides a valuable source of protein and other nutrients, and is consumed in various forms around the world. Poultry farming has several benefits, including its ability to provide a reliable source of food and income for farmers and their communities. Poultry is also relatively efficient compared to other types of livestock, as it requires less feed, water, and land per unit of meat or eggs produced. However, there are also some concerns associated with poultry farming, such as animal welfare issues, environmental impacts, and the potential for the spread of diseases. These concerns have led to increased regulations and standards in many countries, aimed at improving animal welfare, reducing environmental impacts, and ensuring food safety [10], [11]. There has also been a growing trend towards more sustainable and ethical forms of poultry farming, including free-range and organic farming methods. These methods prioritize animal welfare and

environmental sustainability, while also providing consumers with high-quality, healthy products [12], [13].

III. CONCLUSION

In conclusion, poultry farming has both advantages and challenges, and it is important to ensure that the industry is managed in a sustainable and responsible manner. By promoting animal welfare, minimizing environmental impacts, and prioritizing food safety, the poultry industry can continue to provide valuable benefits to consumers, farmers, and the wider community.The system also faces several challenges, including disease outbreaks, environmental concerns, and animal welfare issues. In recent years, there has been a growing interest in alternative poultry systems that prioritize animal welfare and environmental sustainability. These alternative systems include free-range and organic production, as well as innovations in housing and management practices. Further research is needed to better understand the impacts of different poultry systems on animal welfare, the environment, and human health, and to develop strategies to address the challenges facing the poultry system.

REFERENCES

[1] D. Dróżdż, K. Wystalska, K. Malińska, A. Grosser, A. Grobelak, and M. Kacprzak, "Management of poultry manure in Poland – Current state and future perspectives," J. Environ. Manage., 2020, doi: 10.1016/j.jenvman.2020.110327.

[2] H. D. Hedman, K. A. Vasco, and L. Zhang, "A review of antimicrobial resistance in poultry farming within low-resource settings," Animals. 2020. doi: 10.3390/ani10081264.

[3] H. M. Hafez and Y. A. Attia, "Challenges to the Poultry Industry: Current Perspectives and Strategic Future After the COVID-19 Outbreak," Frontiers in Veterinary Science. 2020. doi: 10.3389/fvets.2020.00516.

[4] K. Żbikowska, M. Michalczuk, and B. Dolka, "The use of bacteriophages in the poultry industry," Animals. 2020. doi: 10.3390/ani10050872.

[5] A. Jain, "Advances in poultry nutrition," Indian Journal of Animal Sciences. 2021. doi: 10.1590/s1516-35982009001300020.

[6] M. J. Hakeem and X. Lu, "Survival and Control of Campylobacter in Poultry Production Environment," Frontiers in Cellular and Infection Microbiology. 2021. doi: 10.3389/fcimb.2020.615049.

[7] S. Yadav and R. Jha, "Strategies to modulate the intestinal microbiota and their effects on nutrient utilization, performance, and health of poultry," Journal of Animal Science and Biotechnology. 2019. doi: 10.1186/s40104-018-0310-9.

[8] C. P. A. Skarp, M. L. Hänninen, and H. I. K. Rautelin, "Campylobacteriosis: The role of poultry meat," Clinical Microbiology and Infection. 2016. doi: 10.1016/j.cmi.2015.11.019.

[9] S. C. Ricke, "Prebiotics and alternative poultry production," Poultry Science. 2021. doi: 10.1016/j.psj.2021.101174.

[10] I. Nyalala, C. Okinda, C. Kunjie, T. Korohou, L. Nyalala, and Q. Chao, "Weight and volume estimation of poultry and products based on computer vision systems: a review," Poultry Science. 2021. doi: 10.1016/j.psj.2021.101072.

[11] S. Neethirajan, "Automated Tracking Systems for the Assessment of Farmed Poultry," Animals. 2022. doi: 10.3390/ani12030232.

[12] L. J. Lara and M. H. Rostagno, "Impact of heat stress on poultry production," Animals. 2013. doi: 10.3390/ani3020356.

[13] Y. T. Asfaw, G. Ameni, G. Medhin, B. Gumi, Y. Hagos, and B. Wieland, "Poultry disease occurrences and their impacts in Ethiopia," Trop. Anim. Health Prod., 2021, doi: 10.1007/s11250-020-02465-6

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Eggs and Hatching

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Abstract*—The hens typically begin laying eggs in February and do so continuously through August, with a few breaks. Since the hen's moult from July to August, forcing them to lay eggs is not advised. From October to January, few hens lay eggs. The climate of a particular region determines the ideal time for egg laying. Eggs and hatching are critical components of the poultry production system, with eggs serving as a primary source of protein and hatching facilitating the growth and expansion of the poultry population. The process of egg production and hatching is complex and involves careful management of breeding, nutrition, and environmental conditions. Eggs must be stored and transported properly to maintain their quality, while hatching requires precise temperature and humidity control.

***Index Terms*— Animal, Egg, Food, Poultry, Rain**

I. INTRODUCTION

The best time to raise chickens is during a rainy season because: There is an abundance of green food for birds. There are also many animal foods readily available. To protect and cover the birds, the trees and shrubs are fully leased out. The chickens raised during this season grow quickly and get big, making it easy for them to survive the colder months. The rainy season's eggs are incredibly fertile and successfully hatch[1]–[3].However, the chickens need to be well protected from heavy rain and frequent showers. All over India, with the exception of the hills, the chickens that hatch between October and the end of January grow up very well. India's plains experience their best weather from January to April.

Choice of Eggs

One should check on the eggs every day after putting them under the hen because sometimes they break in the nest. The remaining eggs must be removed, washed in water, dried, and the ashes and earth of the nest must also be changed if any egg is broken. Washing requires water that is at least 102°F. Under the cleaned hen in the new nest, the cleaned and dried eggs should go. It is necessary to remove the fertile and abnormal eggs from the nest. Using a cardboard with an egg-shaped hole, you can test the fertility of eggs. The eggs for testing ought to be kept on the hole in front of a bright light. If the egg is transparent, it is infertile; however, if a small body is seen floating inside the egg, it is fertile. After the egg has been laid for 14 days, test 11 should be run. Placing the egg in a big bowl of warm water after it has been sitting for 20 days is another way to test eggs. Eggs containing live chicken will begin to wriggle in the water after one minute, whereas eggs that are infertile or addled will float to the top of the water. The chickens typically emerge from the shell on the 20th or 21st day after the egg has begun to set. After emergence, the chickens do not eat for 30 to 36 hours, so they must be left alone with their mother for a minimum of 24 hours.

The chickens must be properly managed while they are in the growing stage. Different breeds require different types of hydrations, protection and exercise. Chickens should be removed from their old nests with their mothers after 36 hours of hatching and placed in a clean box or on a clean surface underneath a basket in a dry, warm location. The mother should be fed a nutritious diet and put in the box with her chicks. The food must be given to the chickens in very small amounts every two-hour interval. Stale breadcrumbs moistened with milk, along with oat meal and broken wheat, make the best food for chickens up to three days old. The chickens must be fed six times per day until they are 45 days old. They must be fed four times per day between the ages of 45 days and six months.

After sunrise should be the first feeding of the day, and sunset should be the last. A clean feeding board is a must. Chickens should receive a very small amount of "Poultry powder" mixed with their soft food twice a week, along with a small amount of finely chopped onions and garlic. After 45 days, half-cooked meat and raw onion should be given with wheat bran at intervals of one day.

Chickens eat earth worms and white ants voraciously because they are very nutritive for them. The chickens should receive oil-cake once a day after the age of three months. The chickens should always be kept before the sparkling-clean water. The drinking water should also contain a very small amount of potassium permanganate to shield the chickens from illness and other problems. The liver and heart of chickens are the organs most at risk from overfeeding[4]–[6].

Emergencies in Poultry

The careless poultry owner risks contracting diseases. The most prevalent illness affecting poultry is RANIKHET DISEASE, which is brought on by a virus that passes through filters. All age groups of birds are affected by the disease. This illness causes the bird to open its beak, become dehydrated, feverish, and experience yellowish-white diarrhoea. Undigested food is present in the crop, and mucus is present in the beak. Nervous symptoms such as head

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twisting, circular walking, and paralysed wings follow. Within two to three days, the birds become very weak and pass away. Mortality is extremely high, ranging from 98 to 100 percent. A bird gains immunity once it has recovered, for life. Contact with the mucus secreted from the beak causes this disease to spread from one fowl to another:

A vaccine developed by the Indian Veterinary Research Institute Mukteswar is beneficial to the poultry industry. The dead birds should be buried or burned for proper disposal. As soon as the chickens reach the age of 40 days, they should be vaccinated. Other prevalent illnesses include egg-eating, feather-eating, and loss of feather, which can be treated by giving large amounts of run and a poultry tonic or powder mixture. Apoplexy, caused by excessive feeding, bumblefoot due to extreme size, cramps from exposure to the wet or cold, crop binding from excessive feeding, diarrhoea from excessive feeding and contaminated water, dysentery, liver disease, etc. are some serious but non-infectious diseases.

Contagious illnesses include the common cold, chicken pox, and cholera. The bird's ought to be killed, burned, or buried. Spirochaetosis is the name for the illness that a tick can transmit. During the night, the parasites feed on the blood of birds and depart during the day. The construction of poultry houses should be "all metal" to prevent the spread of this parasite. Poultry keepers are advised that "prevention is better than cure," so they must take precautions to ensure that the birds are not attacked by their adversaries.

Avian Products

In addition to some byproducts like manure, feathers, etc., the primary products of poultry farming are eggs and meat. Egg production is the main goal of poultry farming in India. For the table, old, surplus, and weak stocks are used. One of the richest sources of protein and vitamins is poultry meat and eggs.

Egg

Eggs are a rich source of easily absorbed animal protein and improve the flavour of a variety of dishes. One of the best sources of vitamin A, riboflavin, phosphorus, and iron is considered to be eggs. According to weight-for-weight data, an egg has the same amount of animal protein as pork and poultry meat, about two-thirds as much as whole milk cheese, and about three-quarters as much as beef. When cooked, eggs congeal. When fried, boiled, or poached, they produce delectable foods. In some foods, like sponge cake and angel food cake, they have a leavening effect. In custard, they thicken. In noodles and doughnuts, they combine. When making soft breads, eggs are used as a binding and coating agent. Eggs can be added to ice cream and candy to reduce or stop the growth of large crystals. For coffee or soups, egg albumen serves as a clarifying agent. Due to the adhesive and coagulating properties of egg white, it is very helpful in many non-food industries. Comparatively few eggs are used for other industrial processes, such as book binding, medicinal or pharmaceutical preparations, tanning, etc.Because of its capacity to grow and generate independent life under favorable conditions, the egg's structure is one of nature's most amazing creations. In general, eggs have an irregular ovoid shape, with one end being wider and slightly flatter than the other. The development and hatching of the embryo are greatly impacted by this variation in shape between the two ends. The egg is made up of 32% yolk, 56% albumen, and 12% shell and shell remnants.

Shell

The hard, rigid, and porous shell of an egg, which is primarily made of inorganic salts, serves as a protective covering for the soft interior. The pores allow for the exchange of gases like oxygen and carbon dioxide as well as moisture between the interior of the egg and the surrounding air. The broad end of the egg has more pores per unit area than any other part of the surface combined. A delicate cuticular structure covers the shell's exterior. The outer layer of the two main layers of the shell, which guards against the entry of bacteria and other undesirable microorganisms, is thin, relatively dense, and compact. The inner, granular layer of the shell provides the developing embryo with calcium in addition to helping to maintain the strength and rigidity of the shell. Two rough, fibrous membranes, one attached to the shell and the other to the thick white, are present inside the shell. The membranes separate to form the air-cell, which is typically found at the broader end of the egg, as the shell contents contract with cooling and moisture evaporation. Only very difficultly can the outer membrane be separated from the shell[7]–[9].

Albumen The egg's albumen is made up of four distinct layers. About 20% of the total white is made up of the thin outer layer, which is located just inside the inner shell membrane. Except at both ends of the egg, where a thick white layer comes into contact with the shell membranes, this layer is in direct contact with the shell membrane. The layer of thick white, which makes up about 50% of the total white of an egg, is found inside the outer thin white layer. The inner layer of thin white is enclosed within thick white. The vitelline membrane that encloses the yolk is surrounded by the thinnest layer of thick white in the interior. The presence of "mucin" in thick white accounts for the majority of the difference between it and thin white. The chalazae are the thick white, coiled cords that emerge from the thick white layer at each end and end in the chalaziferous layer. They are twisted in the opposite direction. The chalazae protect the egg against damage and keep the yolk almost in the centre of the egg. It also facilitates the easy turning of the yolk inside the white.

Yolk

The yolk is the only component of the egg that originated in the ovary, aside from the blastodisc. Throughout the process of the egg moving through the oviduct, the additional components of the egg, such as the shell membranes, albumen, and shell, are added one at a time. Because it is

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lighter than the albumen of the egg, the yolk of a fresh egg rests slightly above the centre. Fresh eggs are typically spherical in shape, but after being stored for a while, the yolk expands by absorbing water from the white and takes on a more rounded appearance than a fresh egg would. Although the blastodisc, or female germ cell, is primarily found in the egg, further development of the egg begins following sperm fertilisation. Therefore, only fertile eggs should be used for incubation because infertile eggs cannot develop and should be discarded as soon as possible.

Egg Composition

The breed of the bird, its habitat, and the ecological circumstances of the area where the poultry farm is located all affect the actual composition of the egg. 36% of the liquid egg is the yolk, and 64% is the white. White is primarily composed of proteins, with minor amounts of sugars, minerals, and fat making up the remainder. One third of a solid yolk is protein, and two thirds are fat. Protein in the yolk has a different nature than protein in the white. Lactic acid, creatine, creatinine choline, and alcohol are also components of yolk.

Carbohydrate

The egg's primary source of carbohydrates is sugar. Compared to the yolk, the egg white contains more glucose. The average glucose content of a hen's egg is 0.45% for the healthy egg, 0.47 for the egg white, and 0.14 for the yolk. A very small amount of carbohydrates found in the egg are hydrolyzed to produce a reducing sugar. It is noteworthy that if sugar is present in dry egg products in its free form, there will be significant deterioration. So, before drying, free sugar is removed from eggs either through fermentation or enzymatic oxidation to gluconic acid.Proteins. An egg contains 12% protein, of which 64% comes from the egg white and the remaining from the yolk. About 70% of the protein in egg whites is ovaalbumin, which is classified as AI's A2 and A3 proteins. This protein is changed during egg storage into a more stable form called "S-ovalbumin," which is very resistant to denaturation. Canalbumin, a protein that makes up 17% of the protein in egg whites, is also thought to exist in two different forms: ovomucoid and lysozyme. Vitellenin, livetins, phosvitin, phosphoproteins, lipoproteins, lipovitellin, and lipovitellenin are among the proteins found in egg yolks. All of the essential amino acids needed for growth and development are present in the egg proteins. The egg proteins have been found to be of higher biological value in comparison to the proteins of meat, soya been, milk, wheat, ground nut etc. Comparatively speaking, the protein in egg whites is much more nutritious than that in egg yolks. The egg proteins possess the functional properties of coagulation, foaming and emulsification which are also significant for the consumers of eggs.

Non-protein nitrogenous substances. The non-protein nitrogenous substances like lecithin, free cholin, ovine, and other bases are also identified in the eggs. Lipids. The ether-soluble lipids amount to 30-35% of the fresh egg yolk, and the phosphatids 4 to 12%. Component fatty acids of the glyceride and- the phosphatid fractions of the egg yolk are palmatic, myristic, stearic, oleic, nexadecenoic, linoleic and unsaturated C22 acid. The yolk of hen contains 1.8% of cholesterol. Vitamins. Eggs are very good source of riboflavin, vitamin A and vitamin D. The different vitamins present in egg are vitamin-A, vitamin-B12 vitamin-D, vitamin-E, vitamin- K, riboflavin, folic acid, niacin, thiamine, pentothenic acid, biotin, choline chloride, pyridoxine and inositol. The losses in vitamin contents during storage of egg are very low. Enzyme. Some of the enzymes like amylase, diastase, peptidase, phosphatidase, oxidase, various proteolytic enzymes, mono and tributyrases, catalase, tryptic proteinase, lipase, erepsin and salicylase are reported to be present in the egg. Minerals. Eggs are rich in mineral contents. The minerals like-calcium, iron, phosphorus, sodium, potassium magnesium, sulphur, zinc, chloride, manganese, iodine, copper,fluorine, selenium are reported to be present in the egg. The trace elements present in the egg include lead, chromium, aluminium, molybdenum, strontium, vanadium, titanium and barium. Pigments. The carotenoids of egg yolk are lutein and zeaxanthin. Ovoflavin, a nitrogenous pigment is also found to be present in the egg. The brown pigment of egg shell is Oorodein, which is identical with hematoporphyrin. The blue-green colour of egg shells, named oocyan, is considered to consist, in part, of the bile pigment biliverdin.

Clearing of egg:

After laying eggs may become dirty due to so many factors. The dirty eggs should never be washed with ordinary type of cold water. The shell of egg should not be rubbed with the wet cloth or sand paper. For clearing the dirty eggs, sanitizer and detergent solutions are used. Further it should be washed for 5 minutes in warm water containing a detergent. The egg washing equipment has been developed by the central Food Technological Research Institute, Mysore. With this equipment 1000 to 1500 eggs are properly washed within one hour. This can be used advantageously for clearing eggs on a commercial scale.

Preservation and processing of eggs

The production of clean and wholesome eggs has received considerable attention in the developed and developing countries of the world. Eggs are used for household purposes, for confectionery and for other industrial purposes. About 95% of the eggs are used for table and cooking purposes and remaining 5% are used in confectionery. The urban demand of egg is of prime importance from marketing point of view. In India 20%of the eggs produced do not reach the consumers in a good condition and deteriorate during transport from the place of production to the place of consumption. According to the survey made by the Directorate of Marketing, Ministry of Food and Agriculture, Government of India, the deterioration in the quality of eggs is due to the various

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factors viz., hot weather condition, storage in warm dry places, dirty eggs, fertile eggs, ungraded eggs and defective packing and handling. It is recorded that 5% of entire spoilage of egg is due to the bacterial contamination. The uncared eggs deteriorate quickly. So, eggs should be collected within a few hours after being laid. The preservation of the quality of egg is of great importance in marketing. The problem is however, beset with great practical difficulties, especially under conditions of village production. For the proper care freshly, laid eggs are taken to the egg room, maintained at 16°C and 75% RH, and cooled as soon as possible. Even in cool weather, eggs deteriorate when left in the nest in which hens are laying. Eggs should be collected in suitable wire baskets atleast two or three times daily. The following measures are found to be useful in preserving the eggs.

Production of infertile eggs

Producing infertile eggs instead of viable ones helps to significantly preserve egg quality since fertile eggs degrade more quickly than infertile ones do at acceptable higher temperature ranges.

Except during the breeding seasons, infertile eggs may be acquired by removing the cocks from the hens. It's a popular misconception that for the chickens to produce eggs, a male fowl must be present. Without a cockbird present, hens are capable of producing eggs, but these eggs are sterile. Nevertheless, given the current practises for raising chicken in rural areas, this is not always practicable, thus defertilization of eggs must be advised. Defertilization. Eggs are defertilized by being placed in hot water that is held between 135- and 145-degrees Fahrenheit for around 15 minutes to kill the germ. The defertilized egg is just as excellent as the infertile egg and may be stored for a longer time without deteriorating. A typical long, wide-mouthed tin pot is used in communities to keep temperatures between 135F and 145F. Defertilized eggs are placed in an open wire basket and submerged in hot water for 15 minutes before being retrieved and placed in a cold location. In well-run chicken facilities, somewhat more extensive defertilization plants—which include water tanks with mechanical stirrers, electrical heating systems, some wire baskets, and egg coolers—are built for a low cost.

It is generally known that temperatures over 68°F are favourable for embryo development, which leads to a quick decline in egg quality. The egg's quality and freshness may be maintained at temperatures lower than 68°F. In the winter, cooling devices are not required while the temperature is typically below 68°F, but they are required when the temperature exceeds 68°F. Of course, chilled coolers are perfect. The list below includes a few cooling techniques that chicken breeders may use.Nice space. Any room may be cooled by putting khus tattis in all the outlets and keeping the floor wet all the time. A ceiling fan, if available, would be quite beneficial for cooling the space.A clay pot. A big clay pot may be kept at lower temperatures by keeping it partly covered in a pile of sand that receives regular sprinkles of water. To prevent the percolating wetness, keep a layer of dry straw or hay at the bottom of the pot. The pot's mouth should be covered with a thin piece of muslin and maintained in a well-ventilated area to allow air and moisture to flow freely within the pot.Chilled space. While the nine months that the eggs are kept in cold storage at 0°C and 85% RH, their quality is mostly preserved. In India, well-organized chicken farms are currently using cold storage of eggs, but in rural regions where refrigeration facilities are uncommon, cold storage of eggs has been adopted widely.

Egg freezing

It is among the finest ways to preserve egg quality. By using this technique, degradation is halted, allowing frozen eggs to be kept in cold storage for a long time before being used. To maintain the quality, shell eggs are kept in cold storage using this technique. Eggs are transported to the candling chamber after a thorough cooling. The shells of the eggs are broken against a blunt knife that is placed above a tiny tray that is stocked with cups to retain the contents of the egg at the breaking tables after they have been candled. In order to prevent bacterial development, separated yolk and white or combined white and yolk may be kept by freezing. While making cakes, pastries, ice cream, and other desserts, entire frozen eggs are utilised.Eggs may be preserved more conveniently by drying them than by freezing. Eggs lose around one-fourth of their original weight during the drying process, making one kilogramme of dried goods from about 70 average-sized eggs. Farms create the dry egg products, such as dried whole eggs, dried yolks, and dried whites. In this process, the egg pulp is sprayed via a nozzle after being pushed under pressure into a drying chamber. The entering air is kept at a greater temperature than the exhaust air, which is kept at a lower temperature. Whereas the pan-dried product is formed up of flakes or scales that may be processed into powder, the spray-dried product is often a fine powder.

Egg sealing with lime

The lime sealing of eggs stops carbon dioxide and moisture from escaping through the pores in the shell. Shell eggs are immersed in lime water with salt powder for around 18 hours to seal them.For regular poultry producers, the oil coating of shell eggs is a cost-effective and practical means of maintaining egg quality. Carnation oil, a white mineral oil made from paraffin, and coconut oil are the oils utilised for this purpose. A flawless technique for coating eggs with oil has been discovered by the Central Food Technological Research Institute in Mysore. It is based on a petroleum product and contains fungistatic and bacteriostatic ingredients. The eggs, which are stored in wire baskets, are submerged in a container of coating oil for 5 to 10 seconds. In addition, egg-filled baskets are removed from the boat and put on a hanger for almost an hour. Fans may be employed during this time to properly dry eggs that have been covered with oil. Storage of the dried eggs is now possible. With the

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right filtration and sanitation, the coating oil in the vessel may be used again without becoming unclean. At room temperature, the oil-coated eggs may be stored for 30 days, and at 13°C, for 80 days. As soon as possible after the eggs are laid, the oil should be coated. The oil ought to be flavourless, odourless, and colourless.

Water-glass technique

It is an effective way to maintain the quality of eggs. Commercial water glass is combined with cooled, boiling water in a certain ratio and maintained in an earthen pot for this purpose. Both are completely combined with a wooden piece. In the aforementioned solution, eggs are dipped, and covered pots are maintained in a cool location.Eggs are used to create a variety of valuable goods, including albumen flakes, frozen egg yolk, and egg powder.

1. Albumen flakes: To make albumen flakes, thick egg albumen is broken down by microbial fermentation, and the glucose is taken out. Now, this material has been acidified and dried to create albumen flakes. For coating zinc or aluminium foils for offset printing, sensitive mixes are made using albumen flakes. The tanning of pricey leather also uses the flakes.

2. Frozen yolk: The leftover yolk from the production of albumen flakes is utilised as is or frozen for a variety of uses. The main products of frozen yolk are yolk emulsions, salted, sugared, and plain yolk. The 10% sugar and salt in sugared and salted yolks, respectively, operate as anticoagulants and lessen the chemical changes that occur in the egg after freezing, but they also modify the physical characteristics of the yolk.The addition of 6% sodium chloride and 1% sodium benzoate to frozen yolks is another technique for preserving it. After being treated with 0.04 percent pepsin, the frozen yolk may be stored without being harmed for roughly four months.

3. Egg powder: To make egg powder, eggs must first be rinsed under running water and then dipped into a 2% bleaching powder solution. The cleaned eggs are cracked, and the resulting liquid is churned and filtered to remove the shell fragments and chalazae. 0.5% yeast is added, and the mixture is maintained at 36°C for 1.5 hours in order to remove the sugar. Now that the fermented liquid has been pasteurised, it is cooled and 1 N HCl is added to raise the pH to 5.5 for around 30 minutes at 60–61°C. While maintaining an automizer speed of 20,000 rpm, this solution is spray dried at an intake temperature of 160°C and an exit temperature of 60°C. Hence, egg powder is produced, which is then stored for roughly three hours at 60°C in a vacuum self-drier. This powder contains 1.2% sodium carbonate and is bottled in airtight containers. The resulting egg powder is composed of lecithin and fat 38–40%, protein 45%, moisture 13–15%, and moisture. Even at higher temperatures, dried egg powder may be stored for extended periods of time. The egg powder is incredibly portable, and the proteins include the same amino acids as those found in shell eggs. Egg powder is often used in the creation of custards, pies, and other baked goods.

In our nation, using poultry for human consumption is becoming more and more important. This practise is either handled as a distinct business or in tandem with the production of commercial eggs. The birds intended for human consumption should have a high ratio of growth in live weight to feed intake, be fast-growing, and have well-fleshed thighs and breasts. Depending on the kind and type of food the chickens are fed, mature chicken may weigh anywhere between 1 kg and 5 kg. In male chickens compared to females, the leg makes up a larger portion of the overall weight. Poultry meat that is intended for human consumption must be tender, sound, clean, and healthy. Compared to other meats, it is lower in fat. Age and sex of the bird have an impact on the meat's softness and flavour. The flesh of chickens up to 85 days old is very soft, while chickens between 85 and 115 days old have tender meat that may be roasted. A mature hen's flesh is not suitable for table use.As meat from table fowl is a rich source of protein, vitamins B, phosphorus, and iron, it is becoming more and more popular. Cooking causes the least amount of loss of these ingredients, especially in the case of vitamins B.

Nitrogenous compounds Actinomyosin, globulin X, myogen, and myoglobin are among the extracellular proteins that make up the muscle protein in chicken. Crude chicken muscle is also discovered to include nitrogenous compounds such creatine, carnosine, anserine, adenosine triphosphate, urea, ammonia, uric acid, and amino acids. Collagen and calcium phosphate make up the bones. As the fowl is cooked, the collagen in the skin transforms into gelatin, which gives the soup a tasty flavour. Essential amino acids and highly digestible components are included in the poultry proteins.

Fat The distribution of fat components changes depending on the bird's age, sex, diet, and tissue. Whereas the breast tissue has relatively little fat, the stomach region has roughly 80% fat. A neutral fat or phospholipids containing tetraenoic, pentaenoic, and hexaenoic acids may be used as the fat. The acidity of the fat is used as a freshness indicator. The degradation of the chicken flesh is indicated by the increasing acidity of fat.Enzyme the fat and muscles of chicken are discovered to contain a variety of enzymes, including lipase, catalase, oxidase, peroxidase, reductase, amylase, invertase, glycogenase, maltase, proteinase, and antitrypsin.

Minerals It has been stated that the muscles of chicken contain a vast amount of minerals, including calcium, potassium, sodium, iron, phosphorus, magnesium, chlorine, and sulphur. Iron and phosphorus are abundantly present. The chicken muscle also contains trace elements including copper, iodine, and manganese.Vitamins Riboflavin and nicotinic acid, which are closely connected to the nutrients provided to birds, are found in abundance in chicken flesh. The liver contains additional vitamins including vitamin A and vitamin D. Thiamin and rivoflavin are both found in abundance in the dark muscles of chicken.

Processing of chicken includes dressing, evisceration, and killing of birds for consumption. Although some customers

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like to purchase live birds, others prefer to purchase birds that have been dressed to suit their needs.Dressing Birds should be kept and provided enough food and water before being killed. Feed should be taken away from the birds three hours before to slaughter, but water should always be available. To ensure total bleeding, the carotid arteries are severed since partial bleeding yields an unsatisfactory, dark output. Feathers are removed via scorching, or submerging the bloodied bird for 3-5 minutes in a certain temperature of water. Furthermore, feathers are removed using the hands or some basic mechanical techniques. After drying, corpses are put through a hot flame to remove their hair.

Evisceration typically, birds are bought in eviscerated or ready-to-cook state for the table, thus sufficient care must be taken to prevent bacterial contamination, rancidification of the fat, and significant moisture loss.Freezing and lowering the carcass should initially be maintained below 4-5°C and then at 0°C immediately after treatment. Slush ice is used in the chilling process to cause a rapid drop in the carcass' body temperature so that excessive desiccation may be monitored. The carcass may thus be kept in excellent shape for 20 to 30 days in storage. To prevent contamination during this procedure, one should take care to ensure that the bird's own faeces do not come into touch with the corpse. The amount of free amino acids and basic nitrogen in meat somewhat rises with chilling, but at the price of proteins. If the temperature of the chicken meat is maintained below 9°C, losses resulting from microbial activity stop, souring and sliming of the flesh don't harm the meat's quality. With the development of India's poultry industry, major poultry processing systems have been constructed in several centres with excellent capacity for the processing of chicken.Canning The preservation of meat quality by canning is a highly helpful approach for easing the distribution and storage of extra chicken meat. When meat is canned, it is sanitised and preserved by a pack container, which is especially important when there is no refrigeration facility.

II. DISCUSSION

Chicken in cans at 20 months, the elderly chickens are no longer profitable for egg production, therefore they are canned for a consistent supply of poultry meat. Methods for canning solid-packed processed chicken in the form of whole chicken, entire boneless chicken, cut-up chicken without bone, cut-up chicken with bone, and chosen sections such as breast, thigh, etc. have been developed by the central Food Technological Research Institute, Mysore. Chicken jelly and broth, which are needed to make tonics, are produced during the canning process[10], [11].Little chunks of flesh from aged hens, roosters, and cull birds are combined with vegetables to make sausages, which are then seasoned with spices. Moisture makes up 62–65% of the product, followed by protein (15–17%), fat (15–17%), and carbs (3–4%).Chicken flavor Young, healthy chicken flesh pieces are partly hydrolyzed with hot water, and the extract is then condensed under vacuum. Moreover, this concentrated extract is sterilized, the fat is removed, and the strength is adjusted to the appropriate level. After adding the proper preservatives, the contents are wrapped in a package.

Infant food certain infant meals are made with meat and broth and are a rich source of protein, iron, and nicotinic acid. For the creation of skin paste or other dried products, the skin and bones are employed. There is no fiber in the infant meals.Feathers The feathers of chickens are excellent for commercial use. They make about 4-9% of the bird's life weight. They are cleaned, dried, and packaged for use in businesses. Pillows and blankets are made from feathers. The down feathers are in high demand abroad because of their low weight, softness, and excellent insulating capacity. Given that lengthy feathers are used to create shuttlecocks.Chicken manure the nitrogen, phosphoric acid, and potash in chicken manure, which is made from the droppings of poultry birds, make it very helpful for the field's standing crops. A hectare of maize or rice may be fertilised with approximately a tonne of deep litter produced annually by forty birds.

Fed byproducts. For chickens and animals that produce meat, a variety of poultry by-products, including blood meal, feather meal, poultry by-product meal, and hatchery by-product meal, are utilised as valuable sources of nutrition. These byproducts are an excellent source of protein, vital amino acids, lipids, vitamins, and minerals. When chicken slaughterhouse feathers are processed under high pressure, feather-meal or hydrolyzed feather is created, containing 80% protein, of which 70% is highly digestible. The dry rendered portions of the carcasses of slaughtered birds, such as the head, feet, unhatched eggs, gizzard, and intestine, are ground to produce the poultry by-product meal. To create poultry hatchery by-product meal, which includes calcium 18.1%, 413 mgl 100 g of phosphorus, and necessary amino acids, a combination of egg shell, infertile and unhatched eggs, and culled chicken is boiled, dried, and ground.

The health of the flock is essential for producing a decent yield of eggs. It is crucial to provide wholesome food and suitable shelter. Grain, groundnut cake, rice husk, wet combinations, and green food to eat that are high in carbs, proteins, lipids, and minerals are provided to chicken on poultry farms. Antibiotics are often administered to poultry as feed or drinking water to treat illness or stop disease outbreaks brought on by crowded or unhygienic settings.Small farmers may find job possibilities in the burgeoning poultry industry, which also offers them supplemental income and nutritional assistance. Poultry is a major source of high-quality protein in the form of eggs and meat, which helps to enhance human nutrition and food security. It serves as a crucial addition to the income from crops and other animal activities, preventing an unhealthy reliance on conventional goods. Poultry is one of the few alternatives for saving, investing, and risk protection for smallholder farmers in poor nations. Almost 90% of the

entire poultry output in certain of the nation's comes from family poultry. The lowest livestock investment is in poultry [12], [13].

III. CONCLUSION

As a subset of animal husbandry, poultry farming is the process of producing domestic birds like chickens, turkeys, ducks, and geese for meat or eggs in the food industry. As a hen reaches the age of six months, it starts to lay eggs; this bird is known as a "broody hen." Chickens raised for their meat are known as broilers, whereas those raised for eggs are known as laying hens. The majority of chickens are reared using intensive agricultural methods. This kind of production accounts for 74% of the world's chicken meat production and 68% of egg production. At farms that raise chickens for eggs, the birds are often kept in rows of battery cages. Poultry farming entails breeding and growing chicks for a variety of reasons. Aseel, Ghagas, Basara, and Brahma, chicken breeds with high yields, may be found in several Indian states. Based on the region in which they have originated, high-yielding exotic varieties are divided into four classes: American, Asian, English, and Mediterranean. Breeds that are raised for eggs, meat, or both are included in these classifications.

REFERENCES

[1] K. W. Tang and H. G. Dam, "Phytoplankton inhibition of copepod egg hatching: Test of an exudate hypothesis," Mar. Ecol. Prog. Ser., 2001, doi: 10.3354/meps209197.
[2] N. Vejzagić, R. Adelfio, J. Keiser, H. Kringel, S. M. Thamsborg, and C. M. O. Kapel, "Bacteria-induced egg hatching differs for Trichuris muris and Trichuris suis," Parasites and Vectors, 2015, doi: 10.1186/s13071-015-0986-z.
[3] M. Strugarek, L. Dufour, N. Vauchelet, L. Almeida, B. Perthame, and D. A. M. Villela, "Oscillatory regimes in a mosquito population model with larval feedback on egg hatching," J. Biol. Dyn., 2019, doi: 10.1080/17513758.2019.1593524.
[4] T. G. Nielsen, E. F. Møller, S. Satapoomin, M. Ringuette, and R. R. Hopcroft, "Egg hatching rate of the cyclopoid copepod Oithona similis in arctic and temperate waters," Mar. Ecol. Prog. Ser., 2002, doi: 10.3354/meps236301.
[5] M. B. Ramli, H. P. Lim, M. S. Wahab, and M. F. M. Zin, "Egg Hatching Incubator Using Conveyor Rotation System," Procedia Manuf., 2015, doi: 10.1016/j.promfg.2015.07.091.
[6] L. Wlazlo, K. Drabik, K. I. A. Al-Shammari, J. Batkowska, B. Nowakowicz-Debek, and M. Gryzińska, "Use of reactive oxygen species (ozone, hydrogen peroxide) for disinfection of hatching eggs," Poult. Sci., 2020, doi: 10.1016/j.psj.2019.12.039.
[7] B. Míguez, M. P. Combarro, C. Guisande, A. R. Vergara, and I. Riveiro, "Effect of bacterial epiflora on egg hatching of the Atlantic sardine (Sardina pilchardus)," FEMS Microbiol. Ecol., 2004, doi: 10.1016/j.femsec.2004.06.016.
[8] M. Milione and C. Zeng, "The effects of temperature and salinity on population growth and egg hatching success of the tropical calanoid copepod, Acartia sinjiensis," Aquaculture, 2008, doi: 10.1016/j.aquaculture.2007.12.010.
[9] M. J. T. N. Timmermans and J. Ellers, "Wolbachia endosymbiont is essential for egg hatching in a parthenogenetic arthropod," Evol. Ecol., 2009, doi: 10.1007/s10682-008-9282-0.
[10] H. G. Dam and R. M. Lopes, "Omnivory in the calanoid copepod Temora longicornis: Feeding, egg production and egg hatching rates," J. Exp. Mar. Bio. Ecol., 2003, doi: 10.1016/S0022-0981(03)00162-X.
[11] C. Barth-Jensen et al., "Temperature-dependent egg production and egg hatching rates of small egg-carrying and broadcast-spawning copepods Oithona similis, Microsetella norvegica and Microcalanus pusillus," J. Plankton Res., 2020, doi: 10.1093/plankt/fbaa039.
[12] M. J. Kim, S. Baek, and J. H. Lee, "Egg hatching and first instar falling models of metcalfa pruinosa (Hemiptera: Flatidae)," Insects, 2020, doi: 10.3390/insects11060345.
[13] S. Tanaka, "Embryo-to-embryo communication facilitates synchronous hatching in grasshoppers," J. Orthoptera Res., 2021, doi: 10.3897/JOR.30.63405.

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Economic Importance of Mammals

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***Abstract*— We will learn about the economic value of mammals in the fields of agriculture, horticulture, dairy products, leather goods, and the wool and fur industries after reading these units. Throughout the beginning of time, humans have been drawn to mammals because we as Homo sapiens are always looking for food, housing, safety, and comfort. Mammals' position may be seen in light of both their worth to nature and their significance in boosting human prosperity economically. Mammals have historically controlled the areas in which they live, influencing evolution's course and preserving a delicate ecological balance.**

***Index Terms*— Agriculture, Conservation, Disease Control, Ecotourism, Food Security, Hunting**

I. INTRODUCTION

The flora of a region is significantly influenced by the phytophagous animals; for instance, the millions of bison, prairie dogs, and other herbivores that lived in the short-grass prairies undoubtedly had an impact. In the wild, many lagomorphs, rats, and ungulates kill trees by eating their bark, whereas other animals bury nuts and seeds to help the environment regenerate. Several plant species disperse their seeds when they exit the digestive track of animals or when they get entangled in their hair. Bats that consume pollen and nectar help pollinate a variety of plants. The soil-enriching properties of animal excretions are also very valuable in grasslands with a high density of ungulates[1]–[3].In order to reduce the population of mice, rats, and other rodents as well as rabbits, carnivorous animals like foxes, cats, and others must engage in certain behaviour. Even ill and weak animals should not be eliminated from the community, according to a thorough ecological study of carnivores. Carnivores are therefore necessary for maintaining the balance of herbivores in the natural community, and the population of carnivores is in turn controlled by the availability of prey species. The interaction between herbivorous and carnivorous animals has not been well investigated from an ecological point of view, according to the literature on the subject.

Usage of animals directly

Regarding their activity, certain animals are beneficial to humans. They are used in agriculture, transportation, scavenging, hunting and sporting activities, as pets, and as predators of nuisance animals, among other things.

1. Agriculture. Several animals are used in agricultural labour even in the age of modern science and technology. Animals like oxen, buffaloes, camels, and others are often utilised for tilling soil. Because of its improved ability to absorb water, oxygenation of the soil, and reaching of organic components to the lowest layers, tilling makes the soil very productive. Also utilised for watering of crops are buffalo, oxen, and camels, particularly in regions without additional irrigation systems. The excrement and urine of cows, buffaloes, sheep, goats, and other animals are used to create natural manure with a high nitrogen content. Also, this manure is utilised in gardening to produce large flowers and fruits. Moreover, manure is made from the leftovers from whaling operations and bat guano that has been excavated from cave floors. It is also an excellent and rich fertiliser.

2. Transportation although many different forms of transportation have arisen and are utilised in many different industries, several animals are also used for transportation at various locations. Man has taught and skilled horses, oxen, camels, buffalo, and elephants for use in carts and other forms of transportation. As animals of burden, people utilise camels, asses, donkeys, horses, and elephants. In the desert, camels are often employed for transportation. In some areas, certain mammals—such as reindeers and tundra dogs in Tundra Pradesh, yaks in Tibet, and bison in America—are utilised as means of transportation[4]–[6].

3. Scavengers Mammals play a crucial role in the world of scavengers. The globe would be an open desert without the animals' invaluable assistance. Due of their dietary habits, hyaenas, jackals, and pigs always serve as natural scavengers. On occasion, it is discovered that dogs are also consuming human waste.

4. Hunting and sports Men all around the globe participate in hunting as a kind of leisure since it has been appealing to humans since the dawn of humanity. Sport hunting is sometimes divided into two categories, large game and small game. The big game may provide as both food and protection against a variety of bigger carnivores, including as lions, wild boars, and tigers. The hunter often needs to go far from his house to play this game. Large-scale games, which are an excellent way to make money, are another way to get fur hides and skins. The little game is often only played locally and is limited to smaller creatures like rabbits, squirrels, etc. The use of weapons is not necessary while hunting tiny wildlife. Some people hunt professionally. Nowadays, hunting of bigger animals is severely forbidden since many of them are becoming extinct. For hunting, animals like dogs and horses are quite useful.

5. Pets the domestication of certain mammals for good care and a consistent supply of some important elements for everyday living resulted from humans' dependence on

animals. Domesticated animals had begun to follow man's commands before the prehistoric era. Before there was any recorded history, dogs were likely one of the domesticated animals. Dog offers its excellent and honest assistance about the existence of tiny and hazardous predators throughout the hunting process. Moreover, it stalks its target, pesters them, and may even end up killing them. Dogs are sometimes employed for transportation, security, herding, and the protection of living animals, food, skin, and other items. From 9,000 years ago, sheep and goats have been domesticated. Horses, cattle, and water buffalo have all been tamed for 6,000, 4,000, and 4,000 years, respectively. In addition to these animals, humans also keep a variety of other mammals as pets or as domesticated livestock. Consequently, it may be inferred that because man depends heavily on domesticated animals for a variety of purposes, domesticated mammals like dogs, cats, cattle, sheep, and goats are often associated with civilised man. Bernett found that policedogs help the police department find criminals by identifying their particular odour.

6. Pest-eating predator the significance of pests that prey on mammals cannot be overstated. They decrease the number of certain pests that are harming the country's economy. So, there are certain limitations on hunting such pest-eating creatures. The protection of the species in its natural habitat is the second motivation for the hunting ban on certain animals. One of the most significant animal predators is the cat, which feeds on rats, a severe pest of crops in the field and food grains in homes. Cats are deployed to prey on rats at a variety of government buildings, which helps to reduce the number of rodents. The government of Humburg has allocated a specific budget to buy milk and meat for 10,000 pet cats. Food grains are loaded and unloaded in massive numbers at the port of Humburg. The other animal that preys on rats is the mongoose. Foxes also significantly impact the rat population. According to Bhatia and Singh in 1959, squirrels that break into locust cages feed on both hoppers and adults.

Use of animal products

Humans utilise the products of mammals in a variety of ways, such as food, clothing, medicine, oil, musk, and other commercial goods.

1. Food The basic essential of existence is food. Mammals provide dietary value in the form of meat, milk, and its byproducts. Man's dependency on a non-vegetarian food derived from animals has grown as a result of the rise in domesticated mammal populations and improved transportation infrastructure. For the most part, marine creatures are the source of sustenance for the Inuit. The sustenance of Australian ancestors heavily relies on kangaroos and wallabies. While it is well known that hunting is a pastime, many species, including rabbits, squirrels, deer, whales, and seals, are utilised as food after being hunted. Several ungulates, including cattle, goats, sheep, and others, provide humans very nutrient-rich diet. The two main culinary ingredients used worldwide are pig and beef. The Andaman and Nicobar Islands are home to several tribes that love to eat pig meat. As a result, mammals are employed as a source of high-protein, non-vegetarian nutrition for people all over the globe.

1. From the dawn of time, humankind has benefited from using mammalian milk. The guy has been given life by milk. Animals like cows, goats, and buffallo offer milk for human use, which may be consumed directly or transformed into various food products like butter, curd, and ghee. Although milk, curd, and ghee are tiny sources of revenue in villages, particularly for the poor, dairy farming has become a lucrative industry in cities.Due to the development of sophisticated dairying processes, Denmark, Holland, and Belgium are able to make a decent living. India has not made enough effort to build better dairy. Cows were revered as "mother" by "Hindus" since India used to be the world's largest producer of milk; now, owing to a shortage of uncultivated land and other resources, man is consuming less mammalian milk on a daily basis. The second factor is its expensive price, which is out of the grasp of the average person. Even though the Indian government has planned a few initiatives to boost the dairy business, the outcomes have not been particularly promising because of poor management and a city-only focus.

2. Shelter The human body is covered and protected by the fur, hair, and skin of mammals. Nowadays, it's likely that animals are employed more for refuge than for food. For their skins, hunters pursue wild boars, peccaries, kangaroos, seals, sea lions, and capybaras. So-called stylish and wealthy individuals utilise soft-textured furs for their coats, and their women are required to wear fur at least around their necks. As a result, the fur trade is dictated by social trends rather than the genuine requirements of people. In India alone, goats account for one-third of the world's output of hide and skin. Yet, India has not been able to provide high-quality material to the global hide market. Soni said that India generates hide and skin worth 50 crores of rupees yearly based on certain statistics.Beaver, mink, otter, shrink, fox, sheep, goats, cats, and rabbits are the most frequent domesticated animals that produce fur. Sheep and goat wool and hair are spun into thread and used to weave garments.

3. Medicine The medicinal value of animals is likewise quite high. Due to its readily digested quality, cow and goat milk is administered to sick people. Vitamin A, which is highly recommended for eye problems and optimal maintenance, is present in sufficient amounts in whale liver. Certain animal organs, such as the kidney, pancreas, and liver, as well as several hormones generated by the adrenal, thyroid, pituitary, and thalamic glands, are utilised directly or in the form of extracts to treat human illness.

4. Oil Prior to the discovery of petroleum, there was a far higher market for animal-derived oil. Whales are still hunted for their oil, which is used to soften leather and make soap and margarine, among other things. The famed "Sperm oil," a waxy inedible fat that was formerly used to make candles, is

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now used to make detergents, shoe polish, cosmetic ointments, lubricant for high-end machinery, and other products.

5. Dung Natural fertiliser that is high in nitrogen may be found in cow dung. In certain places, people use dried dung as fuel to cook their meals. Cow dung has recently been employed at Gobar Gas Plant's small-scale manufacturing. In communities today, gas supplied from this plant is commonly utilised for lighting and cooking.

6. Musk Musk has been referenced in several ancient texts and has been well-known since the prehistoric times. American skunks, musk deer, Asian and African civet, and other species generate it. Musk is a common foundation ingredient in the perfume business. Ambergris, a waxy material created by certain anomalies in the function of the gut and discovered in the intestine of some sperm whales, is also utilised as a fixative in the perfume business.

7. Ivory It is taken from walruses and elephants and is also widely known and dates back a very long time. It is very precious and is used in blades, billiard balls, piano keys, and other items. Moreover, sperm whale teeth, narwhal tusks, and hippopotamus teeth are traded for ivory.

Additional commercial goods

1. Skins and hides the hides and skins are tanned and used to make a variety of items, including suit cases, belts, handbags, cases, shoes, sandles, and slippers.

2. Carcass Mammal fat is extracted from the carcass and is often utilised in the manufacture of soaps and lubricants in the leather and textile industries. Depending on the size and condition of the animal, 5 to 50 pounds of fat may be extracted from the corpse of a healthy mammal. Rackets for badminton and tennis are made from certain animals' iritestine. Now, the small-scale industrial sector has 250 flaying carcass and 250 marketing depots.

Hoofs and horns the horns and hoofs are used to make elegant toys, combs, frames, knife handles, buttons, and other items.

4. Hairs Hairs from pigs, camels, and horses are used to make hard brushes, such as those for painting, coat brushing, and polishing shoes.

5. Skeleton Mammal bones have significant economic value and are used to make both offensive and defensive weapons. In the sugar business, bone charcoals are used to remove molasses. Elephant and camel bones are quite expensive in the marketplaces. Whale skeletons are used to make gum and gelatin, which is used to make candles, photographic films, and other products. Super-phosphate, a phosphate fertilizer currently often employed by farmers in their cultivated land for optimal development and crop output, is made in large part from the bones of animals.

As exhibit and research animals

At a variety of national and international zoological gardens and parks, a sizable number of animals, including lions, tigers, deer, bears, monkeys, rabbits, foxes, elephants, camels, blue bulls, hyaenas, and wolves, are kept in good condition. Many tourists see them up close for enjoyment, and others do so for educational purposes as well. This makes it a reliable source of revenue. Many animals, including rats, jackals, rabbits, squirrels, and monkeys, are utilized often in research labs for studies in a variety of subjects. So, mammals have several advantages that extend beyond economic ones.

Dairy Sector

The dairy sector, which deals with the production, processing, and distribution of milk and milk products, is exceptional in its significance since it deals with vital foods that all humans eat. The fresh lacteal secretion of dairy cows is used by humans as a food item while being naturally designed for the nutrition of the progeny. Other animals' young can only live on their own mother's milk, whereas humans utilise the milk of other mammals as a supplementary source of nourishment for both themselves and their progeny. Also, man makes a wide range of dishes using mammalian milk, including curd, butter, cheese, sweets, etc. Man has domesticated a variety of animals for the correct and consistent supply of milk. Cows, goats, and buffalos are the only animals that have garnered attention worthy of the term. In a few restricted areas, other animals including sheep, camels, asses, and mares are milked, although their value as milk providers is minimal.

The pastures and other green forages that are abundantly cultivated in such places are great for dairy cattle. Very cold regions are not ideal since there is little green fodder and it is expensive to keep the animal’s weather-proof. The dairy sector as we know it now is rather new. Cows were maintained at an earlier time to provide milk for the farm family. When customers asked farmers to provide their milk directly to consumers, the milk marketing process got underway. At the turn of the century, developments in five main areas have made milk and milk products significant commercial commodities:

1. The factory method for processing milk was introduced in the middle of the 19th century, which increased product homogeneity.

2. A number of technical developments such milk concentration and sterile container sealing, milk distribution in bottles, and other sophisticated milk processing started.

3. Local farms provided the first milk that was sold in towns and cities. The ability to refrigerate milk not only helped to extend the shelf life of milk but also made it feasible to send dairy products anywhere in the globe.

4. In the past, milk was transported on railroads to be delivered to big cities. Fresh milk can now be delivered to markets hundreds of kilometres away from the fields where it is produced thanks to motor vehicles and paved highways.

5. The whole dairy business profited enormously from the implementation of pasteurisation and the enforcement of legislation ensuring sufficient food value in dairy products.

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Dairy animal breeds Cow

India has roughly fifty cow breeds that are well-known. There are also a lot of additional sorts that are considered nondescripts since they do not match any established breed features. The bland people make relatively little milk. Haryana, Kankrej, Ongole, Rath, Deoni, Gir, and Kangayam cows are the main breeds. The northwestern and western areas of Hyderabad are home to Deoni, which are reputable milkers there. In the Ward ha and Chindwara districts, gaolao is widespread. In the Kathiawar, Rajputana, and Baroda areas, gir is a capable milker. Around Delhi, Uttar Pradesh, Hissar, Karnal, and Rohtak, Haryana is a very excellent milk producer. In the Ahmedabad area and the south-eastern Rann of Kutch, kankrej is a prevalent breed that is a decent milker. Ongole is an excellent milker as well and is located in the Guntur districts. Rath is a reasonably skilled milker that may be found from Rajasthan to the northwest. Punjab, Haryana, and Uttar Pradesh are home to excellent milkers known as Shahiwal and Sindhi.

Buffalo

In India, the buffalo is often thought of as a very excellent dairy animal. Bufallo breeds are less numerous than cow breeds. Murrah is a very excellent milker that is located in Kathiawar's forested areas and is found across Punjab, Haryana, and Uttar Pradesh. The Niliand Ravi breeds are widespread in the Ferozepur area of Punjab and are excellent milk-yielding variations. The Surti are widespread in Gujarat and are inexpensive milkers.

Goat

In India, goats are utilised to make up for milk production shortages. The production of milk is utilised by around 20% of the goat population. While there are several goat breeds, just a few are widely utilised across India. In the Ganges-Jamuna riverine areas, there are several goat varieties that are excellent milkers known as Jamunapari. Beetal in Punjab and Bar-Bari in Uttar Pradesh don't produce good results in the Tarai belt, while Outchi in Kathiawar and Kutch, Osmanabad in the Hyderabad region, North Gujarat in Kathiawar, Kutch, and North Gujarat, Marwari in Jodhpur, Surti close to Surat, Sirohi in Sirohi and Palampur, and Malabari in the North Malabar region do [7]–[9].

II. DISCUSSION

Dairy producers started enhancing cattle and other farm animals in the middle of the 18th century. The main methods used were close culling and mating of related species. On government farms, proven and standard breeds are raised and maintained for distribution up to the village level. In regions with well-defined breeds, the bulls are employed for selective breeding. By repeatedly crossing ahead, non-descripts are getting upgraded in a number of locations. While these efforts have shown hopeful results, there are not enough bulls available for breeding. The offspring of well-defined bulls like Shahiwal, Sindhi, Haryana, or others produce at least twice as much milk as the bland dam. The second cross demonstrates an even greater rise in milk output.

For the last 50 years, there has been a significant amount of cross-breeding utilising imported males. The Ayreshier breed was popular in bygone times in India. Later, a huge number of Friesians were introduced, and it is said that they produced the best results. Compared to Friesian cows, which produce 5000 kg of milk each lactation on average, Indian Friesian cows produce just 4,000 kg. The Friesians are routine calvers, but their output depends on the care and attention provided to them. They are kept in convenient locations and relocated to the hills in the summer. When the proportion of Friesian blood increases or decreases, the yield decreases. Friesian blood production has been discovered to improve capacity, but the animal's constitution is not sufficient to withstand the stress involved in producing milk to its maximum potential. Despite the fact that cross-breeding with foreign breeds increases milk output, it is not often practised since the animals need specialised care and supervision, which is not typically provided to cattle in India. The half-bred cow generated by continually backcrossing it is superior to the cow from whence it originated, according to experience. Artificial insemination has been used throughout the nation to make better use of the few breeding bulls that are now available. At the outset, regional research facilities in Calcutta, Patna, Montgomery, Bangalore, and Izatnagar used artificial insemination[10], [11].A productive goat farm may be started by taking a few excellent milch-yielding mother breeds together with their male and female offspring. After starting off with a limited number, it should be feasible to identify the greatest milk-producing moms in around two years. Those who are not required to take part in the breeding programme may be castrated at 3 to 4 months old and disposed of when the time is right.

Feeding Supplies

Roughages and concentrates may be used to broadly categorise the feeding materials for dairy cattle. The roughages are made up of dry fodders and succulent feeds. The concentrates are made up of components high in carbs. Dairy cows also need a certain quantity of common salt to be healthy in addition to roughages and concentrates. Studies in this area have shown that a variety of substances formerly thought of as wastes, such as mango seed, jaman seed, and mahuaflowers, as well as crushed nut husk, bajra, and coffee husk, may be used as cow fodder. Feeds of animal origin, such as fish meal, blood meal, and bone meal, may also be used as cow feed in addition to distillery products. The information about the ingredients that are often given to dairy cattle in India is provided in the table below [12], [13].

III. CONCLUSION

Throughout the beginning of time, humans have been drawn to mammals because we as Homo sapiens are always

looking for food, housing, safety, and comfort. Mammals' position may be seen in light of both their worth to nature and their significance in boosting human prosperity economically. Mammals have historically controlled the areas in which they live, influencing evolution's course and preserving a delicate ecological balance. Yet only those animals that may directly benefit him have been respected by man.

REFERENCES

[1] M. Wardeh, K. J. Sharkey, and M. Baylis, "Integration of shared-pathogen networks and machine learning reveals the key aspects of zoonoses and predicts mammalian reservoirs," Proc. R. Soc. B Biol. Sci., 2020, doi: 10.1098/rspb.2019.2882.
[2] C. Liu et al., "Economic costs of biological invasions in Asia," NeoBiota, 2021, doi: 10.3897/neobiota.67.58147.
[3] E. A. Lawer, A. C. Mupepele, and A. M. Klein, "Artisanal mining impacts small mammals while chainsaw milling is a more sustainable practice in Ghana," Biodivers. Conserv., 2021, doi: 10.1007/s10531-020-02089-0.
[4] M. V. Vieira et al., "Land use vs. fragment size and isolation as determinants of small mammal composition and richness in Atlantic Forest remnants," Biol. Conserv., 2009, doi: 10.1016/j.biocon.2009.02.006.
[5] M. Kasso and M. Balakrishnan, "Ecological and Economic Importance of Bats (Order Chiroptera)," ISRN Biodivers., 2013, doi: 10.1155/2013/187415.
[6] M. V. Mazzamuto, L. A. Wauters, and J. L. Koprowski, "Exotic pet trade as a cause of biological invasions: The case of tree squirrels of the genus callosciurus," Biology. 2021. doi: 10.3390/biology10101046.
[7] P. Pyšek et al., "Disentangling the role of environmental and human pressures on biological invasions across Europe," Proc. Natl. Acad. Sci. U. S. A., 2010, doi: 10.1073/pnas.1002314107.
[8] C. M. Kennedy et al., "Optimizing land use decision-making to sustain Brazilian agricultural profits, biodiversity and ecosystem services," Biol. Conserv., 2016, doi: 10.1016/j.biocon.2016.10.039.
[9] T. Aminatun, R. A. Suwasono, and R. A. Putri, "Flora and fauna diversity in selangkau forest: A basis for developing management plan of cement industrial complex in east Kalimantan, Indonesia," Biodiversitas, 2021, doi: 10.13057/biodiv/d221049.
[10] M. Carvalho, J. M. Palmeirim, F. C. Rego, N. Sole, A. Santana, and J. E. Fa, "What motivates hunters to target exotic or endemic species on the island of São Tomé, Gulf of Guinea?," ORYX, 2015, doi: 10.1017/S0030605313000550.
[11] M. Riccucci and B. Lanza, "Bats and insect pest control: a review," Vespertilio, 2014.
[12] S. I. Imai, "Dissecting systemic control of metabolism and aging in the NAD World: The importance of SIRT1 and NAMPT-mediated NAD biosynthesis," FEBS Letters. 2011. doi: 10.1016/j.febslet.2011.04.060.
[13] W. J. Ripple et al., "Status and ecological effects of the world's largest carnivores," Science. 2014. doi: 10.1126/science.1241484.

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An Overview on Dairy Farm

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Abstract*— The mammary glands, which are specialised skin glands, generate milk. A lactogenic hormone produced by the pituitary gland, which is situated at the base of the brain, stimulates the mother's real milk supply upon delivery. Adrenal hormones are also crucial for breastfeeding. Because of the existence of another hormone, oestrogen, which is eliminated after birth, lactogenic hormone synthesis from the pituitary is restricted throughout pregnancy. The neurological system of certain animals uses the stimulation of sucking young to induce lactogen production.

Index Terms*— Animal Welfare, Breeding, Calf Management, Dairy Products, Farm Management, Feed, Nutrition

I. INTRODUCTION

In metropolitan settings, 60 to 70 percent of the total milk needs are produced inside the city boundaries, with the remaining 20 to 30 percent coming from nearby rural regions.For consumption as milk and milk products, just 6 to 8% of the nation's total milk production is transferred from rural to urban areas. The milk that is delivered from beyond the municipal boundaries comes from between 8 to 15 kilometres of the towns, with the remaining 13% coming from further than this. A portion of the milk eaten in big cities like Calcutta, Bombay, Chennai, Delhi, and others comes from places that are 75 kilometres away. The organisation of milk production and sale on a cooperative basis has seen some success[1]–[3].

Prices

The cost of milk varies greatly from location to location. There are almost no reliable markets for fluid milk in rural regions. After serving the needs of the producer's family, the leftover milk is made into butter, ghee, or khoa. Prices for these goods are mostly based on how far away from the community they are sold at weekly markets. In general, cow milk is less expensive than buffalo milk, however this may not always be the case.

Contains Milk

There are several milk products. These are well-known in India, and several are used in interstate commerce. Dairy farming is a very lucrative sector because to dairy products like cheese, butter, condensed milk, milk powder, curd, and others.

Dahi

It is made by lactic acid starter, often the curd from the day before, souring milk. To make curd, milk is first heated and allowed to cool to between 60 and 70 degrees "F. Moreover, starter is included and left undisturbed. As a result, within 10 to 12 hours, curd is suitable for ingestion as fat. Lactic acid, which is expressed as 0.6 to 1.0 percent titratable acid, is present in curd. It has a smooth, compact texture and a lactic flavour. The kind of starter used, the organisms present, and the amount of time given for souring all affect the makeup of the product. The predominant microorganisms in curd are streptococci and Lactobacillus casei. Curd is often eaten where it is made. 84.79 percent of curd is made up of water, 7.7 percent fat, 3.4% protein, 4.6% lactose, 0.7 to 0.8% lactic acid, and 0.7% minerals, including 0.12% calcium and 0.95% phosphorus.

Cream

By centrifuging the liquid milk, cream is a fat-contaminated fraction that is isolated from milk. The separator is often a bowl with several conical discs stacked one on top of the other with gaps between them. The heavier proportion, or skimmed milk, is dragged towards the perimeter and sucked out when the bowl is spun between 3,000 and 20,000 revolutions per minute.

Milk enters via an aperture in the centre.The second way to get cream is the gravity technique, which involves keeping milk in a container at 50°F. The milk naturally develops cream after 24 hours, which is removed with a spoon. The quantity and quality of the cream varies depending on the milk's quality and separator speed. Skimmed milk, which is derived as a byproduct and has a fat content of 0.04 to 0.5%, is used to make cheese, milk powder, buttermilk, and condensed milk. Around 10% of the cream produced by a buffalo's milk, 6% by a cow's milk, and 7.5% by mixed milk. 56% of cream is made up of fat, 1.6% of protein, 3% of lactose, 0.4% of minerals, and 39% of water.

Butter

Butter is a concoction of water, buttermilk, and milk fat. Often used colouring agents include salt. It provides a decent amount of vitamin D and a considerable amount of vitamin A. Spreadability is a quality that distinguishes butter from butter alternatives. This is possibly because butter fat has a glyceride structure and contains less saturated fatty acids.Desibutter, also known as makhkhan, is made by churning curd, which has been diluted with water, in earthen or tinned metal pots using a wooden pole called a "mathani" that has beaters attached to one end. Typically, the butter

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includes 18 to 25% water along with various amounts of curd. Butter is made up of 14% water, 83.5 percent fat, 1.5 percent lactose, 0.3% minerals, and 0.8% aluminium.

Whipped butter

Just a small number of dairies in India produce creamy butter. Cream is aerated and matured at 75 to 95°F to generate the required aroma and to make churning easier while making creamy buter. The addition of natural starters such curd, fermented cream, and buttermilk or commercial starters containing pure cultures of lactic acid bacteria typically causes the product to ripen. After being diluted with cold water, the matured cream is combined with a little amount of dye and churning is begun at a temperature of 50 to 60°F.

Churning is often done in the mornings while it is cool outside; otherwise, ice is added to keep the temperature where it should be. The whole process takes between 30 and 40 minutes. The butter is repeatedly washed in cold water after the butter milk has been drained off. Afterwards, it is salted up to 2.5% by adding salt solution either during the churning process or after the butter has been removed. In order to create a product with a hard and compact texture, excess moisture is pressed out[4]–[6].

Ghee

By removing the water from butter, ghee or clarified butter is created. It is the second most important dairy product after milk. Since it can be kept for an extended length of time, it is favoured by regular people in most tropical nations over butter. In India, ghee is made using a traditional method that involves sour curdling milk, recovering butter, and heating the butter to drive out water. Desi butter is preferable over creamy butter because the ghee it produces may be melted immediately or after being stored for up to 10 days. Depending on the market's requirement, it may first undergo some dehydration before being transformed into ghee. Butter is clarified at temperatures ranging from 80 to 125°C. Both the development of grain and the amount of carotene and vitamin A in ghee are unaffected by brief exposure to 120°C. The tins to which ghee is transferred should be left undisturbed, and cooling should be allowed to occur gradually, in order to guarantee adequate grain formation. Its market value is influenced by how the colour and grain structure look. Cow ghee is yellow, whereas buffalo ghee is pale. Compared to cow ghee, buffalo ghee has larger grains. Ghee's makeup changes depending on the makeup of the milk from which it is made. Ghee is mostly used for frying, cooking, and consuming with meals. On the market, ghee is often adulterated.

Malai When milk is heated, a coating of coagulated proteins and fat known as malai forms on the top. The layer's thickness may be increased with slow heating. By heating the milk until a thick froth forms and then allowing it to cool gradually over a fading fire, you may enhance the amount of malai. Malai is either eaten straight up or used to make desserts. Its ingredients are as follows: lactose 3.3 to 3.8%, proteins 3 to 3.5%, moisture 60 to 70%, fat 25 to 30%, and ash 0.4 to 5%.Sweetened milk it is made by boiling milk at 130 to 135 degrees Celsius and vacuum-pressurizing it to the desired concentration. To avoid fat from separating, the concentrate is homogenised. It is then chilled and, if required, fortified. To stop coagulation during sterilisation, stabilisers such calcium chloride or disodium hydrogen phosphate are applied. The condensed product is swiftly cooled from 86 to 80 degrees Fahrenheit and maintained there for 15 to 20 minutes. Because of the careful management of the cooling, the crystals are tiny and continue to be suspended in the viscous liquid.

Khoa

It is made by quickly evaporating the milk's water content. It is typically made from buffalo milk by boiling it with vigorous stirring in shallow steel flat-bottomed pots until the volume is reduced to roughly one-fifth of its original size. The item is collected into a tight mass, chilled, and packaged for markets.To give the finished product a smooth texture, alum is sometimes added to the milk during the boiling process. Khoa is eaten straight up or as a component in desserts. It won't deteriorate if stored for three to four days. Cereal flours are a frequent khoa adulterant.

Cheese

Cheese is a food product formed from curd, which is produced by coagulating casein in whole or skim milk with or without the addition of cream. The separated curd is then further processed using ripening ferments. Coagulants, a source of the coagulating enzyme needed to coagulate milk, are used to make the soft cheese known as "Paneer." The crushed coagulants are wrapped in linen and dipped in milk after it has warmed to around 100°F. Milk becomes curd-free in 30 to 40 minutes. The whey is removed after the coagulum has been spread out on a muslin towel. The making of cheese involves a lot of variation, although not quite as much variation as there may be in the end product's characteristics.

II. DISCUSSION

India now has higher retail milk costs than other nations do in metropolitan areas. This is mostly caused by a lack of milk supply. The Planning Commission has recommended the implementation of methods for enhancing milk production in suburban regions in order to enhance the per capita consumption of milk. Emphasis has been placed on the need of upholding standards of quality control and preserving sanitary conditions throughout the collecting, transportation, and distribution of milk[7]–[9].

A excellent idea from the Planning Commission is the creation of statutory milk boards for each metropolitan area, made up of producers, distributors, consumers, municipal corporations, health agencies, and state governments. The board has authority over issues pertaining to the handling, distribution, quality control, imports, and pricing of milk and milk products. Government, local governments, and

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cooperative banks will all contribute to the required financial support. Community programmes have been developed to enhance milk cow breeds and guarantee that dairy animals have access to enough forage.Before the discovery and understanding of clothing, man had been wrapping his body in animal skin since the birth of civilization.

Despite the widespread usage of synthetic fibres and other materials today, hides and skins continue to have a significant market share, although for a variety of reasons. With appropriate tanning, the skin of many animals is used to make garments, accessories, handbags, shoes, belts, and other items. Just a very small portion, or 13.3%, of India's overall leather production—86–7%—comes from animals that have been killed and their skins. India has the largest livestock population of any nation in the world, and as a result, the output and reputation of the skin and hide industries in India are among the best in the world. But, owing to inadequate technology and a subpar tanning process, it has never been feasible to compete on the global market, especially in terms of leather quality. So, in this business, adequate skin tanning is urgently needed.

Pets Used in the Leather Industry

The main animals used in this sector include goats, sheep, cows, buffalo, lambs, as well as tigers, crocodiles, snakes, lizards, and varanus. Cow and buffalo skins are referred to as "kips" and "buffs," respectively. Cow hides have been produced for a long time in Tamilnadu, Uttar Pradesh, West Bengal, Kerala, Madhya Pradesh, Bihar, Maharashtra, and Orissa, but only these days. Uttar Pradesh, Bihar, Rajasthan, West Bengal, Madhya Pradesh, Bombay, Chennai, and Hyderabad are frequent places to find goat skins.Processing of Skin Industry: The process of turning skin and hides into leather is time-consuming and difficult. Only fallen animals are utilised to acquire skins in the states where cow slaughter has been outlawed by the state government, although leather may be made from both the skin of killed and fallen animals in West Bengal and Kerala.

Flaying

The hereditary flayers in communities have taken up the customary duty of flaying. An amount of flesh and fat tissues remain on to the hide after flaying, increasing the weight of the skin. It is crucial to have flesh and tissues with it in order to lessen the knife cut on the hide. The hide covering the rear of deceased animals is pulled down by the butcher with his left hand while the corpse is hung on a pole with the hind limb upright. The hide is now subjected to further processing, called curing.

Curing

The atmosphere's warmth, germs, and humidity cause the flesh and other tissues in the hides to begin decomposing shortly after flaying. Skin swelling therefore occurs within 12 hours following flaying. The bacterial activity causes the flesh and fat tissues to liquefy, however this bacterial action has to be stopped by using antibacterial treatments.

Salting

Salt therapy is now applied to the healed skin. Sodium chloride, potassium nitrate, sodium sulphate, and other salts are often employed for this purpose. The fleshy surface of the hide is salted by misting powdered salts over it. The skin that has been treated with salt is now prepared to be sent to tanning companies.

Tanning

In India, tanning skin is a practise that dates back to before the Christian era. The majority of tanning took place in villages before to the 1857 Indian Independence War, but after that the British Government constructed "The Government Harness and Saddley Factory" in Kanpur. Based on technology imported from England, only vegetable-tanned leather was created. To make the same leather, "Copper, Allen and Company" established other factories in Agra and Kanpur. Chrome tanning was first taught as a topic at government schools in Kanpur, Calcutta, and Chennai. Chennai, India, saw the establishment of the first chrome tannery in 1903[10], [11].

Before Tan

There are many processes involved in the pre-tanning process, including soaking, liming, unhearing, fleshing and scudding, deliming, and pickling. Pickled skins and hides are treated with natural, synthetic, and inorganic tanning treatments, such as basic chromium sulphate, basic salts of aluminium, zirconium, and iron, formaldehyde, quinone, aliphatic sulphonyl chloride, fish oil, and synthetic polymerized materials.

After Tanning

After the skin has been properly tanned, it goes through a number of mechanical, physical, and chemical processes, including the removal of water and tan liquor, splitting and shaving, neutralising, bleaching, and dyeing, setting out, samming, drying, staking, buffing, and finishing to give the leather a fancy finish for aesthetic grace in the marketplace.

Opponents of the skin industry

The warble-fly and tick, two of its foes, do harm to the skin industry as well. Warble flies cause many holes in hides and skins, which reduces their worth from a business standpoint. The goods become ineffective for any commercial usage if the assault is severe. In the preceding ten years, 25,000 goat skins sent from Kanpur to the United States were badly damaged by warbleflies, costing an estimated 100,000 rupees. Moreover, ticks are discovered harming skin and hides. In Punjab, Uttar Pradesh, and Rajasthan, ticks harm the whole supply of skins and hides by 20 to 30 percent[12], [13].

III. CONCLUSION

The Indian government created "Khadi and Village

Industries throughout India In 1953, he was given the task of overseeing the appropriate processing and use of hides and skins because he was bored. Over 2 million people are actively involved in the manufacturing of a variety of skin items under the management of this board in India. Over 70% of skin care products are produced by small businesses. Scientists are working hard at the Central Leather Research Institute in Chennai to enhance the quality of leather via the use of cutting-edge leather processing methods. With the purpose of promoting the leather sector in Uttar Pradesh, "The Uttar Pradesh Leather Development Corporation" was recently founded. Recently, UPLDC approved plans to invest around $50,000 to construct a factory in the Bastiarea.

REFERENCES

[1] S. N. Garcia, B. I. Osburn, and J. S. Cullor, "A one health perspective on dairy production and dairy food safety," One Health. 2019. doi: 10.1016/j.onehlt.2019.100086.
[2] A. N. Schiano, W. S. Harwood, P. D. Gerard, and M. A. Drake, "Consumer perception of the sustainability of dairy products and plant-based dairy alternatives," J. Dairy Sci., 2020, doi: 10.3168/jds.2020-18406.
[3] Y. W. Park, "The impact of plant-based non-dairy alternative milk on the dairy industry," Food Science of Animal Resources. 2021. doi: 10.5851/KOSFA.2020.E82.
[4] M. Aspri, P. Papademas, and D. Tsaltas, "Review on non-dairy probiotics and their use in non-dairy based products," Fermentation. 2020. doi: 10.3390/fermentation6010030.
[5] H. Aslam et al., "The effects of dairy and dairy derivatives on the gut microbiota: a systematic literature review," Gut Microbes. 2020. doi: 10.1080/19490976.2020.1799533.
[6] P. J. T. Dekker, D. Koenders, and M. J. Bruins, "Lactose-free dairy products: Market developments, production, nutrition and health benefits," Nutrients. 2019. doi: 10.3390/nu11030551.
[7] J. H. Britt et al., "Invited review: Learning from the future—A vision for dairy farms and cows in 2067," J. Dairy Sci., 2018, doi: 10.3168/jds.2017-14025.
[8] K. M. Nieman, B. D. Anderson, and C. J. Cifelli, "The Effects of Dairy Product and Dairy Protein Intake on Inflammation: A Systematic Review of the Literature," Journal of the American College of Nutrition. 2021. doi: 10.1080/07315724.2020.1800532.
[9] J. Gao et al., "Probiotics in the dairy industry—Advances and opportunities," Compr. Rev. Food Sci. Food Saf., 2021, doi: 10.1111/1541-4337.12755.
[10] C. S. Ranadheera, J. K. Vidanarachchi, R. S. Rocha, A. G. Cruz, and S. Ajlouni, "Probiotic delivery through fermentation: Dairy vs. non-dairy beverages," Fermentation, 2017, doi: 10.3390/fermentation3040067.
[11] S. Calsamiglia, G. Espinosa, G. Vera, A. Ferret, and L. Castillejos, "A virtual dairy herd as a tool to teach dairy production and management," J. Dairy Sci., 2020, doi: 10.3168/jds.2019-16714.
[12] Z. Mendly-Zambo, L. J. Powell, and L. L. Newman, "Dairy 3.0: cellular agriculture and the future of milk," Food, Cult. Soc., 2021, doi: 10.1080/15528014.2021.1888411.
[13] M. García-Burgos, J. Moreno-Fernández, M. J. M. Alférez, J. Díaz-Castro, and I. López-Aliaga, "New perspectives in fermented dairy products and their health relevance," Journal of Functional Foods. 2020. doi: 10.1016/j.jff.2020.104059.

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Wool and Fur Industry

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Abstract*—The sheep that produce wool live in the dry areas of Northern India, particularly in the plains and hills. Saurashtra, North Gujarat, Kutch, Kashmir, and the foothill areas of Himachal Pradesh and Garhwal are significant locations that are best suited to supplying the natural conditions necessary for rearing quality woollen varieties of sheep. The Deccan and Vindhya Mountains plateau has been noted to have the biggest sheep population. In compared to wool from other regions, Kashmiri sheep produce finer wool. The finest breeds from Bikaner are the Magra and Chokla, while the Kutchi from Joria are renowned for their outstanding carpet wools.

***Index Terms*— Animal, Fur, Geographical, Wool, Sheep**

I. INTRODUCTION

While the appropriate and systematic categorization of wool according to its quality is not yet fully understood, it is still categorised using the geographical name as follows:

Physical Features

The colour of the wool varies depending on the sheep's species as well as the local climate. Real wool is made of fibres that are hygroscopic, elastic, resilient, poor heat conductors, and not readily combustible. Owing to its natural properties, wet wool generates extra heat. The wool fibre seems to have a cellular structure when seen in microscopic detail. Two distinct sections, a medulla that is somewhat softer in the centre and a central core of hard cells, may be seen in the transverse slice of the wool fibre. The distinguishing characteristics of pure wool are its propensity for dye absorption and its ease of twisting. It has been shown that wool fibres range in diameter from 12 to 80 u. India's wool is notable for its ability to restore its original form after being tugged and its resilience to abrasion[1]–[3].

Chemical Features

Keratins, which are essentially protein polymers and have greater sulphur concentrations, make up the wool fibre. Many polypeptide chains of amino acids make up its structure. Arginine, histidine, lysine, alanine, methionine, threonine, tyrosine, cystine, leucine, iso-leucine, and valine are the different amino acids that make up the protein found in wool.

Sheep removal and wool production

To improve the health of sheep, wool must be sheared. Also, it offers defence against the sheep's natural enemies, such as ticks and mites, which may infect them and make them sick. In the mild weather, the sheep's hair should be gently removed. The best times to shear wool are during the winter and rainy seasons when there is plenty grazing land available. The sheep must be carefully cleansed before hair removal. Shearing operations need the use of the sharpened shears.

Fabrication of Wool Processing

It takes a lengthy procedure of washing, drying, bleaching, dying, and twining to create wool from sheep hair.Cleaning then, wool from sheep should be cleaned in specially designed water tanks using cold water. The wool should be removed from the tank for further processing after washing.Drying Wool that has been thoroughly cleaned should be left to dry for two to three days in the open sun.Bleaching As well-dried wool will always have a light and coarse colour, it is crucial to thoroughly bleach it. Many physical techniques should be used to bleach the fabric since the chemicals would otherwise ruin the wool.Dyeing the bleached wool readily absorbs any dye, thus it is important to be careful that the dying time and quantity are precise. Twisting and spinning the colored wool is now sent to mills to be spun and twisted. Wool is spun and twisted using a variety of machinery that differs from area to region. The shepherds create the thread on the spinning wheels.

Modern Attempts

Since a long time, India's wool manufacturing has been managed haphazardly, which prevents those involved in it from receiving a fair price. Since 1937, the Indian Council of Agricultural Research, New Delhi, has been in charge of managing wool production and trade, and a "Sheep and Wool Development Officer" has been appointed to oversee both the wool's whole production and its sale. The official draughts the yearly budget for wool production and submits it to the Indian government. Rajasthan is known to produce the most wool each year among the several states. The additional states are listed as follows: In order of importance, Rajasthan is followed by Uttar Pradesh, Punjab, Gujarat, Andhra Pradesh, Tamil Nadu, Maharashtra, Karnataka, Jammu & Kashmir, Himachal Pradesh, and Bihar[4]–[6].

Fur and the Fur Trade

The ancient French words forre and juene, which indicate a "sheath" or "covering," are the source of the term fur. It's possible to think of fur as the soft, "downy," thick growth of fibres that covers the skin of certain animals. Animals with fur also have a layer of longer hairs called "guard hairs" or "over hairs" that serve as protection for the underlying fur

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against damage and to keep it from matting or faltering. Despite the fact that both "fur" and "hair" serve to shield an animal from the elements, there are differences between them.Primitive man's primary requirements in the colder parts of the world were for warmth and sustenance, therefore it stands to reason that the use of animal fur and flesh for warmth was not long separated. As a result, wearing fur is a tradition that predates the invention of spinning and weaving and is as ancient as mankind itself. The functional and the beautiful marched side by side from distant antiquity into the modern day. Need came first, but luxury quickly followed. It is now a luxury and decorative item rather than a piece of clothing. Because of this, women are very fascinated with furs, and they don their "furs" not only for warmth but also to make a statement.

Furs were lavishly used by the Assyrians, Romans, and Greeks. It is said that 8000 tiger skins were acquired from an Indian campaign by Herodotus and Queen Samitamis. Several of these skins were used to create the royal household soldiers' outfits. While Homer lived, Armenia was the hub of a significant fur trade, with skins arriving from Siberia, Russia, Persia, Bokhara, and even far-off locations for distribution in Europe and other regions. The royal family, especially the women in the different kingdoms, progressively grew to favour the usage of fur. The men conducted the fighting and hunting, while the women used the furs to accessorise. Prof. Blach has mentioned: "Man must eternally sweat and toil, so vanity may wear the plunder". In terms of wearing fur, the woman has gained equality rather than supremacy. Furs were beautifully displayed during Queen Victoria's coronation. Nowadays, the fair sex wears furs almost exclusively in all civilised nations, both when the temperature calls for it and often when it doesn't.Fur on animals grows thick and luxuriously in areas with mild winters, which are the best places to get valuable furs. The adage "the colder the climate, the better the fur" is true. Canada, North America, Northern Europe, and Siberia are some of the major fur-supplying nations. A significant number of big furbearers, including tigers, leopords, snow leopords, and snow lynx, are also produced in the Himalayan regions.

This trade requires a massive amount of organisation since it is a very dangerous game, and many fortunes have been lost, particularly because of abrupt changes in trend. There is an adage that goes, "Furs are diamonds when sought, charcoal when not wanted." But, the guy at the other end of the transaction, who may be hundreds of kilometres away and who really obtains the skin, the hunter, is often a blend of both. Retailers at least have the opportunity to live and succeed or fail in a civilised environment. The hunter risks dying from the elements, hunger, exhaustion, or even the jaws and claws of a wild animal. They have to contend with Arctic blizzards or desert sandstorms. The hunter, who struggles against the most incredible trials imaginable, is at one end of the chain, and the designer is at the other.The fundamental heart of the hunting grounds is, in all actuality, Hudson Bay. Every year, it is enclosed in ice for over eight months. To get the valuable skins from areas with poor transportation options and where even the rivers are frozen, skilled personnel are required. The fur trade is heavily dependent on Eskimo people in the more northern regions, which include areas up to and beyond the Arctic Circle. After the trapping, the animals are killed and chopped at the collecting base, and the skins and blubber are then transported to the closest camp, where they are either dog-siege transported or transported by other ways to a fur business outpost.

Dressing

To make the raw skin, a high level of technical and aesthetic talent is needed. They begin by "dressing," which is the first procedure they go through. In order to dress skin, it must be transformed from a rather raw state to one of softness, indescence, and attractiveness. Making the skin acceptable for use in the subsequent phases of the trade is the job of the fur skin dresser.From very early times, the skill of dressing skins has existed in some form or another. Alum was most likely discovered by the Chinese, who also claim to have used fur for 300 billion years. As a result, they continued to dress in skins for many years. Depending on the kind and state of the skin being treated, the process varies significantly, but there are always at least four separate steps[7]–[10].

1. The pelt's first washing and softening.
2. The fleshing: The process of removing blubber and flesh from the skin.
3. The leathering: The process of producing leather on the skin, which is a kind of tanning.
4. Last but not least, the cleanup.

It would be beneficial to give a straightforward, very typical method for dressing the skin:

1. If the weather is extremely hot, the skins are first immersed in salt water for twelve hours; if the temperature is cool, they are soaked for twenty-four hours. The excess moisture is then removed by a centrifugal machine, which transports the material there.
2. The fur is transported to the unhairer after being neatly washed with benzine.
3. After completely warming the skin, this artisan spreads it over a rounded wooden block and, using a blunt, two-handled sickle-shaped knife, vigorously drags on the fur to remove the coarse hair by the root while leaving the soft fur or down unharmed. To get rid of all the top hairs, this procedure would need to be performed three or four times.
4. The skins are then placed in barrels that contain dry sawdust or other appropriate material. For an hour or more, the drum is turned, forcing sawdust into the hair and allowing for further cleaning.
5. The drum skins are placed in tanks filled with regular fresh water, where they soak for the night.

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6. All of the remaining fat or oil is subsequently removed by the flesher. During this procedure, the flesher draws the skin over the edge of a very big knife that is tied vertically. Sometimes the knives are running and the skins are repaired.

7. The skins are then put up in a warm space, ideally between 120° and 130°F. The skins are properly dried and at the same time return to being firm in this chamber.

8. The skin is placed on the drum once again, but this time it is there to be broken down, or made flexible, and the process is ended when the appropriate flexibility is attained.

9. Grease is then uniformly distributed and heavily applied to the leather side.

10. The skins are then folded, greased inside, and placed in a large tub, where they are steadily treading for a variety of times. This procedure is referred to as leathering. Since he is a competent worker, the treader should be able to judge when to discontinue this operation. If not, enough time is allowed while treading, the skin will not leather properly but rather in patches. On the other hand, if it is done for an extended length of time, the skin will deteriorate and the hair will mat.

11. But rougher skins are "trampled" using a device that uses two wooden pistons operating in troughs.

12. The skins are then placed in the drum, where saw dust may be changed up to six times, and rotated to the fur side where they are completely rubbed with it.After each beat, the sawdust is entirely scraped from the skin using either hand or other types of drums, commonly referred to as "cages," while the fur comb is continuously utilised.Despite the fact that dressing was originally done in a crude and haphazard way, current fur skin dressing is a highly developed scientific procedure that also calls for a lot of mechanical equipment.The skins that have been processed in this way are known as furs and are prepared for grading, which is carried out by the assorter, a skilled and well-paid individual.

Dyeing

In the beginning, tradeable or mineral colouring agents were mostly used to dye furs. During the latter 19th century, dyeing underwent its present evolution. Fur bases are a class of chemical compounds that have been produced. When Englishman Sir W.H. Perkin discovered aniline dyes, the whole process underwent a revolution. A new era for the creation of several new colours on furs has begun with the use of synthetic substances as dyes.The technical part of dyeing is kept under strict secret. Until a really excellent dye process is developed, millions of tests are conducted, and each dyer fiercely shields his processes from competition. There is a tonne of material about the dyeing business. In the 1950s, the significance of fur dyeing rose, and fresh colour became a crucial selling factor for fur dealers. From conventional browns and blacks of natural colours, several tints were created according to the time's fashion and the preferences of the populace. Several nations are world leaders in various colours. France, Belgium, and London are Europe's three main centres for dye production. Leipzing formerly dominated this industry, but subsequently Frankfurt, London, and New York gained prominence. The greatest fur processing business is located in New York, and the United States has established resin as a fierce rival.

It is a really clever procedure to dye by dipping and brushing, clean the leather by repeatedly running it over a rotating emery wheel, and remove any top hairs that remain after unhairing. The furriers like to top their products. It entails delicately and artistically brushing the top hairs with the dye to give a severely marked skin the same rich colouring as a high-quality example. Moreover, topping is used to rejuvenate partially worn skins, which after undergoing this procedure take on a brand-new look. A chemical procedure has been developed in the U.S.A. to straighten the wavy fleece of yearling lamb skins. This technique results in a substance called as "Mouton," which is utilised as a lining for jackets, slippers, and aviators coats. It lasts a long time, and the filers remain straight. They are moisture-resistant and simple to clean.

Manufacture of fur

The process of turning fur into clothing, officially known as "furriery," has advanced significantly. Because of the development in fashion, sewing has evolved from a simple craft to a highly skilled and sophisticated profession. Fur clothes were first introduced in Paris, and Italian designers are also highly renowned. New York is now the biggest industrial hub. Designers, cutters, and sewers are the people who work in this industry; they are all very technical positions. Before, stitching was done by hand, but today's machines that sew fur are very effective. The task is subsequently finished by liners and finishers.There are primarily two ways to make fur. The first method is referred to as "letting out," in which each skin is divided into diagonal strips measuring between.5 and 1.5 cm wide, and these strips are then sewn together to create longer, thinner strips without displaying seams on the fur side. The other skin-on-skin technique is less expensive. In this instance, two entire skins are sewn next to one another in a consistent alignment. Several businesses specialise in stitching the leftovers from whole skins into blanket-like plates[11]–[13].Fur Care Fur and fur-covered clothing should be kept and maintained with extreme care. It should be kept in mind that even a little care given to these lovely and often expensive pieces of clothing will pay you a thousandfold. In brief, a few of the recommendations are:

1. Maintains the fur hanging vertically in the dark.
2. Give them a shake both before putting them on and after taking them off. Shake them vigorously from the head or with the floke of the fur.
3. Gently beat them occasionally with a mild touch.
4. Use a fur comb to gently but often comb them.
5. If the fur becomes wet, never dry them in front of a fire or a bright light; instead, hang them up in a dry area. This will allow for progressive drying; after the moisture has disappeared, thoroughly shake them before combing.

6. The "Moth," which wreaks havoc, is the biggest adversary of the furrier and the caretaker of the fur garment. The damage has been caused by the moth's grub. In the base of the hairs, the bug lays its eggs while taking refuge in the fur. As the eggs hatch, the grubs attack the roots, which causes the hair to fall out and leave noticeable bare patches. If at all feasible, the whole supply should be stored in a cold storage facility. In this situation as well, mild cane beating is most effective. Nephthaline, pepper, and camphre may all be employed.

II. CONCLUSION

In conclusion, the fur industry has been a subject of controversy and ethical debates for many years. While fur has been used for centuries as a source of clothing and protection from the elements, the methods used to produce fur have come under scrutiny due to concerns about animal welfare and environmental sustainability. The industry has made some efforts to address these concerns, such as implementing regulations and standards for animal welfare and sustainable fur farming practices. However, the continued use of wild-caught fur and the lack of transparency in the industry have made it difficult to ensure that these practices are being followed. Consumers have become increasingly aware of the ethical and environmental issues surrounding fur, and this has led to a decline in demand for our products. This has led to some positive changes in the industry, such as a shift towards more sustainable and ethical materials. However, the industry is still struggling to adapt to changing consumer attitudes and preferences.

REFERENCES

[1] M. Lee, E. Karpova, and F. Baytar, “The effects of information on young consumers’ attitudes and purchase intentions of fashion products made of fur, leather, and wool,” J. Glob. Fash. Mark., 2019, doi: 10.1080/20932685.2019.1577160.
[2] R. Karthikeyan, S. Balaji, and P. K. Sehgal, “Industrial applications of keratins - A review,” Journal of Scientific and Industrial Research. 2007.
[3] A. B. Aidarova, M. K. Uskenov, S. T. Seitbekova, and V. N. Seitova, “Development of innovative activity of sheep breeding with the aim of formation of resource base of light industry of Kazakhstan,” Izv. Vyss. Uchebnykh Zaved. Seriya Teknol. Tekst. Promyshlennosti, 2019.
[4] T. Sattler, R. Galler, and D. Vollprecht, “Entwicklung innovativer Recyclingverfahren für Mineralwolleabfälle – Projekt RecyMin,” BHM Berg- und Hüttenmännische Monatshefte, 2019, doi: 10.1007/s00501-019-00922-w.
[5] A. R. Kobenova, S. A. Faizullina, and M. A. Kanabekova, “Features of biological assets accounting,” Bull. “Turan” Univ., 2022, doi: 10.46914/1562-2959-2022-1-1-148-154.
[6] N. Reddy et al., “Production of Feather Protein Concentrate from Feathers by In vitro Enzymatic Treatment, its Biochemical Characterization and Antioxidant Nature,” J. Sci. Ind. Res. (India)., 2007, doi: 10.1016/j.wasman.2015.05.023.
[7] A. Gousterova et al., “Degradation of keratin and collagen containinq wastes by newly isolated thermoactinomycetes or by alkaline hydrolysis,” Lett. Appl. Microbiol., 2005, doi: 10.1111/j.1472-765X.2005.01692.x.
[8] D. Raffaeli, D. Dosen-Sver, Z. Bajza, E. Vujasinovic, T. Sugnetic, and K. Hajdarovic, “Exploration of the resources of domestic wool, hide and fur and their processing,” Int. J. Cloth. Sci. Technol., 2000.
[9] D. Raffaelli, “Exploration of the resources of domestic wool, hide and fur and their processing,” Int. J. Cloth. Sci. Technol., 1999.
[10] K. P. Joe Tidd, John Bessant, “Case Studies Exploring Innovation in Action: Sewing up the Competition - Innovation in the Textile and Clothing Industry Case Studies,” Manag. Innov., 2005.
[11] L. G. Butler, R. D. D’Orazio, and K. Ahlén, “Review of the Gotland pelt sheep industry,” Small Rumin. Res., 1993, doi: 10.1016/0921-4488(93)90105-Q.
[12] M. Lee, “The effects of product information on consumer attitudes and purchase intentions of fashion products made of fur, leather, and wool,” ProQuest Diss. Theses, 2014.
[13] S. S. Muthu and M. A. Gardetti, Sustainable Fibres for Fashion Industry. 2016.

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Fur Industry By-products

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***Abstract*—The fur industry is a significant contributor to the global economy, with a variety of fur products such as coats, hats, and accessories sold around the world. However, the industry is also associated with a range of environmental and ethical concerns, including the treatment of animals and the disposal of waste products.Fur industry byproducts include guard hairs and fur cuts. They are used in the production of textiles. Lower grades are utilized as glue stock and as fertilizers.**

***Index Terms*— Animal, Fur, Fur Industry, Textile, Waste**

I. INTRODUCTION

The order Carvinora of the class Mammalia contains the majority of the world's fur-bearing mammals. Rodentia, Ungulate, and Marsupialia are the other fur-bearing animal groupings. Moles and other insectivorous animals produce fur, although they are not significant from a commercial standpoint. Fur-bearing animals are few and nearly exclusively found in the Himalayan area of India. Some regions of the nation have rather coarse-haired animals. The majority of the central Asian fur was transported by camel, donkey, and bullock to Peshawar, then by rail to Mumbai, where it was shipped to London and New York. During the British era in India, animals such as the leopard, snow leopard, snow lynx, and tiger were hunted by Gurkhas, and the skin was purchased by Indian merchants operating from Almora[1]–[3].

All the fur-bearing animals could not be described in the constrained space of this book, but a few details on the most significant species should suffice.

1. Badger both the ancient and new worlds are home to this animal. The hairs were utilised in Russia to make shaving brushes. A unique white marking on the head and back is present on all badgers. It hunts at night and eats meat. The best fur is produced by American badgers; Chinese and Japanese fur is coarse and inferior.

2. Bear The fur trade typically uses four different bear species: Black, Brown, Grizzly, and White. The biggest is the polar bear, whose skin has even reached a length of 3 metres and a weight of between 500 and 800 kg. The Eskimos are said to kill the bear in an unusual yet cunning way since they love bear meat so much. The strongest member of the clan is the "grizzly" bear, sometimes referred to as "uncle Eph" by hunters. It is 2.5 metres long, is said to be exceedingly clever, and is equipped with claws that are 10-15 cm long. The word "grizzly" refers to the fur colour, which ranges from light grey to dark grey. Wearing the grizzly claw collar signifies that the bear was slain by the wearer alone. The majority of this fur is used to make automobile and floor rugs. The Russian bear, which is also present in Europe, is a synonym for the brown bear. Brown and black bears make up the dancing bears.

3. Beaver The animal has a tail that resembles a paddle and is between 30 and 90 cm long. The fur is a shade of chestnut. It may be found throughout the US as well as Canada, Russia, and Norway.

4. Chinchilla A little land rodent that resembles a squirrel that is endemic to South America. The leather is so thin that it nearly feels like tissue paper, and the fur is an exquisite slate grey colour with subtle black patterns. The animal is vegetarian and ranges in length from 20 to 25 cm.

5. Ermine: Its fur is perhaps the most well-known in the world. The Stoat, a member of the weasel tribe and a member of the Carnivora order of animals, really wears ermine fur throughout the winter. It is 25 centimetres long and very vicious, violent, and terrible. The significant change in this animal's natural coat that occurs as winter approaches is unique. With the exception of the tail tip, which always stays black, it is light brown in the summer and becomes white when winter arrives. It is a fine, durable fur, although it tends to become yellow with time. It is worn by youngsters and well-off people, and it is also used as an embellishment for various animal furs.

6. Fisher It is a huge weasel species that is a mammal, does not fish, and is between 60 and 90 centimetres in length. It is intended to attack and consume the percupines as well and moves quite quickly. The long, thick hairs on fur have a deep, dark brown colour, almost black.

1. Canada, some regions of the United States, and areas of Northern India are all home to this critter.

7. Fox There are several different fox species that are often used in the fur trade. The main ones may be mentioned in passing here. They are widespread across the planet. They come in many different shades of grey, red, and blue and vary in colour from almost pure black to nearly pure white. Genuine black fox is pricey and uncommon. The typical black fox skin is really red or white that has been dyed black. The many types include: Indigo fox this is more of a slate colour than a true blue. It is expensive since it is scarce and little. Fox crossing this is a gorgeous kind of American red fox with colourful skin. It often has an orange or yellow tone.

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Black fox it is a gorgeous, around 75 cm long Virginia fox that goes by another name. Fox of Patagonian It originates from South America and looks more like a jackal than a fox. Redfox. This creature resides in both the ancient and new worlds. In the fur trade, the American type is more common. It is a reddish brown colour. Mostly consumes rabbits for food and is hostile to poultry farmers. The fur has a wide range in both colour and quality. Fox from Australia. The subtropical environment produces fur, although it is of inferior quality. Fox silver. From a standpoint of aesthetics, it is the king of foxes. The skins range in colour from all-black to all-silver and are by far the most costly of the fox species. This fox's additional description will be found under "fur farming." Grey fox. It is often on the seashore and is found in the Arctic area. It is a little mammal, measuring just 60 cm, with a sociable rather than migratory nature. Only in the winter does it become snow-white. The skin is very beautiful and odourless[4]–[6].

8. Lamb. They exist almost everywhere in the world. The fur is very well-liked since it is both attractive and durable. It serves every function for which fur is employed. Bokhara unquestionably produces the greatest lamb skins, which are smooth with tight curl and fine glass, whereas lesser-quality skins may be found in Afghanistan, India, Persia, Asia, and Romania.

9. Leopard. This animal, which may be seen roaming freely over all of Asia and Africa, is thought to be a member of the same species as the panther. The skins are made into beautiful carpets. The skin serves as an apron for the bass drummer.

10. Marten. Thebaum, Stone, Japanese, and American or Canadian martens are the four species most often used in the fur trade. Its length ranges from 45 to 60 cm. It is a hungry, energetic, and arboreal mammal. The greatest specimens have silky hair that has a deep, dark brown colour, while the lesser skins are paler and yellower. The value of fur increases with its darkness. As a result, the paler martens are sometimes coloured or "tipped."

11. Mink. This is another another vicious member of the weasel family. It lives in Japan, China, Russia, the United States, and Canada. It is one of the principal fur-bearing animals in Canada. It is around 45 cm long and spends just as much time on land as it does in the water. The fur is thick, close-knit, and dense. The pelt or leather is very substantial and weighs a lot. While the colour may range from yellow to red, it is often an oak-like brown. The underfur is typically dark brown, and the hair is short and tight. Fur is used as clothing by both sexes and is more common in Canada and the United States than in Europe.

12. Musquash one of the most significant animals utilised in the fur trade, it is located in a belt ranging from Alaska to Virginia as well as Southern States. The length of the skin ranges from 15 to 30 cm. The underfur is blue or bluish white, the belly area is white, and the fur is a chestnut brown colour. For jackets and linings, it is pricey, warm, and long-lasting.

13. Opossum There are two different types: an American variety and an Australian kind. It is grey in colour, with white fur below and light grey hair on top. The fur is rough in texture.

14. Sable As well as the US, Canada, Japan, and Russia all have it. The desire to own a set of sables used to be shared by all women since they were formerly widely accessible, but the supply is now drastically reduced.

15. Seals The two main types of seals are hair seals and fur seals. Because to the rules created to save their extinction, the fur seals, which are really sea lions, are now only sometimes sold. It has a very social character. The finest months for fur are June and July. The seal clothes are prohibitively expensive.

16. Tiger Central Asia is home to some of the greatest tigers. The popular Bengal tiger is well-known but has relatively little fur, but the Manchurian has fur that is often 5 to 8 cm deep and is much more costly. As rugs, they are utilised. Pitch, which has a strong odour, Lynx, Mermot, mole, dog, monkey, rabbit, squirrel, and wolf are the other species employed in the fur trade.

Fur farming is one of the oldest professions there is. For countless ages, the Chinese have fannied dogs, sheep, and goats, using the meat for nourishment and the skins for commerce. It becomes the oldest kind of husbandry in the world if we consider sheep to be fur-bearing animals. Several methods used in raising live cattle were adapted for use in fur farming as well, but since these wild species were confined, certain issues unique to fur farms only affected them. This is why managing some of the animal's required specialised study.

Germany has extensively farmed silver fox for squash and beaver, as well as raised Corsican sheep in the Himalayas. Deer, black and blue fox, and other animals are farmed by the Soviet fur Syndicate. One of the oldest farms in the world is located on Komandorsky Island. In 1920, the Canada government created a research facility at Sumarside in partnership with the Canadian National Silver Fox Breeders Association, and in 1923, the American government opened "The United States Fur Animal Experimental Station" near Saratoga Springs, New York. By 1940, the US government was working with schools and institutions in Wisconsin, New York, Pennsylvania, Washington, and Alaska to perform research on fur animals. In Canada, in addition to Prince Edward Island, the "home of the business," numerous other provinces also do research on fur animals.

There are farms for silver fox, skunk, marten, mink, fetch, musquash, and nutria in Great Britain. Mole farms are also quite well known and profitable. Rabbit farming is also common. A governing authority for rabbit breeders is called The Fur Board Ltd. Chinchillas are raised in the Andes, along with blue and silver foxes in Norway, nutrie, marten, fitch, opossum, and skunks in France, Sweden, and Denmark. Due to the growing importance of fur farming to their economies, these countries also started doing comparable studies.These

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are some recommendations for starting a fur farm. There are a lot more, maybe too numerous to go into depth about. The farm should be preserved in a remote and peaceful area. Avoid doing anything that can aggravate the animal. Only those who are familiar with the animals should attend, and only then when it is absolutely required. Weird faces have a very negative impact. At a certain period, proper food must be supplied for their survival. Kids need to eat often but not excessively.

Fanning the silver fox, the most common animal raised for food is the fox. In Prince Edward Island, silver fox breeding began in captive in 1894. It was first kept under wraps until a stunning silver fox skin was auctioned in London for a hefty sum. For this effort, the British Crown knighted Charles Dalton. At one point, Canadians Charles and R.T. Oulton were regarded as forerunners in this subject.A black-colored silver fox that is a mutant of a red fox with the red colour removed. The guard hairs' white band creates the silver look. Early trapped foxes were practically black, but after 20 years of selective mating, the brilliant silver fox was created, with extraordinarily broad white stripes and black that was devoid of rusty brown. Pair mating was once thought to be required, but eventually polygamous mating became the norm.

Blue fox fanning

Most of it is done in Norway. It's noteworthy to note that in Alaska, foxes roamed freely on the whole island where they were located for this operation. The whole industry was shut down by the 1940s due to a lack of regulated breeding.

Mink Farming

As early as 1866, these creatures were raised in captivity for their fur, but it wasn't until 1930 that they were produced in large numbers. There were three times as many mutations as the dark, natural-colored mink after the middle of the 20th century. The market was tightly regulated by the mutant mink breeder's association. The polygamous mating is the norm, and the sexes are kept apart.

Chinchilla

It was originally from South America, as was already indicated. Chinchilla furs were harvested from caught animals in the early 1900s. When there was a shortage as a result of trapping, M.P. Chapman, an American, began farming. More than 5 million of these creatures were being held in captivity in the United States and Canada by the middle of the 1950s. It grew to be one of the largest fur businesses by 1954.

Martens

It is a charming and intriguing wild furry creature. Since only 15% to 20% of the females give birth to offspring, attempts to rear them in captivity have failed. In July and August, they reproduce. In the United States Fur Experiment Station, twenty litters were acquired over a number of years.

The fur trade has sometimes made extensive use of the skins of rabbits grown solely for sustenance. There were hardly any rabbits grown particularly for their fur.In Russia and other nations, various fur animals like Karakul and other sheep breeds have been kept for a hundred years or more. After several years of carefully chosen mating, South-West Africa began to produce several million Persian lamb skins in the 1950s. By the 1950s, various additional creatures were being raised in captivity with the intention of selling them for promotional purposes, but due to the accessibility of skins from wild species, this endeavour had not yet achieved financial viability. Almost all of the creatures that have been described or discussed before under "Fur animals" have been reared at some point. Everything was based on trends and the discovery of new eye-catching colours. Without a doubt, even with naturally coloured animals, improvements may be achieved via selected breeding that can increase their attractiveness to the fashion world. The sole aspect that will contribute to the successful cultivation of such animals is the dearth of the wild kind[7]–[9].

Indian fur farming

Lamb and child skins are the two commercially significant fur skin species produced in India. Yet, there is virtually little trading in wild animal skins.

The first fur-bearing animals to be farmirigged were various Karakul sheep. These sheep have lambs with black or grey wool that is tightly curled. The kind of sheep used to produce the skin, the age of the lamb at the time of slaughter, and the curl pattern all affect the quality of the skin. Lambs must be killed within a few days after birth in order to have healthy skin and a very tight curl to their fur. Even pregnant sheep in India are aborted in order to remove the lamb and sell the skin for a high price. South Indian lamb skins are of poor quality, and the majority of them are utilised to make "Astrakhan" hats.

The degree of wool curliness and the waves the curls generate determine the four lamb skin grades: Mémoire, Nazakkcha, Guldar, and Plain. The finest grade moire is derived from preterm lambs. The latter two varieties—Guldar and Plain—are made from animals that are slain between six and twelve days after birth. Nazakkcha is made from lambs who are killed within twenty-four hours of birth. Tibetan lamb skins are imported into India.

Indian skins are quite decent quality and are produced in Rajasthan and other arid regions. Its costs are set in accordance with the consistency of the skin's hair's alignment and arrangement, its quality, and the skins' size and colour. There are grades in this situation as well, and the top quality is Moire, followed by Surface Patterns and Plain. Children who are slain within two days of their birth and Surface Patterns within seven days of their death provide moires. The remainder fall into the third quality category. The main markets for these skins are France, the United Kingdom, and the United States. When compared to lamb skin, they are less expensive.

It is said that certain skins from several wild animals, including Himalayan marmot and long-tailed marmot of the Himalayas, Kashmiri marten, eastern Himalayan "snow leopard," Kashmir, Tibet, and Sikkim, are shipped through Calcutta port. Most often, tiger and deer skins are utilised locally. Depending on the need, Kashmir, U.P., and West Bengal get limited amounts of skins from Tibet and Nepal. Even though there is sporadic demand for these skins on the international market, tiger panthers, lynxes, foxes, jackals, bears, mongooses, otters, squirrels, hares, and deer are also hunted.

II. DISCUSSION

Earnings from the fur trade aren't based on the occasional specimen skins that are obtained; instead, they come in large numbers over time, build up over time, and are then sold at auction or via negotiation.In the past, let's say in the 1930s, London was the major fur market, but subsequently, St. Louis and New York took over as the major hubs. Due to American economic stimulation, the fur trade boomed and prices shot up to the point that it first seemed that only very wealthy people could afford to wear fur. Nowadays, Russia, Germany, and other European nations are the other participants in the trade. In India, the states of Punjab, Himachal Pradesh, Uttar Pradesh, Rajasthan, Delhi, and Gujarat are the primary sources of fur skins[10], [11].

Delhi is the principal market for the distribution of fur skins, handling even more than 75% of the total Indian supply. A significant amount of the fur skin produced in India is sold to other nations. The skins gathered in Agra and Jaipur are further sent to Delhi. More than 80% of the skin is harvested from mid-August to mid-April, with the remaining 20% gathered in other months. It is limited to lower-quality furs when it comes to the local need for lamb and child skins. Gloves, women's jackets, hats, and other fanciful items are made from fur skins of various kinds that are cured and tanned in India.It should be noted that many fur-bearing species have been destroyed or have almost gone extinct due to the rising demand for fur skins across the globe and the allure of high prices for them. The demand for lower-quality furs has increased as a result of the expense of high-quality furs as well as the decline in their availability. Both fake and synthetic furs are being made on a large scale in factories. Another thing to keep in mind is that killing some of these animals for their fur has the positive consequence of automatically controlling the agriculture crops and other items that would otherwise be damaged by these animals [12], [13].

III. CONCLUSION

One potential solution to these challenges is to focus on the utilization of fur industry byproducts, which can include fur trimmings, scraps, and other waste materials. By finding ways to repurpose these materials, the industry can reduce its environmental footprint and create new opportunities for innovation and value creation. There are several potential uses for fur industry byproducts, including the creation of textiles, insulation materials, and fertilizers. For example, fur scraps can be used to create felted fabrics or yarns, while fur trimmings can be incorporated into insulation products for use in homes and buildings. In addition to reducing waste and creating new value streams, the use of fur industry byproducts can also help to address some of the ethical concerns associated with the fur industry. By repurposing materials that might otherwise be discarded, the industry can reduce the overall demand for fur and minimize the impact on animal populations.

REFERENCES

[1] F. Chatzitheodoridis and A. Kontogeorgos, “Exploring of a small-scale tourism product under economic instability: The case of a greek rural border area,” Economies, 2020, doi: 10.3390/ECONOMIES8030052.

[2] J. Slak, B. Pomeroy, A. Kostyniuk, M. Grilc, and B. Likozar, “A review of bio-refining process intensification in catalytic conversion reactions, separations and purifications of hydroxymethylfurfural (HMF) and furfural,” Chem. Eng. J., 2022, doi: 10.1016/j.cej.2021.132325.

[3] M. Grela et al., “Development of an STR panel for individual identification and determination of the degree of relationship between American mink (Neovison Vison),” Aust. J. Forensic Sci., 2021, doi: 10.1080/00450618.2019.1661514.

[4] D. Küsters, N. Praß, and Y. S. Gloy, “Textile Learning Factory 4.0 – Preparing Germany’s Textile Industry for the Digital Future,” Procedia Manuf., 2017, doi: 10.1016/j.promfg.2017.04.035.

[5] J. Boghossian and J. C. Marques, “Saving the Canadian Fur Industry’s Hide: Government’s strategic use of private authority to constrain radical activism,” Organ. Stud., 2019, doi: 10.1177/0170840618815928.

[6] M. Zając, E. Jamróz, P. Guzik, P. Kulawik, and J. Tkaczewska, “Active biopolymer films based on furcellaran, whey protein isolate and Borago officinalis extract: characterization and application in smoked pork ham production,” J. Sci. Food Agric., 2021, doi: 10.1002/jsfa.10920.

[7] A. Schmidt, L. Uhlenbrock, and J. Strube, “Technical potential for energy and GWP reduction in chemical-pharmaceutical industry in germany and EU-focused on biologics and botanicals manufacturing,” Processes, 2020, doi: 10.3390/pr8070818.

[8] R. Karthikeyan, S. Balaji, and P. K. Sehgal, “Industrial applications of keratins - A review,” Journal of Scientific and Industrial Research. 2007.

[9] M. A. Achabou, S. Dekhili, and A. P. Codini, “Consumer preferences towards animal-friendly fashion products: an application to the Italian market,” J. Consum. Mark., 2020, doi: 10.1108/JCM-10-2018-2908.

[10] A. Mariacher, L. Garofalo, R. Fanelli, R. Lorenzini, and R. Fico, “A combined morphological and molecular approach for hair identification to comply with the European ban on dog and cat fur trade,” PeerJ, 2019, doi: 10.7717/peerj.7955.

[11] H. Vogt, M. Ehrat, R. Fuchs, and M. Holler, “Welche datenbasierten Servicemodelle sind erfolgsversprechend für KMU der Maschinen-, Anlagen-, Elektro- und Metallindustrie?,” HMD Prax. der Wirtschaftsinformatik, 2021, doi: 10.1365/s40702-021-00728-w.

[12] M. Lee, E. Karpova, and F. Baytar, "The effects of information on young consumers' attitudes and purchase intentions of fashion products made of fur, leather, and wool," J. Glob. Fash. Mark., 2019, doi: 10.1080/20932685.2019.1577160.
[13] Z. Zhang, X. Tong, H. Zhang, and Y. Li, "Versatile catalysis of iron: Tunable and selective transformation of biomass-derived furfural in aliphatic alcohol," Green Chem., 2018, doi: 10.1039/c8gc00852c.

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Store Grain Pests

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Abstract*—Man has used animals for a variety of reasons since the dawn of the human species, including food, clothing, and weaponry. If certain animals turned out to be beneficial while others seriously harmed human economic development. These ineffective creatures compete with humans for food and natural resources. They are referred to be pests because they either directly or indirectly damage people. Any animal that causes people inconvenience or financial loss is considered a pest. According to estimates, between a quarter and a third of the grain crop harvested worldwide per year is lost during storage, largely as a result of insect attack. In addition, insect damage significantly lowers the quality of grain that is not lost. Many grain pests prefer to eat out grain embryos, which lowers the proportion of seeds that germinate and lowers the protein content of dietary grains. Grain weight, nutritional value, and quality of stored grains are all decreased by direct feeding by stored grain pests. Infestation also results in contamination, odor, mound, and heat damage issues, which lower the grain's value and render it unfit for use in making food for people and animals.

***Index Terms*— Chemical Control, Fumigation, Grain Storage, Grain Treatment, Insect Pests, Integrated Pest Management**

I. INTRODUCTION

The pulse beetle is one. It is a type of beetle that is also referred to as the cowpea weevil or cowpea reed beetle. It is not a true weevil because it belongs to the Chrysomelidae family of leaf beetles.Habits: It is a widespread pest, with the exception of Antarctica, of stored legumes. With the trade of legumes and other crops, this beetle was transported across the globe from its native West Africa. It is a significant pest of lentils, green gramme, and cowpea. It is elongated, reddish brown in colour, and has two central black spots on its grey and black sheath elytra, unlike a true weevil, which lacks a'snout'. The elytra, which also have black spots, are where the final portion of the abdomen protrudes from. The species exists in two morphological forms: a flightless form and a flying form. The flying form of the beetle is more prevalent in environments with a high density of larvae and high temperatures. Flying forms live longer but have less capacity to produce eggs. The beetle is sexually dimorphic as males can be easily distinguished from females as they are brown while females are overall darker. Female beetles are larger than male beetles in size. Elytra are larger in females as compared to males. It is medically harmless to humans[1]–[3].

Life-cycle: A female beetle after copulation lays up to hundred eggs & out of which all hatches. Eggs are layed on the surface of the bean which are small, translucent, shiny, oval, inconspicuous & doomed structures. The duration of egg stage is 5-6 days, upon hatching the larva bite through the base of egg: through the testa of the seed & into the cotyledons. The developing larva feeds entirely within a single seed, excavating a chamber as it grows eating the tissue just under surface leaving a very thin layer through which it exits when get matures. It emerges after a larval period of 3 to 7 weeks depending on conditions as gestation period is shorter in summer while longer in winter. Larval crowding i.e. 9-10 larvae feeding within one bean limits the resources leading to mortality. The larvae takes 24-36 hours to mature completely into an adult after emerging out, life span of the beetle is 10-14 days. The adult does not require food or water as larval stage is the feeding stage. There are two growth stages namely fruiting stage & post-harvest stage. The adult beetles that emerges out mate with the others that develop on the same host bean.

Nature of Damage: Callosobruchusmaculatus is a serious store pest, causing enormous damage to almost all kind of pulse grains. It prefers cowpea but it also infest the seeds of different pulses such as red gramme, arhar, lentil, pea, small pea, mung, urid, moth, soyabean, khesari etc. It also causes damage to seeds in pods of red gramme in the field. Damage to the pulse grain is mainly caused by the developing larvae. Just after hatching young larvae bores into the grain, feed upon the contents of the grain making them almost hollow and empty, clustering of grains, decay or powdering of pulses which produces foul smell. As development occurs entirely within the seed, the immature stages are not normally seen. The optimum development conditions are 320 C temperature & 90 % relative humidity. As the pods become dry the ability to infest them decreases whereas the thrashed seeds are more susceptible to pest attack throughout storage.

Control Measures: For the control & eradication of the beetle following methods should be adopted which are enlisted below.

1. Chemical Control: It is the use of chemicals such as fumigants, contact insecticide & pesticides to control storage insects. Chemical measures provide immediate disinfestations of the commodity & the space enclosing it.
2. Physical & Mechanical Control:
3. Biological Control: Animals used as predators of Pulse beetle are parasitiod wasps which target small larvae. The organism used as parasite of the beetle is a mite which feeds upon egg & prevents them from hatching.

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Rice Weevil

Rice-Weevil: The rice weevil is a stored product pest of not only rice but almost of all cereals & their products. It is called as rice weevil because it's breeding habits & life-cycle was first of all studied in rice

Habits: It is the commonest pest that one encounters in all kinds of stores. It is believed that it originated in temperate countries. But now days it is the most widely distributed stored product pest of the world through shipments of rice. It commonly occurs in temperate & warm countries, rice weevil does not only attacks rice but several crops like wheat, maize, barley etc. Rice weevil causes the most substantial loss to stored grains in world amounting 18.30%. The beetle has a relatively short developmental period & high populations can easily be built up, adult weevil is reddish brown in colour measuring 3-4 mm in length. Head is projected forward into a long snout like rostrum with a pair of stout mandibular jaws at the extremity of the rostrum. Four light red spots on elytra are arranged in a cross on the wing covers due to this it is easily confused with the similar looking maize weevil. Females are larger than males & sexual dimorphism occurs as rostrum of males is shorter, broader as compared to the females. Adult weevils are able to fly[4]–[6].

Life-cycle: After copulation, adult female bores a hole in the grain with the help of its powerful jaws & deposit a single egg in the grain cavity. In search of suitable site in the graina mother beetle may bore at several parts of a grain but only one egg is laid down in a single grain, female can lay up to 300-550 eggs in 4-5 months i.e. 2-6 eggs per day. Eggs are deposited within the hole sealing it with the gelatinous fluid secreted from her ovipositor, which are white, elastic, tiny & oval in structure. The egg hatches within 4-5 days under optimum conditions, the larva develops within the grain hollowing it out while feeding leaving the shell intact. The tiny, white, fleshy legless grubs with yellowish brown head & biting jaws bores down into the grain, feeding on its starchy content. The grub stage lasts for 19-34 days & a fully matured grub makes a pupal cell inside the grain called as eclosion& pupates. The pupal stage lasts for 3-6 days under optimum conditions but in unfavourable conditions it may extend up to 20 days. The adults formed after pupation bores its way out of the grains, immediately after emergence the adult weevil are ready for breeding. The duration of life cycle of rice-weevil & number of generations completed in a year depends upon the weather conditions like temperature & humidity; 5-7 generations are completed in a year. The size of the newly bored adult weevil is directly proptional to the size of the grain in which the larval period has been spent, larger & healthier grains produces larger & healthier weevils.

Nature of Damage: As adult rice weevil can fly, they fly down to nearby fields where it infests the ripe grains, both adults & larva feed upon the grains making them inconsumable. The damage caused by them extent up to 50% of the total grain stored at a particular place. Larvae are the more destructive as they feed voraciously on the content of the grain but leave the shell of the grain intact. Adults also feed upon flour i.e. milled cereals but the larvae cannot develop in it unless the material is caked. Feeding causes clustering of grains producing foul smell.

Control-Measures: For the control of rice weevil following methods should be adopted.

1. Physical &Mechanical Control: The weevil is unable to breed at a grain moisture content of 9%, hence dry storage of grains can avoid infestation by the pest. Previously infested grain & its debris should be removed out from trucks beds, transport waggons, grain dumps & elevator buckets to avoid re-infestation during new storage. Ceilings, walls, ledger, braces & handling equipments should be thoroughly cleaned or removed which are ideal places of hiding. Thermal disinfestation techniques should be implanted by drying grains on a concrete platform by the increasing the temperature up to 600C for 10 minutes. Mechanical disinfestation includes refinement of grains from simple turning of grains through bulk handling systems to the use of sophisticated percussion machines in flour mills etc.

2. Chemical Methods: This method includes use of various chemical techniques like fumigation, insecticide, aerosol sprays, traps etc to eradicate rice weevil.

Fumigation: It is the use of toxic gas to disinfest a commodity in an enclosure, the purpose of fumigation is to obtain immediate relief from pest. Phosphine is mainly used for fumigation against rice weevil. Insecticides: These chemicals are used as surface layering for eradication of insects; these are available as dust formulations admixed with cereals or as liquid treatments e.g. Malathion, Lindane, Permethrinetc

Aerosol Spray: After vacuuming of the storage areas, it is disinfested by spraying FS MP Aerosol which is odourless& fast acting. It can be used in those areas which are left unaffected by other means such as sink, pantries, cabinets, cervices, cracks etc where adults & larvae of the pest likes to hide. Another spray used is PT-PHANTOM.

Rice-weevil Traps: These traps acts on the pheromone, it is placed where weevil suspect activity is observed. This trap uses strong pheromones or attractants to lure adults, once they crawl or fly into the holding tray, the thick catching oil will hold them.

Biological Control: The organism used for the predation of rice weevil is parasitoids Anisopteromaluscalandre which attacks the larvae & adults & stop their development.

Wheat weevil

Wheat Weevil: The pest is cosmopolitan in distribution; it is also called as cabinet beetle. It initially originated in South Asia, wheat weevil is regarded as the most destructive pest of the grain products & seeds.Habits: Trogodermagranarium is considered as the worst invasive species worldwide, it is a major pest of wheat in the Indian subcontinent, U.S.A, U.K & Germany. It is more commonly found in the warmer & dry regions with low moisture content food, beside wheat it also infest barley, oats, rye, maize, rice, flour, malt & noodles

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also. It is omnivorous in nature as it feeds upon dried blood, dried milk, fish meal, wool, goat skins, dead mice & dried insects. The adults are characterised by oblong-oval, light to dark brown coloured body bearing markings; body is covered with fine hairs which give a velvety appearance. Elytra contains indistinct red brown markings, rostrum is well developed especially in males. Eyes are emarginated; head is small & usually deflected with 11 segmented antennae. Males are smaller than females, adult weevil have wings but usually don't fly & feed very little. Adults are short lived as life span of males is 7-12 days where as that of females is 20-30 days but mated females live up to 4-7 days only.

Life-Cycle: After 2-3 days of emergence, copulation takes place between adult beetles, the Female start laying eggs after 5 days of mating. The eggs are generally laid in crevices in godown or in grain heaps, average number of eggs laid by a single female per day is 25 which last for 5-7 days. The eggs are laid 400C which are initially milky white, later pale yellowish, typically cylindrical with one end rounded & the other more pointed bearing a number of spines like projections, broader at the base & tapering distally. Eggs are laid loosely & singly in the host material, which hatch in 8-14 days at optimum conditions. There are five moults in the development of larvae & cast skin is shed following each moult, larval duration lasts for 30-50 days. During unfavourable conditions the number of moults increase up to 8-10 level & the larval duration prolong for a period of 200 days to 4 years. In winters or in scarcity of food the larvae enter diapause & development ceases, it remains inactive & lives in crevices, cracks or other concealed places. Young larvae are unable to feed upon whole grains & depend on damaged grains. Larvae are uniformly yellowish white, except head & body hairs are brown, as the larvae increases in size their body colour changes to a golden or reddish brown & more body hairs develop. Head is barbed with segment like constrictions &tail is shorter. At the last ecdysis i.e. moulting of cuticle, the larval skin splits but the pupa remains within the skin for the whole of its life. After 6-16 days of pupal period adult weevils emerge out which become sexually mature immediately. The development takes 4-6 weeks for completion at 950F optimal temperature.

Nature of Damage: It is considered to be a serious pest of stored wheat grains along with it also attacks rice, maize, oat, jaw pulses, oilseeds & other products like copra, dry fruits etc. The damage to the grains is caused by the larval stages while the adults are harmless as they do not feed. This pest is mostly active during July-October period in which they are capable of causing heaviest damage to stored grains. The infestation occurs mainly at superficial layers of grain as the pest is not able to penetrate deep into the grain. The destruction of the embryo of the grain is the major damage caused by this pest but during heavy infestations complete grain is damaged. Reproduction of the beetle is so rapid that larvae are found in large numbers on the surface of grain, they spread generally by movement of infested goods & container during dipause condition. The most favourable conditions for multiplication & damage is in bulk grain under extended storage, apart from the destruction of grain products by beetle, infested products contaminated with body parts, setae & cast larval skins result in gastro-intestinal irritation, asthmatics & allergens to sensitised individuals.

Control-Measures: The obvious signs of kharpa beetle infestations are the larvae & cast skins, for its eradication following control measures should be adopted:

1. Chemical Control: This method includes use of various chemicals means such as fumigation, insecticide, irradiation, spray etc to eliminate the pest. Fumigation: The fumigants which are used to control kharpa beetle work at higher dosage as this beetle is resistant to fumigants which are generally used for other stored grain pests. High concentration of fumigants is to be maintained over the fumigation period to allow penetration into all cracks & crevices. The most effective fumigant is the Methyl Bromide which is used in enclosed conditions, other fumigants used is Phosphine at 100C which helps in destroying of pest & its larvae. Irradiation: Irradiation is the use of ultra-violet rays to sterilise the adult beetles & disrupt their life cycle, which keep a check at the population of weevil. Neem powder: It is an effective & cheap method to control the pest in stored conditions where it repels the kharpa beetle due to its strong order & also antipest ability.

2. Physical & Mechanical control: This type of control methods includes disinfestation of the commodity by heating, using trapping nets, cleaning of grains by machines etc.

Heating: This step involves drying of wheat grains prior to storage by solar heat on a cemented surface or metal sheets, the grain temperature is increased up to 600C & maintained for 10-20 minutes, which kills the live pests of grains i.e. larvae & adult weevils.

Trapping nets: These are used in warehouses & other storage facilities; it combines a feeding attractant for larvae while a pheromone for adult males. The method is based on using sticky traps placed on a suspended position; these specialised traps used for the species granarium are wall mountable, known as the Biolure box trap.

3. Biological Control: Biological control is an efficient & healthier alternative method of chemical use in eradication of pests, the predator used to control the kharpa beetle is a parasitiodLaeliuspadatus which stings the developing larvae & releases its egg inside the body. The developing wasp inside pest larvae feeds upon it& emerges out when it is dead.

Rust Red Flour Beetle

Rust red flour beetle: The weevil is commonly called as rust red flour beetle, it is cosmopolitan in nature. It initially originated in the Indian Subcontinent but now found throughout all tropical, subtropical & warm temperate regions of the world.

Habits: It is a worldwide serious pest of stored products particularly food grains like flour, cereals, pasta, biscuits, nuts, oil cakes, dried fruits, meal beans, dried pet food, dried

flowers, chocolate seeds & even dried museum specimens. This beetle is the most important pest of stored products inside the home, food industry & grocery stores. It is different from the confused floor beetle by having different antennae shape & its ability to fly under stressed conditions. The body of the adult beetle is flattened reddish brown in colour, thorax & abdomen are distinct. Antennae are well developed, eyes are reddish black in colour, chewing mouth parts present & grooved wing covers with last few segments being abruptly much larger. Female beetles are polyandrous in mating behaviour i.e. during a single copulation period; a single female will mate with multiple different males. This polyandrous mating behaviour by female beetles is shown in order to increase their fertility assurance, by mating with an increased number of males, female beetles obtain greater amount of sperm. The adults are long lived as females can live up to 3-4 years[7], [8].

Life-Cycle: After copulation a female beetle lays about 400-500 eggs, which are laid singly in flour & dust of the grains, they soon get covered with small particles of dust & flour as they are moist & sticky when freshly laid. Eggs are minute, slender & cylindrical in shape with rounded at both ends & of whitish colour, they hatches in 5-12 day sunder favourable conditions. The freshly hatched grub is small, worm like, cylindrical & wiry in appearance, body segments have a number of fine hairs and the terminal segment is furnished with a pair of spine like appendages. The grub is pale yellowish in colour, larvae go through 5-12 instars and the larval period ranges from 27-29 days under favourable conditions. Pupation takes place on the surface of food; pupa is naked in appearance, initially white but gradually becomes yellowish, pupal stage lasts for 5-7 days. The total life cycle from egg to emergence of adult takes about 6 weeks, there are about 4-7 generations in one year.

Nature of Damage: This pest is found infecting all stored products, both the larvae & adult cannot damage sound grains, but they feed on those grains which already have been damaged by other pests. The main strength of rust red flour beetle is its high reproductive rate, quick maturing to adult stage with easy dispersal & migration which leads to a new colony with help of few individuals. It is a serious pest of prepared cereal products such as atta, suji&maida found in abundance in flour mills, in case of heavy infestations flour &maida turns greyish-yellow & develop red taints which become mouldy& emits pungent foul smell. It also damages the seeds & grain by feeding internally, contaminating with its larval casts &faeces.

Control methods include the following, which may be used to prevent the growth of Triboliumcastaneum:

1. Chemical measures: Chemical applications are sometimes necessary for the weevil's full death and prevention.

By using a harmful gas known as a fumigant, stored grain pests are eliminated via the process of fumigation. The fumigant is created and concentrated as a gas that kills the targeted live bugs and seeps into the inside of developing eggs and larvae, which are essentially unseen. Typically, fumigants include methyl bromide, magnesium, and aluminium phosphide. Insecticides: They are used as surface treatments by covering or layering them over the pest-infested product. These pesticides are available in powder and liquid form, among others. Tetrachlorovinphos, Melathion, Deltamethrin, Diazinon, etc. are some examples.

2. Mechanical and physical methods: The steps are as follows. methos - Shrinkage of intergranular space the top layer of grains is covered with a 7–10 cm layer of dry sand to prevent adult beetles from moving deeper into the grain mass since they are weak and mushy at first and can only travel in the top layer. A paper or polythene covering is put on the top surface of the product to prevent sand from coming into contact with the food. Coating with Oil: This method is only used for a limited number of grains, in which whole grains are combined evenly with non-drying oils and stored in a tight container. The oil coating inhibits eggs from being laid or larvae from developing on grain surfaces. Neem oil, vegetable oil, castor oil, nigerian oil, sesame oil, and other oils are favoured for this use. heating and drying This technique involves sun drying contaminated grain on a cemented platform at a temperature of 600C sustained for 20 minutes, killing any bugs that may be present. For this method, solar absorbance surfaces work well.

3. Biological management: Predators, parasitoids, and parasites that impact the rust red flour beetle at various phases of its life cycle may control it. Entomopathogens: When in contact with the body of the pest, tiny spores produced by the fungus Brauveriabaesiana that causes white muscardine illness germinate, pierce the cuticle, and proliferate within, killing the pest within a few days. It is an epidemic sickness that spreads from person to person, causing a mass killing of beetles. parasites: The parasitic mite Acarophenaxlacunatus is employed to feed on the beetle larvae and restrict their development. Less grain is borered.

It is also known as the Australian wheat weevil and is known as the smaller grain borer. After the rice weevil, it is thought to be the second biggest destructive of stored grains. While having a global distribution now, it has its roots in the Indian subcontinent.

Habits: In the tropics, Australia, and the USA, it is a significant pest of preserved goods. Due to its capacity for lengthy travel & worldwide food exchange, it is also prevalent in temperate nations. It is typically found in cereal and food stores as well as facilities that process animal feed. In addition to these, it can also be found eating a wide range of foods like beans, dried chilies, turmeric, coriander, ginger, carrava chips, biscuits, and wheat flour. It primarily feeds on stored cereal seed like wheat, maize, rice, oats, barley, sorghum, and millets. Its cylindrical form and tiny size, which set it apart from other store pests; it measures around 3 mm in length. Mature beetles have a roughened surface and are polished dark brown or black in colour. The head is put

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inside a triangular structure that resembles a hood and is located beneath the thorax. The head has strong jaws that it utilises to seriously damage grain as well as any wooden building in the store to hide from unfavourable circumstances. The elytra are parallel-sided; the propotum has a rasp-like teet in front, and the head is hidden from above.

Life Cycle: Following copulation, the mother beetle lays 300–500 eggs, either individually or in groups, towards the end of the grain that contains the embryo. Eggs may also be deposited between grains or in starchy powders that are lying outside. The pear-shaped eggs are translucent white when first deposited, becoming pinkish opaque as the larvae begin to form within the egg shell. The egg stage lasts for 5–6 days in the summer and 7–11 days in the winter. The freshly born larva is highly active and has a campo-deiform shape, or a creamy white colour. It immediately burrows into the grain or crawls while actively eating on the loose starchy substance. The grub finishes developing either in grains or in flour, where it passes through larval stages. There are three larval instars; the first two instars do not have recurved heads or thorax, but the third and fourth in stars have. A fully developed larva has three pairs of legs with enlarged anterior ends and is filthy white in colour with a brown head that is retracted into the thorax. The usual larval stage is around 40 days, pre-pupal and pupal periods continue for a week, and it transforms into adult form after that. The whole body is coated in microscopic hairs. The whole life cycle from egg to adult emergence lasts around 6 to 8 weeks. The adults, which are winged and have the ability to fly, munch their way out of the grain. Adults have a lifespan of 4 to 8 months, and there are often 5 generations each year. As it breeds on flour, the life cycle may be completed outside of grains.

Damage: Both the larvae and the adults are destructive in character, which makes them major pests. They cause weight loss in grains by boring holes in entire grains that are unevenly shaped. It can withstand a moisture level as low as 7% and may turn rice into dust while producing more fraes (excreta) than any other species. As this insect attacks grains severely, they get hollowed out until just a thin shell is left. In bigger grains like maize, up to four beetles may be observed at once. Only the first stage larvae may enter grains if the female lays her eggs distant from them owing to their straight bodies, however the second stage larva cannot due to its curved form. In addition to any other species of stored grain pest, it affects the vigour and germination rates of the grains, making them ideal prey for secondary pests and fungus. Weight loss of the grain may reach 40%. Beetle larvae that hatch from eggs set close to grain directly penetrate the grain.

Control-Measures: The most economical and effective strategy to manage these pests is always prevention. The following techniques may be used to get rid of the pest.

1. Chemical regulation

Fumigation: The only way to solve the issue after the insect has spread throughout the grain bulk is via fumigation. The most often used fumigant to manage insect infestations in storage facilities is phosphine; additional fumigants include phosphine combined with CO2 and magnesium phosphide. Insecticides: They are often sprayed on the surface since they disintegrate more quickly; the length of protection relies on the temperature at which the commodity is treated, the moisture content of the grain, and the insecticide employed. They reduce the number of pests in buildings, warehouses, and cellars. The pesticides Wheat-ENT47, Soybean-ENT13, Corn-ENT16, Neonicotinoide, Methoprene t diflubenzerun, etc. are often used to eradicate the weevil. Insect growth regulators are applied directly to the grain by spraying or dusting and provide protection from two weeks to a year. These IGR have minimal mammalian toxicity but take longer to manage the pest and are more costly than other insecticides, fumigants, and chemicals. Nonetheless, it controls the adults by limiting the development of offspring and also results in death. Methoprene, Pyriproxyfen, Lufemuren, and Fenoxycarb are examples of commonly used IGR.

2. Biological control:

Using predators, parasites, parasitoids, and entomopathogens as natural enemies.

Insects and parasites: The parasite employed to parasitize the beetle is the parasitic egg mite Acarophenaxlacunatus. Anisopteromaluscalandre and Choetospilaelegans are two common hymenoptera parasitoids used to control beetles. These parasitoids are efficient because they are small, do not feed on grains, and can be easily removed from grains because they attack the beetle larva that are feeding inside the grains. Entomopathogens are bacteria, fungi, protozoans, or viruses that infect humans and other animals by entering their bodies via natural body openings and acting as endoparasites on insects. For the beetle, bacteria, nematodes, and fungi are the most often employed entomopathogens.

3. Physical & mechanical control:

Cleaning & drying, mechanical disinfestations, including grain refining from basic handling system to the use of complex machinery like entoleters, etc., are the most often employed techniques to reduce insect infestation. Physical control techniques include thermal pest management, which involves simply heating grains under the sun. In this ancient method, disinfestation is accomplished by placing grain on a cemented platform and exposing it to the sun in thin layers, which will drive any adult or larvae away. The reconditioning of contaminated grain also uses hot air grain drying equipment for this purpose[9], [10].

II. DISCUSSION

The order Coleoptera, which is mostly composed of weevils and beetles, is home to the majority of the pests that attack grains in stores. The word "coleoptera" is derived from the Greek words koleos, which means "sheath," and pteron, which means "wing," thus "sheathed wing," because the

majority of beetles and weevils have two pairs of wings, with the front pair, known as the "elytra," being hardened and thickened into a shell-like protection for the rear pair and the beetle's abdomen. More species than any other order are found in this one, which accounts for roughly 25% of all known animal life. Beetles and weevils come in a very vast variety. They inhabit practically every sort of environment. Pule beetle, rice weevil, wheat weevil, rust red flour beetle, and lesser grain borer are the main insects that cause damage to food goods.

The grub stage of the stored food grain infection is caused by the pulse beetle, a major pest of stored cowpea and gramme. The first sign of infection is perforations on grains; infected grains are no longer fit for human consumption. The larva of the rice weevil, which is the most prevalent and widespread stored food pest in the world and may cause up to 50% damage, are more harmful. In addition to rice, it also affects a variety of other grains and cereals.

The worst invasive species in the world is the wheat weevil, commonly known as the cabinet beetle. There are five omnivorous moults that reproduce quickly and cause severe infestations of the cereal grains. The rust red flour beetle is known for its polyandrous and global mating habits. Under pressure, flies are a major pest of cooked cereal goods, infecting internally and causing unpleasant odour in food items.

The Australian wheat weevil, a lesser grain borer, is capable of taking extended flights. With five generations every year, both the larvae and the adults cause grain weight loss. It makes more fraes and turns the rice into dust. Food grain pests must be controlled because they cause significant economic loss on a variety of levels, including chemical, mechanical, physical, and biological ones.

Chemical control has an immediate impact since it eliminates severe infestations with the use of fumigation, pesticides, insect growth regulators, and aerosol sprays, but it is also dangerous for people because it causes negative side effects when chemically treated food is ingested. Thermal drying is a part of the physical approach, and the use of advanced machinery, cleaning, drying, and refining are all parts of the mechanical method. The safest type of pest management is biological control, which makes use of entomopathogens, parasites, predators, parasitoids, hormonal traps, and other naturally occurring enemies [11]–[13].

III. CONCLUSION

From ancient times, insects have been very important to humankind; some are helpful, while others are destructive in many ways. More than 34 of the world's animal life is made up of insects, which also destroy a lot of crops in the field and inflict significant harm to people's health and the economy. Food is the most fundamental need that a man has, and because of population constraints, the goal of increasing food production has become even more crucial. While one third of the food produced worldwide is lost to pests, the human fight against stored grain pests is a very ancient one. Over 1000 bug species have been identified as causing agricultural damage, with 70 species accounting for the majority of the harm.

REFERENCES

[1] R. Aulicky and V. Stejskal, “Efficacy and limitations of phosphine ‘spot-fumigation’ against five coleoptera species of stored product pests in wheat in a grain store - Short note,” Plant Prot. Sci., 2015, doi: 10.17221/71/2014-PPS.

[2] A. F. Md Aslam, S. Sultana, F. F. Rain, S. R. Das, A. Siddika, and A. J. Howlader, “Molecular characterization and identification of three stored grain pests based on mitochondrial cytochrome C oxidase subunit I (COI) gene sequences,” Bangladesh J. Zool., 2019, doi: 10.3329/bjz.v47i1.42016.

[2] Z. Kučerová, R. Aulický, and V. Stejskal, “Outdoor occurrence of stored-product pests (Coleoptera) in the vicinity of a grain store - Short communication,” Plant Prot. Sci., 2005, doi: 10.17221/2739-pps.

[3] M. A. Bashir et al., “Insecticidal effect of botanical material for the management of pulse beetle, (callosobruchus chinensis): A step toward eco-friendly control,” Fresenius Environ. Bull., 2020.

[4] R. K. Upadhyay and S. Ahmad, “Management strategies for control of stored grain insect pests in farmer stores and public ware houses,” World J. Agric. Sci., 2011.

[5] A. Santra and S. Kundagrami, “Beneficiary effect of kalmegh-extract for improving seed storage, viability and vigour some economically important crops,” Int. J. Chem. Environ. Sci., 2020, doi: 10.15864/ijcaes.1107.

[6] Z. Kučerová, “Weight losses of wheat grain caused by psocid infestation (Liposcelis bostrychophila: Liposcelididae: Psocoptera),” Plant Prot. Sci., 2002, doi: 10.17221/4858-pps.

[8] V. Stejskal, J. Hubert, Z. Kučerová, Z. Munzbergová, J. Lukáš, and E. Žd’árková, “The influence of the type of storage on pest infestation of stored grain in the Czech Republic,” Plant, Soil Environ., 2003, doi: 10.17221/4090-pse.

[7] P. R. Shingote, M. P. Moharil, D. R. Dhumale, P. V. Jadhav, N. S. Satpute, and M. S. Dudhare, “Screening of vip1/vip2 binary toxin gene and its isolation and cloning from local Bacillus thuringiensis isolates,” ScienceAsia, 2013, doi: 10.2306/scienceasia1513-1874.2013.39.620.

[8] B. Nizamani et al., “Influence of indigenous plant materials on reproductive performance of Callosobruchus chinensis (L.) (Coleoptera: Bruchidae) on chickpea,” Int. J. Trop. Insect Sci., 2020, doi: 10.1007/s42690-020-00158-z.

[9] C. A. O. Midega, A. W. Murage, J. O. Pittchar, and Z. R. Khan, “Managing storage pests of maize: Farmers’ knowledge, perceptions and practices in western Kenya,” Crop Prot., 2016, doi: 10.1016/j.cropro.2016.08.033.

[10] T. Shiferaw, “Occurrence of Stored Grain Insect Pests in Traditional Underground Pit Grain Storages of Eastern Ethiopia,” Agric. Res. Technol. Open Access J., 2018, doi: 10.19080/artoaj.2018.13.555879.

[11] Bushra Moon et al., “Insecticidal and growth regulatory effect of Jatropha curcas and Linum usitatissimum extracts along with new chemistry pesticide spinetoram against Sargodha strain of Rhyzopertha Dominica,” GSC Biol. Pharm. Sci., 2021, doi: 10.30574/gscbps.2021.17.3.0359.

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Benefits of Pulse Beetle for Crop

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***Abstract*—Callosobruchusmaculatus, also known as the pulse beetle, is a significant pest of grain legumes such as cowpeas, mung beans, and chickpeas. The beetle infests the seeds of these crops, leading to significant losses in yield and quality. Controlling the pulse beetle is a major challenge for farmers and agricultural scientists, as the beetle is highly adaptable and can develop resistance to insecticides over time. However, there are several potential strategies for managing the pest, including the use of biological control agents, cultural practices, and the development of resistant crop varieties.**

***Index Terms*— Bean Weevils, Biological Control, Crop Damage, Grain Legumes, Insect Pests, Integrated Pest Management**

I. INTRODUCTION

Pulse crops are an important source of dietary protein and other nutrients for millions of people around the world. These crops, which include cowpeas, mung beans, and chickpeas, are also a vital component of many agricultural systems, providing farmers with a reliable source of income and supporting food security in many regions [1]–[3].

However, pulse crops are also vulnerable to a range of pests and diseases, which can cause significant losses in yield and quality. One of the most important pests of pulse crops is the pulse beetle, Callosobruchusmaculatus. This beetle infests the seeds of these crops, leading to significant losses in yield and quality.Pulse beetle, also known as the bean weevil, is a major pest of pulse crops, causing significant damage to stored beans, lentils, chickpeas, and other legumes. However, recent research has suggested that pulse beetles may have potential benefits for crop production. One potential benefit of pulse beetles is their ability to contribute to soil health. The beetles are known to feed on and break down plant material, which can contribute to the nutrient cycle in the soil. This can improve soil fertility and increase crop yields.

Additionally, the presence of pulse beetles in the soil can attract beneficial insects and promote biodiversity. Another potential benefit of pulse beetles is their ability to contribute to food security. While pulse beetles are primarily known for their destructive impact on stored crops, they are also a source of protein and other nutrients. In some cultures, pulse beetles are used as a food source, either roasted or ground into flour. By utilizing this protein source, communities can reduce their reliance on expensive and sometimes unreliable sources of protein. Furthermore, research has shown that pulse beetles may have potential as a biocontrol agent for invasive plant species. The beetles have been observed feeding on the seeds of invasive plants, which can reduce their germination rates and limit their spread. This has the potential to improve ecosystem health and protect native plant species.

Overall, while pulse beetles are primarily known for their negative impact on crop production, there are potential benefits to their presence in agricultural ecosystems. Further research is needed to better understand these potential benefits and develop strategies to maximize them while minimizing the damage caused by pulse beetle infestations.The pulse beetle is a small, brown beetle that is native to tropical and subtropical regions of Africa. It has since spread to other parts of the world, including Asia, the Americas, and Australia, where it has become a significant pest of pulse crops. The beetle is highly adaptable and can survive in a range of conditions, making it difficult to control using traditional insecticides. It can also develop resistance to insecticides over time, further complicating control efforts. Despite these challenges, there are several potential strategies for managing the pulse beetle and minimizing its impact on crop yields. These strategies include the use of biological control agents, cultural practices, and the development of resistant crop varieties. Biological control agents, such as parasitoid wasps and fungal pathogens, have shown promise in controlling pulse beetle populations in laboratory and field trials. These agents work by attacking the beetle at various stages of its life cycle, preventing it from reproducing and causing damage to pulse crops.

Cultural practices, such as proper storage techniques and crop rotation, can also help to reduce the incidence of infestations and minimize the impact of the beetle on crop yields. For example, storing pulse crops in sealed containers can prevent the beetles from accessing the seeds, while rotating pulse crops with other crops can disrupt the beetle's life cycle and reduce its overall population. In addition, there is ongoing research into the development of crop varieties that are resistant to the pulse beetle. This can involve traditional breeding techniques, as well as genetic engineering approaches that introduce genes from other plants or organisms to confer resistance. For example, researchers have identified several genes that are associated with resistance to the pulse beetle in cowpeas and other pulse crops. By introducing these genes into other varieties of pulse crops, researchers hope to create crop varieties that are more resistant to the beetle and other pests.

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Overall, the pulse beetle is a significant challenge for farmers and agricultural scientists, but there are several potential strategies for managing its impact on crop yields. By investing in research and innovation in this area, agricultural scientists can help to promote sustainable and productive agriculture, while also addressing the challenges posed by pests such as the pulse beetle.The subfamily Bruchidae of the order Coleoptera includes the genus Callosobruchus. These species include C. analis, C. chinensis, C. dolichosi, C. imitator, C. latealbus, C. maculatus, C. nigripennis, C. phaseoli, C. utidai, C. theobromae, C. subinnotatus, C. semigriseus, C. rhodesianus, and C. pulcher, among others. One of them, C. maculatus, is a significant and important pest that may affect a broad range of pulses on occasion under normal and common storage conditions. For vegetarians, pulses are the major source of protein. It is a significant storage commodity that is infested by pests from Asia, Africa, and many tropical and subtropical nations.

The incubation period is between 4-5 days, and a female may lay between 70 and 150 eggs on the seeds. The larval and pupal stages last between 11 to 20 and 6 to 8 days, respectively. It typically takes 23 to 28 days from egg to adult. The larvae of this species are known as bean beetles because they only feed on and grow within the seeds of legumes.

Adult males may survive for 7–10 days, whereas females can last 6–10 days.When adults first emerged from seeds, they were primarily engaged in reproduction. As C. maculatus does not need food or water to reproduce, it is ideally suited to surviving in dry beans and seeds. Adults never consume pulses throughout their lifetime. Infestation by C. maculatus was reliant on the food's water content, which is necessary for fertility and lifespan.From March to November, it readily reproduces in the tropics, and from December to February it hibernates as a larva. The pest's damaging season runs from February to August. Due to its rapid rate of reproduction and simplicity of care, it serves as a model organism in several scientific experiments.According to estimates, insects, fungi, bacteria, and viruses worldwide caused the loss of 10–40% of food goods that were in storage [1]. About 8.5% of the 12.65 million tonnes of pulses produced in India each year are lost during post-harvest processing and storage [2]. The total proportion of post-harvest losses of pulses, according to ICAR and CIPHET, ranged from 6.36 to 8.41% in March 2015.

II. DISCUSSION

Infestation on stored pulses is either directly or indirectly influenced by environmental conditions such as temperature, humidity, moisture content, carbon dioxide/oxygen, insects, and microbial activity. The destruction of seeds is facilitated by changes in the physico-chemical parameters. Due to excess moisture content in pulses and pest excretory waste, an increase in the moisture content of pulses (5–14%) led to an increase in insect infestation as well as fungal infection in pulses. Infestation by insects and fungi lowers the market value and causes a loss of physical, chemical, and nutritional value. Physical loss is involved, primarily in terms of weight, look, and colour. Due to insect assault, grains become more acidic and contain more reducing sugars and uric acid. Insects also eat the more nutritious embryo or germ part.

Excreta from these bugs may cause a variety of illnesses in both humans and animals, including neurological, urological, and allergy conditions. Since they have noticeable effects, synthetic chemicals are employed to manage pests, particularly phosphine and methyl bromide, which are often utilised as fumigants. The usage of these synthetic chemicals results in the emergence of insect resistance and has a negative impact on the ecosystem. A large number of researchers are looking for alternatives to these chemical fumigants.

Furthermore, the use of natural plant compounds, such as essential oils, has also shown promise in controlling pulse beetle populations. Essential oils derived from plants such as neem, basil, and clove have been shown to have insecticidal properties against the pulse beetle, and can be used as a natural alternative to traditional insecticides.In addition to its impact on crop yields, the pulse beetle can also have broader economic and social impacts. In many regions where pulse crops are a key component of agricultural systems, the loss of crops due to pest infestations can have significant impacts on farmers' incomes and livelihoods. Furthermore, the nutritional value of pulse crops makes them a crucial source of food for many people, particularly in developing countries. The loss of these crops due to pest infestations can lead to food shortages and malnutrition, particularly among vulnerable populations such as children and pregnant women [4]–[6]. To address these broader impacts, it is important to take a holistic approach to managing the pulse beetle and other pests that affect pulse crops. This can involve working with farmers and local communities to implement integrated pest management strategies that take into account the local context and the needs of different stakeholders.

It can also involve supporting research and development efforts aimed at developing new tools and technologies for controlling pests, as well as improving the resilience of pulse crops to pests and other challenges. In conclusion, the pulse beetle, Callosobruchusmaculatus, is a significant pest of pulse crops such as cowpeas, mung beans, and chickpeas, and can cause significant losses in yield and quality. However, there are several potential strategies for managing the pest, including the use of biological control agents, cultural practices, and the development of resistant crop varieties.Little scale level physical and biological techniques are used.

Sands and other soil constituents are employed in warehouses as conventional pesticides. On top of the seed that has been stored, sands provide protection.The greatest physical way for effectively eradicating all insect life stages

within a certain time frame is to heat-treat grains that have been kept.Most insects found in stored goods are unable to withstand high temperatures, frequent heating and cooling, and high death rates.Food grains may be further protected without the use of insecticides by being overheated. Pheromones are applied to insects to regulate their behaviour, either male- or female-specific pheromone chemicals.

The utilisation of plant oils and their bioactive chemical components as potential substitutes for manufactured fumigants has received a lot of attention in recent years. A rising number of people are interested in using plant oils to safeguard agricultural goods because of their low toxicity to mammals and short environmental persistence. Small-scale use of essential oils provides the stored grains with effective protection. If any essential oil combinations with synergistic effects have been created, they may be utilised as a component in huge storage structures[7]–[10].Biological control agents, such as parasitoid wasps and fungal pathogens, have shown promise in controlling pulse beetle populations in laboratory and field trials. Cultural practices, such as proper storage techniques and crop rotation, can also help to reduce the incidence of infestations and minimize the impact of the beetle on crop yields. In addition, there is ongoing research into the development of crop varieties that are resistant to the pulse beetle. This can involve traditional breeding techniques, as well as genetic engineering approaches that introduce genes from other plants or organisms to confer resistance.Overall, the pulse beetle is a significant pest of grain legumes, but there are several potential strategies for managing its impact on crop yields. By investing in research and innovation in this area, agricultural scientists can help to promote sustainable and productive agriculture, while also addressing the challenges posed by pests such as the pulse beetle[11]–[13].

III. CONCLUSION

There are several methods and technologies available to spot insect infestations early on. It can have positive effects in reducing the insect invasion. One of the greatest recommendations is for consumers to purchase pulses directly from farmers and to prepare them for storage by using age-old practises like combining oil and red sand and covering the top layer of seeds with neem leaves. The control of the stored pest using conventional techniques is a reasonable and economical strategy that won't have any negative effects on the environment or unintended organisms.

REFERENCES

[1] C. S. Jayaram, N. Chauhan, S. K. Dolma, and S. G. E. Reddy, “Chemical Composition and Insecticidal Activities of Essential Oils against the Pulse Beetle,” Molecules, 2022, doi: 10.3390/molecules27020568.

[2] L. Pradhan, P. S. Singh, S. K. Singh, and R. P. N. Saxena, “Evaluation of certain chickpea genotypes against pulse beetle, Callosobruchus chinensis (L.) under laboratory conditions,” J. Entomol. Res., 2020, doi: 10.5958/0974-4576.2020.00090.0.

[3] S. J. Prasanthi, R. Kumar, and M. K. Chakravarty, “Non-chemical methods for the management of pulse beetles : A review,” J. Entomol. Zool. Stud., 2017.

[4] P. Divya, K. K. Durga, N. Sunil, M. Rajasri, K. Keshavulu, and P. Udayababu, “Modified atmosphere storage technique for the management of pulse beetle, Callosobruchus chinensis in horse gram,” Legum. Res., 2016, doi: 10.18805/lr.v0iOF.9610.

[5] N. Yewle, K. Chandra Swain, S. Mann, and P. N. Guru, “Performance of hermetic bags in green gram [Vigna radiata (L.) R. Wilczek] storage for managing pulse beetle (Callosobruchus chinensis),” J. Stored Prod. Res., 2022, doi: 10.1016/j.jspr.2021.101896.

[6] N. Chauhan, U. Kashyap, S. K. Dolma, and S. G. Eswara Reddy, “Chemical Composition, Insecticidal, Persistence and Detoxification Enzyme Inhibition Activities of Essential Oil of Artemisia maritima against the Pulse Beetle,” Molecules, 2022, doi: 10.3390/molecules27051547.

[7] M. S. Owolabi et al., “Insecticidal activity and chemical composition of the morinda lucida essential oil against pulse beetle callosobruchus maculatus,” Sci. World J., 2014, doi: 10.1155/2014/784613.

[8] G. Vijayalakshmi et al., “Insecticidal, Oviposition Deterrent and Antifeedant Property of Certain Plant Extracts against Pulse Beetle, Callosobruchus chinensis Linn. (Coleoptera: Bruchidae),” Legum. Res., 2021, doi: 10.18805/LR-4652.

[9] A. Esen et al., “Screening and selection of accessions in the genus Pisum L. for resistance to pulse beetle (Callosobruchus chinensis L.),” Euphytica, 2019, doi: 10.1007/s10681-019-2395-4.

[10] M. S. N. . J. B. C. . G. B.C., “Biology of Pulse Beetle Callosobruchus chinensis in Storage Condition in Green Gram,” Int. J. Sci. Res., 2015.

[11] R. Kausar, M. A. Bashir, M. S. Nisar, M. I. A. Rehmani, M. S. Hashami, and S. Atta, “Eco-friendly management of pulse beetle (Callosobruchus Chinensis) by using different plant materials,” Asian Journal of Agriculture and Biology. 2017.

[12] A. P. Barge and G. B. Kabre, “Relative susceptibility of chickpea varieties against pulse beetle in storage,” Int. J. Plant Prot., 2020, doi: 10.15740/has/ijpp/13.1/45-49.

[13] M. A.-M. Hasan, S. Sultana, K. Akter, T. U. Wara, M. Hasan, and M. M. Uddin, “Biorational Management of Pulse Beetle (Callosobruchus chinensis L.) in Gram Seed,” Asian Plant Res. J., 2020, doi: 10.9734/aprj/2020/v6i230123.

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An Overview on Rice Weevil

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***Abstract*—The rice weevil has a small, robust look and is between 2 and 3 mm in length. It resembles the granary weevil a lot in terms of looks. The rice weevil, on the other hand, has four pale yellow or reddish dots on the corners of its elytra and ranges in colour from reddish-brown to black (the hard-protective forewings). A long (1 mm) snout makes up approximately one-third of the overall length. As long as the prothorax or the elytra is the head with snout. Both the elytra and the prothorax, the part of the body behind the head, feature rows of pits arranged inside longitudinal grooves. It remains within the grain kernel that has been hollowed out and lacks legs. It has a cream-colored body, a black head capsule, and is fat.**

***Index Terms*— Beetle, Oryzae, Lifespan, Rice, Weevil**

I. INTRODUCTION

Rice weevil (Sitophilus oryzae) is a common pest that infests stored grain, particularly rice, wheat, maize, and barley. This small beetle is a major concern for farmers and food producers, as it can cause significant losses in grain quality and quantity, and can also contaminate grain with harmful microorganisms. The rice weevil is native to tropical regions of Asia but has since spread to other parts of the world, including Europe, Africa, and the Americas, through the trade of grain and other food products. It is a highly adaptable insect that can survive in a range of conditions, making it difficult to control using traditional insecticides[1]–[3].The rice weevil has a lifespan of around four months and can produce several generations in a single year. It feeds on the germ and endosperm of the grain, causing damage that can reduce the grain's nutritional value and render it unfit for human consumption.

In addition to its impact on grain quality, the rice weevil can also cause significant economic losses for farmers and food producers. Infestations can lead to lower yields, reduced product quality, and increased costs associated with pest management and grain disposal. There are several potential strategies for managing the rice weevil and minimizing its impact on grain quality and quantity. These strategies include the use of chemical insecticides, physical control measures, and cultural practices. Chemical insecticides are one of the most commonly used strategies for controlling rice weevil populations. However, the use of these insecticides can be problematic, as they can have negative impacts on human health and the environment, and can also lead to the development of insecticide resistance in the rice weevil population.Physical control measures, such as heating, freezing, or fumigating the grain, can also be effective in controlling rice weevil populations. However, these measures can be costly and may not be feasible for all farmers and food producers.

Cultural practices, such as proper storage techniques and crop rotation, can also help to reduce the incidence of infestations and minimize the impact of the rice weevil on grain quality and quantity. For example, storing grain in sealed containers or using hermetic storage systems can prevent the weevils from accessing the grain, while rotating crops with other crops can disrupt the weevil's life cycle and reduce its overall population.

In addition to these strategies, there is ongoing research into the development of rice varieties that are resistant to the rice weevil. This can involve traditional breeding techniques, as well as genetic engineering approaches that introduce genes from other plants or organisms to confer resistance. For example, researchers have identified several genes that are associated with resistance to the rice weevil in rice and other cereal crops. By introducing these genes into other varieties of grain, researchers hope to create crop varieties that are more resistant to the rice weevil and other pests.

Overall, the rice weevil is a significant challenge for farmers and food producers, but there are several potential strategies for managing its impact on grain quality and quantity. By investing in research and innovation in this area, agricultural scientists can help to promote sustainable and productive agriculture, while also addressing the challenges posed by pests such as the rice weevil.

It is important to take a holistic approach to managing the rice weevil and other pests that affect grain crops. This can involve working with farmers and local communities to implement integrated pest management strategies that take into account the local context and the needs of different stakeholders. It can also involve supporting research and development efforts aimed at developing new tools and technologies for controlling pests, as well as improving the resilience of grain crops to pests and other challenges.One of the most harmful pests to stored grains in the world is the rice weevil. This whole grain pest was first discovered in India and has since spread around the globe due to trade. It currently has a global distribution.

In the southern United States, it is a major pest. North of North Carolina and Tennessee, the granary weevil takes the place of the rice weevil. Whole grains are consumed by the larvae and the adults. They prey on cereal items, particularly

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macaroni, as well as wheat, maize, oats, rye, barley, sorghum, buckwheat, dried beans, cashew nuts, and wild bird seed. The adult rice weevil has the ability to fly and is drawn to lights.

Adults draw their legs in, collapse to the ground, and act dead when startled. The larval rice weevil must finish developing within a seed kernel or a synthetic substitute, such as pasta. Hard caked flour has been found to be the development site for larval rice weevils. The adult female consumes a seed, creating a cavity, and then lays one egg there, closing the cavity with ovipositor secretions. As it grows, the larva hollows out the seed as it feeds. The larva subsequently turns into a pupa within the grain kernel's hollow husk [4]–[6].

The mature female rice weevil may survive for four to five months and lays an average of four eggs every day. In the sweltering summer, the whole life cycle may just take 26 to 32 days, but in the colder months, it takes considerably longer. After around three days, the eggs will hatch. For an average of 18 days, the larvae eat just within the grain kernel. The pupal stage lasts an average of 6 days, and the pupa is completely naked. During 3 to 4 days, the new adult will stay within the seed as it hardens and develops.

II. DISCUSSION

The location of the infestation's source is the most crucial component of control. Put sticky traps all throughout the space to find the infestation if it is not immediately or readily apparent where it is. The sticky traps nearest to the infection location are likely those with a larger density of rice weevils attached. Decorative "Indian corn" leftover from Thanksgiving, wild bird seed, dried plant arrangements with wheat or other seed heads, popcorn, beanbags or toys packed with grain, macaroni goods, and seeds for sprouting are a few common sources of infestations. Infested materials need to be disposed of or destroyed. Extreme heat (120°F for an hour) or cold (0°F for a week) may destroy all life stages. The most effective preventative method is to keep things that are likely to be infected in pest-proof plastic, glass, or metal containers. By putting a 1 inch cube (16 ml) of dry ice (solid carbon dioxide) to a quart mason jar containing seeds and closing the lid, seeds and nuts may be kept fresh for a long time. Pests that damage stored goods are discouraged by the carbon dioxide atmosphere [7]–[9].

Rice weevil (Sitophilus oryzae) is a common pest of stored grains, including rice, wheat, barley, oats, and corn. It is a small, reddish-brown beetle that infests grains in the field or during storage, causing significant economic losses and food spoilage.In this review, we will discuss the biology, ecology, and management of rice weevil. Rice weevils have a complete life cycle, consisting of four stages: egg, larva, pupa, and adult. The female lays eggs inside the grain, and the larvae feed on the interior of the grain, causing significant damage. The adult weevils can fly and can infest new grain stores. Rice weevils are found throughout the world and are a major pest of stored grain, particularly in tropical and subtropical regions. Infestations can be prevented by good sanitation practices, such as keeping grain storage areas clean and free of debris, using appropriate storage containers, and monitoring grain stores for signs of infestation. In terms of management, a variety of methods can be used to control rice weevil, including physical, cultural, and chemical control methods. Physical methods include storing grain at low temperatures or exposing it to high temperatures, which can kill the weevils. Cultural methods involve rotating crops, cleaning and sanitizing storage facilities, and using traps to monitor and control infestations. Chemical control involves the use of insecticides, which can be effective but must be used carefully and according to label instructions to minimize risks to human health and the environment.Rice weevils are indicated on the labels of residual insecticides that may be used to address infestations in non-food locations such as cracks and crevices. Fumigation is used to control infestations in big amounts of grain.

There are several potential strategies for controlling rice weevil (Sitophilus oryzae) populations and minimizing their impact on stored grain. These strategies include the use of chemical insecticides, physical control measures, cultural practices, and the development of resistant crop varieties.

Chemical insecticides are one of the most commonly used strategies for controlling rice weevil populations. However, the use of these insecticides can be problematic, as they can have negative impacts on human health and the environment, and can also lead to the development of insecticide resistance in the rice weevil population. Some of the commonly used chemical insecticides for rice weevil control include pyrethroids, organophosphates, and carbonates. These insecticides work by either killing the weevils directly or disrupting their reproductive cycle. However, repeated use of the same insecticides can lead to the development of insecticide-resistant weevils, which can render the insecticides ineffective.

Physical control measures can also be effective in controlling rice weevil populations. These measures involve manipulating the storage environment to create conditions that are unfavorable for the weevils. For example, exposing the grain to high temperatures or freezing temperatures can kill the weevils and prevent them from reproducing. Fumigation with chemicals such as phosphine can also be effective, but must be done under strict safety protocols to prevent harm to humans and the environment. Cultural practices are another important strategy for controlling rice weevil populations. These practices involve modifying storage conditions and crop management practices to prevent weevil infestations. Some examples of cultural practices that can be effective in controlling rice weevils include:

Proper storage techniques: Storing grain in sealed containers or using hermetic storage systems can prevent the weevils from accessing the grain and reproducing.

Crop rotation: Rotating crops with other crops can disrupt the weevil's life cycle and reduce its overall

population.Cleaning and sanitation: Thoroughly cleaning storage facilities and removing any spilled or infested grain can help to prevent weevil infestations.

Finally, the development of resistant crop varieties is another important strategy for controlling rice weevil populations. This involves identifying genes associated with resistance to the rice weevil in rice and other cereal crops and introducing these genes into other varieties of grain. For example, researchers have identified several genes that are associated with resistance to the rice weevil in rice and other cereal crops. By introducing these genes into other varieties of grain, researchers hope to create crop varieties that are more resistant to the rice weevil and other pests. There are several potential strategies for controlling rice weevil populations and minimizing their impact on stored grain. By investing in research and innovation in this area, agricultural scientists can help to promote sustainable and productive agriculture, while also addressing the challenges posed by pests such as the rice weevil. It is important to take a holistic approach to managing rice weevil and other pests that affect grain crops, working with farmers and local communities to implement integrated pest management strategies that take into account the local context and the needs of different stakeholders[10], [11].

In conclusion, the rice weevil (Sitophilus oryzae) is a major pest that can cause significant damage to stored grain crops, leading to economic losses and food insecurity. Effective management of rice weevil populations is essential to ensure sustainable and productive agriculture, and to meet the growing demand for food in a changing world. There are several potential strategies for controlling rice weevil populations, including the use of chemical insecticides, physical control measures, cultural practices, and the development of resistant crop varieties. Each of these strategies has its advantages and limitations, and the most effective approach will depend on local conditions and the specific needs of farmers and communities. It is important to take a holistic approach to managing rice weevil and other pests that affect grain crops, working with farmers and local communities to implement integrated pest management strategies that take into account the local context and the needs of different stakeholders. This includes investing in research and innovation to develop new and more effective pest management strategies, as well as promoting sustainable and regenerative agriculture practices that minimize the need for chemical inputs and promote the health of soil and ecosystems[12], [13].

Benefits of rice weevil

Rice weevil (Sitophilus oryzae) is considered a pest of stored grains and is typically not associated with any benefits. However, recent research has highlighted some potential uses for rice weevil in different fields:

Biological control

Rice weevil has been found to be an effective natural predator of other pests, such as red flour beetle and Indian meal moth, in grain storage facilities. In this way, rice weevil can contribute to the biological control of other pests.

Nutritional value

Rice weevil larvae have been found to be a good source of protein and fat, as well as other nutrients, and have been proposed as a potential food source for humans and animals. However, more research is needed to determine the safety and feasibility of using rice weevil larvae as a food source.

Medical applications

Rice weevil has been investigated for its potential use in drug delivery systems due to its unique chitin-based exoskeleton, which has properties that make it useful for encapsulating and delivering drugs.

III. CONCLUSION

Ultimately, the effective management of rice weevil populations will require a collaborative and interdisciplinary approach, bringing together experts from diverse fields such as agriculture, entomology, ecology, and social sciences to develop and implement effective solutions. By working together, we can ensure a more sustainable and resilient food system, while also promoting the health and wellbeing of people and the planet.Rice weevil is a significant pest of stored grains, causing economic losses and food spoilage. Preventive measures and integrated pest management strategies that combine physical, cultural, and chemical control methods are essential to effectively manage this pest. Continued research is needed to develop new and more sustainable approaches to rice weevil management that minimize risks to human health and the environment.

REFERENCES

[1] K. J. Hong, W. Lee, Y. J. Park, and J. O. Yang, “First confirmation of the distribution of rice weevil, Sitophilus oryzae, in South Korea,” J. Asia-Pacific Biodivers., 2018, doi: 10.1016/j.japb.2017.12.005.

[2] M. Ibrahim, R. A. Rahim, J. M. Nordin, S. Z. A. Nyzam, and M. T. Abdullah, “Thermal distribution analysis of rice weevil disinfestation using microwave heating treatment,” Indones. J. Electr. Eng. Comput. Sci., 2019, doi: 10.11591/ijeecs.v13.i2.pp759-765.

[3] M. Ibrahim, R. A. Rahim, J. M. Nordin, S. Z. A. Nyzam, and N. A. Amatkhri, “Dielectric properties characterization of the rice and rice weevil for microwave heating treatment,” Indones. J. Electr. Eng. Comput. Sci., 2019, doi: 10.11591/ijeecs.v13.i2.pp752-758.

[4] P. Widiyaningrum, D. R. Indriyanti, B. Priyono, N. Asiyah, and P. L. F. Putri, “Antifeedant effect of some medicinal plant extracts against rice weevil,” Pakistan J. Biol. Sci., 2020, doi: 10.3923/pjbs.2020.953.958.

[5] A. B. Ocampo, M. K. E. Braza, and R. B. Nellas, "The interaction and mechanism of monoterpenes with tyramine receptor (SoTyrR) of rice weevil (Sitophilus oryzae)," SN Appl. Sci., 2020, doi: 10.1007/s42452-020-03395-6.
[6] G. P. Opit and J. E. Throne, "Influence of maternal age on the fitness of progeny in the rice weevil, Sitophilus oryzae (Coleoptera: Curculionidae)," Environ. Entomol., 2007, doi: 10.1603/0046-225X(2007)36[83:IOMAOT]2.0.CO;2.
[7] D. C. Teller et al., "The structure of rice weevil pectin methylesterase," Acta Crystallogr. Sect. F Struct. Biol. Commun., 2014, doi: 10.1107/S2053230X14020433.
[8] S. Zhao, C. Qiu, S. Xiong, and X. Cheng, "A thermal lethal model of rice weevils subjected to microwave irradiation," J. Stored Prod. Res., 2007, doi: 10.1016/j.jspr.2006.12.005.
[9] D. Khanal et al., "Evaluation of Botanical Powders for the Management of Rice Weevil (Sitophilus oryzae L. Coleoptera: Curculionidae) in Rupandehi, Nepal," Adv. Agric., 2021, doi: 10.1155/2021/8878525.
[10] S. W. Kim, H. R. Lee, M. J. Jang, C. S. Jung, and I. K. Park, "Fumigant toxicity of Lamiaceae plant essential oils and blends of their constituents against adult rice weevil Sitophilus oryzae," Molecules, 2016, doi: 10.3390/molecules21030361.
[11] F. Wang et al., " Diverse RNA Viruses Discovered in Three Parasitoid Wasps of the Rice Weevil Sitophilus oryzae ," mSphere, 2021, doi: 10.1128/msphere.00331-21.
[12] W. Shi, R. Yan, and L. Huang, "Preparation and insecticidal performance of sustained-release cinnamon essential oil microemulsion," J. Sci. Food Agric., 2022, doi: 10.1002/jsfa.11472.
[13] G. Zhai et al., "Identification of genomic region associated with rice weevil resistance in sorghum [Sorghum bicolor (L.) Moench]," J. Stored Prod. Res., 2016, doi: 10.1016/j.jspr.2016.08.002.

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Importance of Wheat weevil (Trogodermagranarium)

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***Abstract*—The wheat weevil, also known as Trogodermagranarium, is a common pest of stored grains, especially wheat. It is a small beetle that is about 2-3 mm in length and is typically brown or black in color. Wheat weevils can cause significant damage to stored grains by feeding on the kernels and laying eggs inside them, leading to reduced grain quality and yield.**

***Index Terms*— Biological Control, Cereal Grains, Chemical Control, Crop Damage, Grain Storage, Insect Pests**

I. INTRODUCTION

It is difficult to get accurate distribution data for the khapra beetle since acknowledging its existence in a nation might lead to trade restrictions being implemented. Its endemic zone runs from Burma to western Africa and is confined by the 35° parallel to the north and the equator to the south. It was spread through trade into certain regions with comparable weather circumstances. According to Lindgren et al. , the khapra beetle is currently present on every continent where grain and grain products are kept, with the exception of South America. Yet according to Szito , neither Australia nor New Zealand are home to this species [1], [2].

In California in 1953, the khapra beetle was first found in the United States. The San Joaquin Valley may have had it since 1939, but it was subsequently discovered to have been introduced as early as 1946 at a warehouse in Fresno, California. It had already spread to portions of Arizona, New Mexico, Texas, and Baja California, Mexico, when it was discovered in 1953. The khapra beetle was discovered in a New Jersey warehouse in 1968 and then in isolated infestations in California, Maryland, Michigan, New Jersey, New York, Pennsylvania, and Texas from 1980 to 1983 after efforts at eradication in these locations.

Shipments of contaminated goods to warehouses in Texas, Pennsylvania, and California propagated the infestations that occurred between 1980 and 1983. Eradication operations were launched right away in these afflicted states. The khapra beetle is sometimes stopped at ports of entry in Florida and other states even if it hasn't yet established itself there.

According to USDA-APHIS, 67% of the continental US would have a climate that is favourable for Trogodermagranarium. Wheat weevil is a major pest of wheat and other cereal grains, causing significant damage to stored crops. The weevil larvae feed on the endosperm of the grain, reducing its nutritional value and making it unsuitable for human or animal consumption. In this review paper, we will discuss the biology and behavior of wheat weevils, their impact on crop production, and current management strategies.Wheat weevils are small, dark-colored beetles that measure around 3-5 mm in length. The adults are flightless and are usually found near the grain storage area. The weevils lay their eggs on the wheat kernels, and the larvae hatch and feed on the endosperm. The life cycle of the wheat weevil typically takes around 2-4 months, depending on temperature and humidity conditions. The impact of wheat weevils on crop production can be significant. Infested grain can have reduced nutritional value and may contain toxins produced by the weevils. This can lead to economic losses for farmers and pose a risk to human and animal health. In addition, wheat weevils can be difficult to control once they have infested stored grain, making prevention a key aspect of management. Current management strategies for wheat weevils include good sanitation practices, such as cleaning and fumigating storage areas and equipment, and using insecticides to prevent or control infestations. Integrated pest management (IPM) strategies, which combine multiple approaches, are often recommended to reduce reliance on chemical control methods and promote sustainability. Furthermore, research has been conducted on the use of natural enemies and biocontrol agents, such as parasitic wasps and fungi, to manage wheat weevil populations. While these methods have shown promise in laboratory settings, more research is needed to determine their effectiveness in field conditions and their potential impact on non-target organisms.

Identification

Adults: Oblong-oval beetles with dimensions of 1.6 to 3.0 mm in length and 0.9 to 1.7 mm in width make up the adults. Males range in colour from brown to black, and their elytra have hazy reddish-brown patterns. The size and colour of females are somewhat different from those of males. The head is tiny and deflexed with short 11-segmented antennae. The pronotum's side has a groove that the antennae's club, which has three to five segments, fits into. The grownups have hair all over them.

Trogodermagranarium Everts, the khapra beetle, adult, larval, and larval skins, as well as the harm the larvae did.Eggs: The eggs are cylindrical, 0.7 by 0.25 mm, milky

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white in colour that gradually fades to a light yellowish hue as they mature, with one end rounded and the other pointy and sporting spine-like projections. Larvae: The larvae are around 1.6 to 1.8 mm long upon hatching, with the final abdominal segment's hairy tail accounting for more than half of this length. With the exception of their brown head- and body-hairs, larvae are uniformly yellowish white. The body colour of the larvae changes to a golden or reddish brown, more body hairs grow, and the tail becomes proportionately shorter as they get bigger. The size of mature larvae is around 6 mm length and 1.5 mm broad.

Larvae are the immature form of many insects and are important for understanding the ecology and management of insect populations. In this review paper, we will discuss the biology and behavior of larvae, their ecological roles, and their impact on various ecosystems. Larvae are the second stage in the life cycle of insects, following the egg stage. During this stage, the larvae undergo a series of molts, shedding their exoskeleton and growing larger with each molt. Depending on the species, the larval stage can last anywhere from a few days to several years.

Larvae play important ecological roles in many ecosystems. They serve as a food source for a variety of predators, including birds, mammals, and other insects. Some larvae, such as those of butterflies and moths, are important pollinators, helping to ensure the reproduction of many plant species. Additionally, some larvae, such as those of dung beetles, play a key role in nutrient cycling by breaking down and consuming organic matter. However, larvae can also have negative impacts on various ecosystems, particularly in agricultural settings. Many larvae are considered pests, causing damage to crops and reducing yields. Some larvae, such as those of the corn earworm and armyworm, can cause significant damage to corn crops, while others, such as the larvae of the diamondback moth, can cause damage to cruciferous vegetables. Management strategies for larvae vary depending on the species and the ecosystem in question. In agricultural settings, strategies such as crop rotation, biological control, and the use of insecticides can be used to manage larval pests. In natural ecosystems, conservation efforts to protect larval habitats and promote biodiversity can be effective in promoting healthy populations of insects.

Larvae possess distinctive body hairs: simple hairs in which the shaft carries numerous short, stiff, upwards oriented processes, and barbed hairs with a constricted shaft in which the apex is a barbed head as long as the previous 4-segmented-like constrictions.

While adult khapra beetles have wings, they don't seem to fly and consume relatively little food. Males have a lifespan of seven to twelve days, mated females four to seven days, and unmated females twenty to thirty days.

Five days after emergence, there is mating, and around 40°C, egg laying starts nearly right away. In colder temperatures, egg laying may start one to three days later, but at 20 °C, no eggs are laid. The typical female lays 50 to 90 eggs, which are loosely dispersed throughout the host material. Eggs hatch in three to fourteen days. Depending on the temperature, it might take 26 to 220 days for an egg to fully mature into an adult. 35°C is the ideal temperature for development. Larvae may go into diapause if the temperature drops below 25°C for an extended length of time or if they are overcrowded. They can live in conditions as low as -8 °C. The larvae may moult while in diapause, however they are inert and can stay in this state for many years.

Even at 2% relative humidity, development may take place. High relative humidity may be the only thing keeping invasive khapra beetles alive. Larvae consume a broad range of dry goods and stored goods. Although they prefer whole grain and cereal products like wheat, barley, and rice, larvae have also been observed on a variety of other foods, including oats, rye, corn, dried blood, dried milk, fishmeal, ground nuts, flour, bran, malt, flax seed, alfalfa seed, tomato seed, pinto beans, black-eyed peas, sorghum seed, grain straw, alfalfa hay, noodles, cottonseed meal[3], [4].

Financial importance

In hot, dry environments, Trogodermagranarium is a major pest of items that are being kept. Larvae may reproduce so quickly that they may be discovered in great numbers in the surface layers of binned grain. It often triggers an immediate quarantine of questionable commodities and a costly eradication and control effort when it is found in a region that is not affected. The spread of this insect is most likely reliant on the transit of contaminated commodities or in containers where it may be transferred while in diapause as it has never been seen to fly.

Identification and Control

The larvae and cast skins are the most evident indicators of a khapra beetle infestation. The larvae, however, resemble several relatively minor Trogoderma species as well as other carpet beetle species quite closely. The best way to distinguish between larvae and adults is by using a microscope. Cargo ships, goods from khapra beetle-infested regions, and facilities storing such cargo are all inspected by USDA-APHIS. Examining fissures and cracks, looking behind panelling on walls, and looking below timbers, tanks, shelves, etc. are all examples of detection techniques. As they are most active soon before sunset, larvae are more likely to be observed then. Although though this beetle is more resistant to fumigants than the majority of pests that damage stored goods, certain fumigants provide control at large doses. To ensure that the fumigant gets into every crevice and crack, high fumigant concentrations must be maintained throughout the fumigation period. Both fumigants and surface sprays are employed in eradication programmes together with preventative measures including excellent hygiene habits and exclusion.

Wheat weevil (Trogodermagranarium) is a destructive pest of stored grains, particularly wheat, affecting the quality and

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quantity of grains. Wheat is a staple food crop that provides carbohydrates, protein, and other nutrients to millions of people globally. Wheat weevils can cause substantial economic losses in terms of decreased grain quality, reduced yield, and increased costs of grain storage, handling, and processing. In this discussion, we will explore the life cycle, damage caused, prevention, and control of wheat weevils.

Life cycle

The wheat weevil's life cycle is a four-stage process that includes egg, larva, pupa, and adult. The female weevil lays its eggs inside a grain kernel, usually near the germ, and seals the opening with a gelatinous substance. The eggs hatch into larvae, which then feed on the grain's endosperm, leaving a characteristic round hole in the grain. The larvae pass through three instars before pupating inside the grain kernel. The pupal stage lasts for approximately ten days, after which the adult emerges from the kernel by chewing a small hole in the endosperm. The entire life cycle takes between 30 to 90 days, depending on temperature and humidity conditions.

Damage caused

Wheat weevils can cause significant damage to stored grains, reducing grain quality and yield. The weevils feed on the endosperm of the grain, leaving behind a characteristic round hole. The feeding activity of the larvae can lead to significant weight loss and reduced grain quality. Infested grain can also become contaminated with weevil larvae, feces, and cast skins, making the grain unsuitable for consumption or processing. Moreover, the holes in the grain's surface can provide entry points for fungi and bacteria, further reducing grain quality and safety.

Prevention

Preventing infestations of wheat weevils requires proper storage and handling of grains. Grains should be stored in clean, dry, and cool conditions to prevent moisture buildup, which can encourage the growth of fungi and bacteria. Grains should be stored in airtight containers to prevent weevils from accessing them. The containers should be made of materials that are resistant to weevil penetration, such as plastic, metal, or glass. The storage area should be well-ventilated to maintain a stable temperature and humidity. The storage area should be cleaned regularly to remove any spilled or infested grain. Monitoring stored grain for signs of infestation is also crucial. The presence of live weevils, damaged kernels, and grain dust is an indication of infestation. Infested grains should be removed and treated or destroyed immediately to prevent the spread of infestation to other grains. Grains should be inspected regularly for signs of damage, especially during storage periods and before processing or consumption [5], [6].

Control

Chemical control methods are commonly used to control wheat weevils in stored grain. Fumigation with phosphine gas is the most commonly used chemical control method. Phosphine gas is a highly effective insecticide that penetrates the grain kernel and kills weevils at all stages of their life cycle. However, care must be taken to ensure that the treatment is safe for human health and the environment. Fumigation should be carried out by trained personnel who follow strict safety guidelines. Other chemical treatments, such as insecticides applied directly to the grain or stored air, can also be used to control weevils. However, these treatments are less effective than fumigation and may leave residues that can contaminate the grain. Biological control methods, such as the use of parasitic wasps or nematodes, are being developed but are not yet widely used for controlling wheat weevils[7], [8].

II. CONCLUSION

The life cycle of the wheat weevil includes four stages: egg, larva, pupa, and adult. The eggs are laid inside the grain kernel, and the larvae feed on the grain's endosperm, causing damage and reducing the grain's nutritional value. The pupal stage occurs inside the grain kernel, and the adult emerges from the kernel after development is complete. Preventing infestations of wheat weevils involves proper storage and handling of grains. This includes keeping grain storage areas clean and dry, using airtight containers, and monitoring grain for signs of infestation. Chemical treatments can also be used to control infestations, but care must be taken to ensure that the treatment is effective and does not pose a risk to human health or the environment. The wheat weevil is a significant pest of stored grains that can cause significant damage and reduce grain quality and yield. Proper storage and handling of grains and effective pest control measures are essential in preventing and managing infestations.In conclusion, wheat weevil is a significant pest of cereal grains, and its impact on crop production can be significant. Current management strategies focus on prevention, sanitation, and chemical control methods, with IPM strategies gaining popularity. Further research is needed to develop effective and sustainable control methods, such as the use of natural enemies and biocontrol agents, to reduce reliance on chemical control methods and promote long-term sustainabilit.

REFERENCES

[1] N. G. Kavallieratos, C. G. Athanassiou, R. N. C. Guedes, J. D. Drempela, and M. C. Boukouvala, “Invader competition with local competitors: Displacement or coexistence among the invasive khapra beetle, Trogoderma granarium everts (coleoptera: Dermestidae), and two other major stored-grain beetles?,” Front. Plant Sci., 2017, doi: 10.3389/fpls.2017.01837.

[2] W. Wakil, N. G. Kavallieratos, M. U. Ghazanfar, M. Usman, A. Habib, and H. A. F. El-Shafie, “Efficacy of different entomopathogenic fungal isolates against four

key stored-grain beetle species," J. Stored Prod. Res., 2021, doi: 10.1016/j.jspr.2021.101845.

[3] S. Singh and D. K. Sharma, "Deterioration of Grain Quality of Wheat by Rice Weevil, Sitophilus oryzae (L.) during Storage," Indian J. Agric. Res., 2021, doi: 10.18805/ijare.a-5695.

[4] T. N. Vassilakos, J. Riudavets, C. Castañé, R. D. Iturralde-Garcia, C. G. Athanassiou, and L. Neven, "Efficacy of Modified Atmospheres on Trogoderma granarium (Coleoptera: Dermestidae) and Sitophilus zeamais (Coleoptera: Curculionidae)," J. Econ. Entomol., 2019, doi: 10.1093/jee/toz139.

[5] S. Bala, "Ecofriendly management of khapra beetle, Trogoderma granarium and rice weevil, Sitophilus oryzae through plant products in the stored wheat," J. Entomol. Res., 2015, doi: 10.5958/0974-4576.2015.00029.8.

[6] S. Rajendran, V. L. Kumar, and V. Sriranjini, "Fumigation of grain stacks with sulfuryl fluoride," Int. Pest Control, 2008.

[7] A. Longoni and G. Michieli, "Initial and Residual Activity of Cidial (Phenthoate) Compared with that of Malathion and Lindane on Insects Affecting Stored Products1," J. Econ. Entomol., 1969, doi: 10.1093/jee/62.6.1258.

[8] S. Rajendran, "Detection of Insect Infestation in Stored Foods," Adv. Food Nutr. Res., 2005, doi: 10.1016/S1043-4526(05)49005-1.

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Leishmania and Giardia

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***Abstract*—Leishmania and Giardia are two important parasitic protozoa that cause significant human disease worldwide. Leishmania is the causative agent of leishmaniasis, a neglected tropical disease that affects millions of people in more than 90 countries. Giardia, on the other hand, is a waterborne parasite that causes giardiasis, a diarrheal disease that affects millions of people in both developing and developed countries.**

***Index Terms*— Giardia, Insect, Leismania, Parasite, Worm**

I. INTRODUCTION

This parasitic digenetic protozoan requires two hosts in order to complete its life cycle. The world's temperate regions are where it mostly occurs. Its main host is an animal or man, and its secondary host is a sand fly that feeds on blood. It resides inside the colon as well as visceral organs such the spleen, bone marrow, liver, and lymph nodes. The parasite's body has an exterior pellicle, which serves as protection. There is no undulating membrane.

It exhibits dimorphism, appearing in two forms throughout its life cycle, namely: Amastigote/Leishmanial form: This type inhabits the major host man's blood cells and is non-motile, smaller, spherical, and oval. Leptomonad/Promastigote form: This form has a flagellum and is motile, long, elongated, thin, and spindle-shaped. It uses longitudinal binary fission to replicate asexually. It hides within the host cells to evade the immune system's destruction and survive. It is found inside of the human body in the visceral reticuloendothelial system, where the amastigote form grows until the host cell is killed. It is the root of the illness black fever or kala azar[1]–[3].

Amastigotes and promastigotes are the two phases of development that form. The amastigotes are tiny, spherical, non-flagellated cells with a diameter of 2-4 m. The cells are among the tiniest nucleated cells known and have a little ring of vacuolated cytoplasm around the nucleus and kinetoplast. Promastigotes are elongated, thin cells with an emerging free flagellum and anterior kinetoplast. They often have a lance-like form and measure 5 to 14 metres in length by 1.5 to 3.5 metres in breadth. Typically, geographical, biological, and clinical characteristics are used to distinguish various parasite species rather than physical variations.

A parasite illness called leishmaniasis is prevalent in several tropical and subtropical regions as well as southern Europe. It falls under the category of a Neglected Tropical Disease. Leishmania parasites, which are transmitted by the bite of phlebotomine sand flies, are what cause leishmaniasis. Leishmaniasis may manifest itself in a number of different ways in humans. The two most prevalent types are visceral leishmaniasis, which affects multiple internal organs, and cutaneous leishmaniasis, which results in skin sores.

Life Cycle

As the parasite is digenetic, it requires two hosts for the completion of its life cycle, with man serving as the major host and the blood-sucking invertebrate sand fly serving as the secondary host.

When it infects a human, the leishmaniasis parasite first takes the form of a promastigote or leptomonad before changing into an amastigote or leishmanial after infection. They then live in the liver, spleen, bone marrow, and lymph nodes where their numbers rise from a few to several hundred inside the host cell before they burst, releasing parasites that infect new cells.

In an invertebrate or a vector, the parasite enters as an amastigote. It feeds on the blood of infected people. This form continues to grow and mature within the vector's midgut before migrating to the pharynx, where they multiply and become prepared to infect a new host when the vector finds one.

By biting an infected female phlebotominesandfly, leishmania is spread. The sandflies' proboscis meals are where the infectious stage is injected. Macrophages and other mononuclear phagocytic cells phagocytize prosmastigotes that make it to the puncture hole. Progmastigotes become the tissue stage of the parasite in these cells, where they undergo simple division to replicate before spreading to other mononuclear phagocytic cells. Whether the infection manifests as symptoms and whether visceral or cutaneous leishmaniasis develops depends on the parasite, the host, and other variables. Amastigotes cause sandflies to change into proingesting infected cells during blood feeding. Astigotes grow in the gastrointestinal tract and move to the proboscis[4]–[6].

Pathogenecity

Sandflies carry and spread the vector-borne illness known as leishmaniasis, which is brought on by obligate intracellular protozoa of the genus Leishmania. Among the 30 mammal-infecting species, roughly 21 are responsible for human infection. They include the subgenus Viannia, which

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has four main species (Braziliensis, L. guyanensis, L. panamensis, and L. peruviana), as well as the L. donovani complex, which has two species, the L. mexicana complex, which has three main species, and L. tropica. The various species cannot be distinguished morphologically; however, they may be distinguished using isoenzyme analysis, molecular techniques, or monoclonal antibodies.

As implied by its name, this parasite causes the illness known as black fever, also known as Kala-azar, in which the patient's skin becomes dark and rough and appears to be black. Intermittent fever, weakness, and diarrhoea are the first signs, followed by chills and sweating that may mirror malaria symptoms. Weight loss, anaemia, and emaciation occur as a result of the proliferation and invasion of microorganisms into the spleen and liver cells. A darkly pigmented, granulomatous skin lesion known as post-kala-azar dermal leishmaniasis develops as the illness progresses. The reticuloendothelial system's organs are the ones that are most seriously impacted. Anaemia, leukopenia, and thrombocytopenia are caused by decreased bone marrow function in conjunction with cellular diversion in the spleen. Secondary infections and a propensity to bleed result from this.

Leishmaniasis may manifest itself in a number of different ways in humans. Cutaneous leishmaniasis, which is the most prevalent kind, results in skin sores. After a few weeks or months following the sand fly bite, the sores generally appear. With time, the sores' dimensions and appearance might alter. Skin ulcers may develop from papules or nodules that first appeared as sores. Skin ulcers may be covered by a scab or crust. While they seldom hurt, the sores may be uncomfortable. In certain cases, the glands next to the lesions swell.

Visceral leishmaniasis: which may be fatal and affects multiple internal organs. Usually, the sickness appears months after the sand fly bite. The typical symptoms of those who are affected include fever, weight loss, spleen and liver enlargement, and low platelet, white blood cell, and red blood cell counts.One of the less prevalent types of leishmaniasis is mucosal leishmaniasis. This form may develop as a result of exposure to certain of the parasite species that, in particular regions of Latin America, cause cutaneous leishmaniasis. Some parasite species have the potential to spread from the skin and cause sores on the mucous membranes of the nose, mouth, or throat. Assuring that the primary cutaneous infection is adequately treated is the greatest strategy to avoid mucosal leishmaniasis.

Diagnosis

Leishmaniasis may be diagnosed using a variety of laboratory techniques, both to find the parasite and identify the species of Leishmania. Several of the techniques are only accessible in reference labs. Staff from the CDC in the US may help with leishmaniasis tests.Through a microscope, in special cultures, or in other techniques, tissue samples from places like skin lesions or bone marrow may be checked for the parasite. In instances with visceral leishmaniasis, blood tests that check for the parasite itself as well as those that seek for antibodies to the parasite may be beneficial.

Treatment

The first step is to confirm the diagnosis is accurate before thinking about therapy. Individual choices should be made about treatment. The CDC team is available for consultation by healthcare professionals who are evaluating different strategies. The kind of leishmaniasis, the Leishmania species that caused it, the possible severity of the disease, and the patient's underlying health are a few examples of variables to take into account[7]–[9].Even without therapy, cutaneous leishmaniasis skin lesions often heal on their own. Nevertheless, this might take weeks or even years, and the sores could even leave unsightly scars. Certain parasite species present in specific regions of Latin America also pose the risk of spreading from the skin and causing ulcers in the mucous membranes of the nose, mouth, or throat. It's possible that mucosal leishmaniasis goes unnoticed for years after the first lesions have healed. The best strategy to avoid mucosal leishmaniasis is to ensure that the cutaneous infection is properly treated.Severe instances of visceral leishmaniasis generally result in death if untreated.

Control & Prevention

There are no approved antibiotics or vaccinations to prevent infection. Avoiding sand fly bites is the most effective strategy for visitors to avoid illness. Use these precautions to lessen the chance of being bitten: Avoid being outside, particularly between dark and early when sand flies are often most active.

Reduce the quantity of exposed skin while outside. Wear long sleeves, long trousers, socks, and, to the degree that it is possible given the weather, tuck your shirt into your pants. Spray insect repellent over exposed skin, inside the cuffs of sleeves, and inside the legs of pants. Observe the directions on the repellent's label. In general, repellents that include the chemical DEET are the most effective.

Note: Hardware, camping, and military surplus shops sometimes have bed nets, pesticides, and repellents that may be bought before to departure. There are commercially available bed nets and clothing that has previously been treated with an insecticide that contains pyrethroids.

While inside, stay in locations with good screening or air conditioning.Remember that sand flies may squeeze through narrower openings since they are smaller than mosquitoes.Use an insecticide to spray living and sleeping places to get rid of bugs.Use a bed net and tuck it beneath your mattress if you are not sleeping in a location that is well-screened or air-conditioned. Use a bed net that has been treated with a pyrethroid-containing pesticide, if at all feasible. The same procedure may be used on garments, screens, curtains, and linens.

Giardia

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Protozoan flagellate Giardia intestinalis is one of them. Cercomonas intestinalis was the first name given to this protozoan by Lambl in 1859. In 1915, Stiles changed its name to Giardia lamblia in honour of Dr. F. Lambl of Prague and Professor A. Giard of Paris. Giardia intestinalis, however, is considered by many to be the proper name for this protozoan.The phrase "Grand Old Man of the Intestine" is often used to describe Giardia. It is mostly found in tropics and subtropics. It is a monogenetic parasitic flagellate protozoan called a diplomanad. It has a sophisticated vibe. It is discovered in the human digestive system as a parasite. It resembles Entamoeba's form. Four flagella are present on each side. It has two nuclei, is pear-shaped, and is bilaterally symmetrical. Ingestion of the infectious cyst is the method of transmission. It is polymorphic in nature. i.e., two separate forms. The trophozoite and cyst are the two phases of the life cycle. It divides by binary fission. Giadiasis is a result of it.

Life Cycle

Giardia infection is brought on by eating cysts. In the digestive system, during cyst excystation, each cyst produces two trophozoites. In the duodenum and jejunum, trophozoites are released as a result of gastric acid's stimulation of excystation. The rather pear-shaped, motile and pathogenic trophozoite attaches to the intestinal villi with the help of its ventral sucking discs and begins to feed on mucous secretions until it matures. They reproduce by longitudinal binary fission after maturation and change into cystic form. It is the infectious stage, which has an oval and spherical form and is expelled along with the faeces. Ready to infect a new host when consumed by them together with tainted food and drink.

Giardiasis is spread through cysts, which are resistant forms of the parasite. The faeces include both trophozoites and cysts. The cysts may live in cold water for many months. The fecal-oral pathway, contaminated food, water consumption, or cysts in the mouth may all cause infection. trophozoites are released by excystation in the small intestine. Trophozoites proliferate by longitudinal binary fission and persist in the proximal small intestinal lumen, where they may either be free or connected to the mucosa by a ventral sucking disc.The parasites start to reproduce as they go towards the colon. The stain most often discovered in nondiarrhealfaeces is the cyst. Person-to-person transmission is conceivable since the cysts are contagious when passed in the stool or immediately thereafter. While animals may get Giardia, their use as a reservoir is not obvious.

Identification & Diagnosis

Several stool samples improve test sensitivity due to Giardia cysts' inconsistent excretion. Giardia may be challenging to detect since the quantity of organisms in the faeces might vary, making the use of concentration techniques and trichrome staining insufficient. This calls for the adoption of faecal immunoassays that are more sensitive and precise.

There are also quick immune-chromatographic cartridge tests, but they shouldn't replace regular ova and parasite inspection. Giardia subtypes can only be identified by molecular testing.

Condition & Symptoms

The most common intestinal parasite illness seen in Americans and visitors with persistent diarrhoea is giardiasis. The symptoms and signs might change and linger for a week or more. Sometimes, those who are infected with Giardia don't exhibit any symptoms.Diarrhea, gas, oily faeces that tend to float, stomach or abdominal pains, an upset stomach or nausea/vomiting, and dehydration are some of the acute symptoms.Other, less frequent symptoms include hives, itchy skin, and swelling in the joints and eyes. Giardiasis symptoms might sometimes seem to disappear for a few days or weeks before returning. Giardiasis may result in weight loss and impaired lipid, lactose, vitamin A, and vitamin B12 absorption.Giardiasis may slow down development, stunt growth, and lead to malnutrition in children.

Pathogenecity

Giardia causes giardiasis, which results in dehydration and involves severe diarrhoea, excessive gas, stomach cramps, nausea, and blood and pus in the faeces. Moreover, it leads to malabsorption by flattening and atrophying the villi of the small intestine.Infectious Sources & Risk Factors Detailed Dermatology. The parasite Giardia intestinalis is the source of the diarrheal disease known as giardiasis.

Giardiasis is a widespread illness. In wealthy nations globally, it affects 6% to 8% of children and approximately 2% of adults. Giardiasis affects over 33% of persons in underdeveloped nations. The most prevalent intestinal parasite illness afflicting people in the US is Giardia infection.Giardia infections occur when people consume cysts that are present in tainted food or water. When cysts exit the host via faeces, they become immediately contagious. Over many months, an infected individual may pass 1–10 billion cysts every day in their faeces. Yet, ingesting as little as 10 cysts might make someone sick. Giardia may spread from one person to another or even from an animal to a human. Oral-anal contact during intercourse has furthermore been linked to illness. Giardiasis symptoms often appear 1 to 3 weeks after an individual contract the infection.

Infection rates with giardia have been shown to rise in the late summer. Between January and March and June to October, there were twice as many known cases of giardiasis in the United States between 2006 and 2008.Giardia infection may affect anybody. However, those who are most at risk include: travellers to nations where giardiasis is common, people working in childcare facilities, people who consume tainted drinking water, hikers or campers who consume untreated water from lakes or rivers, people who come into contact with sick animals, and men who engage in homosexual behaviour.

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Molecular Identification

Based on molecular research, Giardia intestinalis may be separated into several genetic assemblages. These assemblages may be further divided into subtypes, such as A-I, A-II, A-III, and A-IV. Each assemblage has the potential to infect certain species, however some assemblages are more prevalent than others.

II. DISCUSSION

Leishmaniasis is a vector-borne disease that is transmitted to humans through the bite of infected sand flies. The disease can manifest in several forms, ranging from cutaneous leishmaniasis, which causes skin lesions, to visceral leishmaniasis, which can be fatal if left untreated. There are currently no vaccines for leishmaniasis, and treatment options are limited and often toxic. Giardiasis, on the other hand, is primarily transmitted through contaminated water or food. The disease can cause diarrhea, abdominal cramps, and nausea, and can be particularly severe in immunocompromised individuals. While treatment options are available for giardiasis, drug resistance is a growing concern, and prevention measures such as safe drinking water and proper sanitation are essential for controlling the spread of the disease. Despite the significant health and economic burden associated with leishmaniasis and giardiasis, both diseases have received relatively little attention compared to other infectious diseases. This has led to a lack of investment in research and development of new drugs and vaccines, as well as inadequate access to existing treatments and prevention measures for those who need them the most[10], [11].

Addressing the challenges posed by Leishmania and Giardia will require a multi-pronged approach, including increased investment in research and development of new drugs and vaccines, improved surveillance and control measures, and increased access to existing treatments and prevention measures. In addition, addressing the underlying social and environmental determinants of these diseases, such as poverty, poor sanitation, and inadequate access to safe drinking water, will be essential for long-term success [12], [13].

III. CONCLUSION

Overall, addressing the challenges posed by Leishmania and Giardia is critical for promoting global health and wellbeing, and for achieving the Sustainable Development Goals of the United Nations.Leishmania and Giardia are two parasitic protozoa that cause significant human and animal health problems worldwide. In this review, we have discussed the biology, transmission, diagnosis, and treatment of these two parasitic infections. Leishmaniasis is a vector-borne disease caused by the protozoan parasite Leishmania. It is transmitted to humans and animals through the bite of infected sand flies. Giardiasis, on the other hand, is a waterborne disease caused by the protozoan parasite Giardia. It is transmitted through the ingestion of contaminated food or water.Both Leishmania and Giardia infections can cause a range of clinical manifestations, from asymptomatic infection to severe disease. Leishmaniasis can cause cutaneous, mucocutaneous, or visceral manifestations, while giardiasis can cause gastrointestinal symptoms such as diarrhea, abdominal pain, and nausea.

REFERENCES

[1] A. P. R. Gadelha et al., “Insights about the structure of farnesyl diphosphate synthase (FPPS) and the activity of bisphosphonates on the proliferation and ultrastructure of Leishmania and Giardia,” Parasites and Vectors, 2020, doi: 10.1186/s13071-020-04019-z.

[2] W. Gibson, “The sexual side of parasitic protists,” Mol. Biochem. Parasitol., 2021, doi: 10.1016/j.molbiopara.2021.111371.

[3] M. Bahmani, K. Saki, M. Rafieian-Kopaei, S. A. Karamati, Z. Eftekhari, and M. Jelodari, “The most common herbal medicines affecting Sarcomastigophora branches: A review study,” Asian Pac. J. Trop. Med., 2014, doi: 10.1016/S1995-7645(14)60198-X.

[4] [G. Vechi, A. Tenfen, E. S. Capusiri, A. Gimenez, and V. Cechinel-Filho, “Antiparasitic activity of two Brazilian plants: Eugenia mattosii and Marlierea eugeniopsoides,” Nat. Prod. Res., 2021, doi: 10.1080/14786419.2020.1739676.

[5] A. Guha-Niyogi, D. R. Sullivan, and S. J. Turco, “Glycoconjugate structures of parasitic protozoa,” Glycobiology. 2001. doi: 10.1093/glycob/11.4.45R.

[6] T. Azimi et al., “Serosurvey and molecular detection of the main zoonotic parasites carried by commensal Rattus norvegicus population in Tehran, Iran,” Trop. Med. Health, 2020, doi: 10.1186/s41182-020-00246-3.

[7] N. Singhal, M. Kumar, and J. S. Virdi, “MALDI-TOF MS in clinical parasitology: Applications, constraints and prospects,” Parasitology. 2016. doi: 10.1017/S0031182016001189.

[8] M. T. Gómez-Muñoz, “Editorial for the special issue ‘Parasitic diseases from wild animals with an emphasis on zoonotic infections,’” Microorganisms. 2021. doi: 10.3390/microorganisms9112267.

[9] M. A. Carey, G. L. Medlock, M. Stolarczyk, W. A. Petri, J. L. Guler, and J. A. Papin, “Comparative analyses of parasites with a comprehensive database of geno-scale metabolic models,” PLoS Comput. Biol., 2022, doi: 10.1371/journal.pcbi.1009870.

[10] W. M. Hikal et al., “Chemical Composition and Biological Significance of Thymol as Antiparasitic,” Open J. Ecol., 2021, doi: 10.4236/oje.2021.113018.

[11] R. C. A. Thompson, “Parasite zoonoses and wildlife: One health, spillover and human activity,” International Journal for Parasitology. 2013. doi: 10.1016/j.ijpara.2013.06.007.

[12] R. Hernandez-Rivas and A. Scherf, “Separation and Mapping of Chromosomes of Parasitic Protozoa,”

Mem. Inst. Oswaldo Cruz, 1997, doi: 10.1590/S0074-02761997000600017.
[13] I. Limachi et al., "Antiparasitic metabolites from hyptis brevipes, a tacana medicinal plant," Nat. Prod. Commun., 2019, doi: 10.1177/1934578X1901400115

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Integrated Pest Management

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***Abstract*—Integrated pest management, commonly referred to as integrated pest control, is a comprehensive strategy that combines methods for the effective control of pests. The idea of integrated pest management is not new, and it is commonly used on orchards and field crops all over the globe. Urban environments, residential gardens, landscapes, golf courses, and structural contexts provide unique obstacles for implementation. Urban IPM, or pest management strategies that minimise the use of pesticides in residential and commercial landscapes, golf courses, and other built environments, is a growing area with growing backing from academic and commercial research.**

***Index Terms*— Biological Control, Chemical, IPM, Pest, Plant, Pest control**

I. INTRODUCTION

After World War II, numerous kinds of pesticides were produced by chemical and research businesses. With varying degrees of effectiveness, plant preservation strategies have included legal, physical, mechanical, cultural, biological, chemical, etc. The physical measurements typically entail exposing items to cold storage and dry or steam heat. Grain radiation and the application of electric shocks are still at the pilot stage. For some circumstances, local mechanics are employed. A lot of people use cultural practises including crop rotation, destroying infected plants, and clean agriculture. For certain insect pests, biological control methods have been effective, but chemosterilization has not yet had a significant influence on plant protection[1]–[3].

IPM is based on implementing preventative measures, checking the crop or site to see how much pest activity is there, estimating the potential for pest damage, and applying the proper countermeasures. Cultural practises, biological control agents, insecticides, pest-resistant plants, mechanical techniques, and physical barriers are just a few of the many possible strategies. These strategies may be used in IPM to create a strategy that is most appropriate for the given circumstance. It is a thorough strategy that focuses on eradicating causes rather than only treating symptoms.

Practically all farmers utilise IPM in some capacity using standard crop production methods. A strategic, well-balanced approach to pest control is known as integrated pest management. It entails taking precautions to anticipate insect outbreaks and minimise possible harm. IPM makes use of a variety of pest management techniques. With the least amount of environmental risk possible, this technique seeks to prevent pests from growing to economically or aesthetically detrimental levels.

IPM initiatives are very site-specific. IPM is based on pest identification, precise pest population measurement, damage assessment, and knowledge of available pest management techniques or tactics that allow the professional to make informed control choices. IPM provides the opportunity to enhance pest management programme efficacy while minimising certain adverse consequences. Numerous effective IPM systems have decreased the usage of pesticides and improved environmental protection.

In the production of food and fibre, forestry, grass and landscape care, and public health, pesticide usage has been and will continue to be substantial. Pest control now employs an integrated strategy focused on pest assessment, decision-making, and evaluation rather than largely depending on chemicals.

IPM Definition

Around 60 definitions of IPM have been published since the 1930s. Here is a brief explanation that will be put to use. The goal of integrated pest management is to prevent unacceptable levels of pest damage using the least expensive methods while posing the fewest risks to people, property, and the environment. It involves the coordinated use of pest and environmental information as well as available pest control methods, including cultural, biological, genetic, and chemical methods.

To handle a pest issue, all practical forms of control measures must be taken into account and coordinated as necessary.

Unwanted creatures known as pests may harm people, domestic animals, plants, and property in addition to being a nuisance to humans and other animals. Pests affect a variety of plants, including lawns, trees, golf courses, and agricultural crops, fruits, and vegetables.

The process of making choices in a methodical approach to prevent pest populations from rising to unbearable levels is known as management. Modest pest populations may often be tolerated; complete eradication is frequently not required nor practical.

The IPM Foundations

Three actions may be used to gather together all of the elements of an IPM strategy. Monitoring is step one, analysing the pest situation is step two, and taking action is step three. Monitering: monitoring ongoing operations to make sure they are on track, fulfilling the performance goal,

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and on time. Evaluating the situation of the pest It is a framework of large-scale environmental concerns utilised in the strategic management process known as environmental scanning. Doing something: It is crucial to do research on biological control methods as well as attractants, repellents, pheromones, chemosterilants, hormones, insect pathology, insect nutrition, and host resistance. A well-balanced training programme with high competence, devotion, and cooperation among the field's entomologists is crucial for success in integrated pest control[4]–[6].

IPM Practice

Because insecticides are so effective at managing pests, you may be asking why you need even think about IPM. These are some explanations for why pest control should include more than merely using insecticides.

To stop or impede the accumulation of pests, several IPM techniques are performed before a pest issue arises.

Maintain a Healthy Ecosystem. Every ecosystem, which is made up of living creatures and their non-living surroundings, maintains a delicate balance; typically, the acts of one organism within an ecosystem have an impact on other, diverse species. Several things we do in an environment have the potential to upset this harmony, eradicating certain species and enabling others to take control. Pesticides may kill beneficial insects like ladybird beetles and lacewing larvae, both of which devour pests, leaving fewer natural pest management methods available.

Dependence on pesticides may provide issues. When employed as a sole means of control, pesticides are not always successful. Pesticide resistance may develop in pests. In reality, up until this point, there have been around 600 recorded instances of pests becoming resistant to pesticides. These instances include populations of common lamb-quarters, house flies, Colorado potato beetles, Indian meal moths, Norwegian rats, and greenhouse whiteflies.

IPM Is Simple and Easy. If you have identified the issue, estimated the size of the pest population, and chosen the appropriate course of action, you will have completed a large portion of the "work" required for an IPM method.

Increase the impact of control strategies. In accordance with conventional plans, pest control professionals sometimes arrange the application of pesticide treatments according to the days of the week, independent of the target pest's stage of growth or the quantity of pests present. The application of pesticides at the appropriate time and solely to decrease pest damage to acceptable levels will be ensured by using an IPM strategy. This will save expenditures associated with pointless pesticide applications and guarantee that control measures are used when they will be most beneficial.

Encourage a Clean Environment. The concept of IPM encourages comprehensive evaluation of all available pest management strategies with environmental preservation as a primary objective.

Natural foes are preserved. Certain pest populations are naturally controlled by parasites and predators. With an IPM software, these natural controls are taken into account and safeguarded.

Keep up a positive public image. IPM's fundamental objective is to use a considerate approach to pest management that safeguards the environment, offers a plentiful, reasonably priced crop, and promotes secure living circumstances.

IPM programmers implemented

IPM is a set of assessments, choices, and controls for pest management rather than a single approach of pest control. Growers that use IPM and are mindful of the risk of insect infestation use a four-tiered strategy. These are the four steps:

Set Activity Limits

IPM first establishes an action threshold, or a point at which insect populations or environmental factors indicate that pest management action is required, before conducting any pest control action. Not every time a pest is seen does control need to be applied. Future pest treatment choices must be based on the point at which a pest becomes a financial risk.

Track and identify pests

Not all weeds, insects, and other living things need to be controlled. Many species are benign, and some even serve us well. In order to effectively reduce pests in combination with action thresholds, IPM systems monitor for pests and precisely identify them. The potential of using pesticides when they are not really necessary or the incorrect type is eliminated by this monitoring and identification.

Prevention

IPM programmes seek to manage the crop, lawn, or indoor area as a first line of defence against pests in order to stop them from becoming a problem. This may include using cultural techniques in an agricultural crop, such as crop rotation, the choice of pest-resistant cultivars, and the planting of pest-free rootstock. There is minimal to no danger to humans or the environment when using these management approaches, which may also be quite effective and economical.

Control

IPM systems then assess the appropriate control strategy for efficacy and risk after monitoring, identification, and action thresholds show that pest management is necessary and preventative strategies are no longer useful or accessible. Effective, less dangerous pest control methods are selected initially, such as mechanical control methods like traps or weeding or highly targeted chemicals like pheromones to prevent insect breeding. Further pest management techniques, such as targeted pesticide spraying, would be used if further monitoring, identifications, and action thresholds show that less hazardous measures are ineffective. Spraying general insecticides widely is a last resort.

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The majority of pests have natural enemies that may sometimes successfully manage or inhibit them. Pathogens and insects that are natural enemies are effectively utilised as biological control agents to manage pests that aren't endemic to a particular region. Since they lack natural adversaries to aid in their management, introduced pests often pose issues in their new environments. To prevent these species from also turning into pests, laws have been passed that rigorously regulate the entrance of all organisms, including biological control agents, into the United States. In order to manage certain pests, biological control also entails the widespread introduction of a large number of natural enemies into fields, orchards, greenhouses, or other sites. These natural enemies must be introduced on a regular basis since this strategy often does not have long-term benefits. Many natural enemies are commercially raised or grown. Spider mites that feed on plants are controlled by predatory mites. Many insect pests are managed by parasitic wasps and lacewings. For certain weeds and insects, nematodes and fungus are being investigated as potential biological control agents. Selling general predators with promises of biological control includes lady bugs and praying mantids. Yet in many instances, their efficacy has not been shown[7]–[9].

The employment of a live creature to manage another living organism is known as biological pest management. It's common to undervalue the value of biological control agents in the management of insect and disease pests. The biological causes of pests in landscapes include.

Lacewings, predatory mites, tiny pirate bugs, lady bird beetles, and spiders are common arthropod predators of insects. It is crucial to correctly identify all the life phases of predator arthropods since either the adult or juvenile stage may feed on insect pests. Pest populations are impacted differently by different predatory arthropods. The use of natural enemies should be part of vertebrate pest control. Examples include rodent-eating predators like hawks, owls, and coyotes. All ecosystems, including landscapes, aquatic environments, cropland, and their surroundings, have natural enemies.

Insect parasites: An insect host is where an insect parasite's life cycle begins or ends. The host generally dies when the parasite feeds on bodily fluids or organs. Wasps, flies, and nematodes are examples of frequent parasites. The majority of parasites have particular host preferences.

Plant Feeders:

Plant leaves, stems, seeds, flowers, and fruits are consumed by insects, grazing animals, and certain fish, including grass carp. Although grazing animals and fish consume a wider variety of plants, insects sometimes have a unique preference for a single kind of weed. Weed eaters seldom get rid of an infestation. They are helpful in suppressing weed growth, however.

Pathogens, including as viruses, bacteria, and fungi, may infect weeds, arthropods, and pest vertebrates. A disease outbreak may develop when the environment is favourable for the pathogen, which might greatly reduce the number of pests. Disease outbreaks in all animals, including humans, are subject to the same general concept. The majority of diseases are unique to certain species of plants or animals. The pathogen Bacillus thuringiensis, or "Bt," is often discovered in soil. Insects in their larval stage may be effectively controlled by the bacterial Bt. Insects including mosquitoes, black flies, and other pests are managed using it economically. Humans and other non-target creatures are seen as being safe around it. Biological control may be carried out in one of the following methods, or a combination of them all:

Conservation is the practise of using, safeguarding, and promoting natural enemy populations. Avoiding the use of pesticides while beneficial insect populations are high and providing roosting or nesting locations for raptors are two examples of conservation.

The most economical method of biological control is conservation.

Augmentation: This happens when extra people are introduced to a biocontrol population that already exists at a place. To boost current populations to a level where they are effective against the pest, for example, several species of predator and weed-feeding insects may be gathered in the wild or produced commercially.

Importation: With this technique, a population of advantageous organisms that is not already existing at a place is brought there. This is often done to control pest species that are not native to the area, such as the noxious plants saltcedar and leafy spurge or insect pests like the Russian wheat aphid.

The Nevada Department of Agriculture is employing biological controls to manage a variety of pests in Nevada in collaboration with the USDA's Animal Plant Health Inspection Service and Plant Protection and Quarantine.

A recent insect introduction known as the Russian wheat aphid is a significant pest of wheat, barley, and other minor grains. In an effort to manage this destructive aphid, parasitic wasps, syrphid flies, and several kinds of lady bird beetles have been dispersed experimentally. The noxious weed leafy spurge has been subject to controlled infestations of beneficial insects. Nevada has seen the discharge of three flea beetle species, as well as a type of midge, in an effort to bring the population of this plant under control.

Chemical insect pest control

Pesticides, which may be produced synthetically or organically, are used as chemical controls. Pesticides generally play a vital part in pest management programmes and often may be the only control technique available. Key advantages of using pesticides include their efficiency, the speed and simplicity with which pests may be controlled, and, often, their affordability when compared to alternative control methods. After the application of a pesticide, often pest damage ceases or pests are eliminated within a few hours to a few days. A fungicide may provide rapid and transient protection against bacteria.

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Any substance that is applied to plants, the soil, water, harvested crops, structures, clothing, furniture, or animals with the intention of killing, attracting, repelling, controlling, or interfering with the growth and reproduction of pests, or controlling plant growth, is referred to as a pesticide. Pesticides are a diverse group of substances with unique names and purposes. They are often categorised according on the kind of pests they manage.

A number of classes or families make up each category of pesticides. For instance, the groups of insecticides include, among others, the microbials, carbamates, pyrethroids, botanicals, insecticidal soaps, and organophosphates, organochlorines, and carbamates. The pesticides in a certain class have comparable chemical compositions, characteristics, or modes of action. A pesticide functions according to its method of action. In other words, it refers to the particular pest system that the pesticide affects. Several chemical classes function differently and provide distinct hazards and issues.

Moreover, selectivity varies across pesticides. For instance, nonselective fumigants may kill a number of pests, including nematodes, weeds, insects, and fungus. With a sufficient dosage, certain non-selective herbicides may kill any plant. Selective pesticides, on the other hand, only manage certain pest species or phases of pest growth. For instance, some ovicides selectively destroy the eggs of certain insects, mites, and associated pests, whereas other herbicides attack broadleaf weeds without hurting grasses.

As they come into touch with a host, pesticides may migrate in a number of different ways. Via the leaves or roots, systemic insecticides are absorbed and subsequently distributed throughout the treated plant. To manage certain pests, systemic pesticides may also be injected into or consumed by cattle. Contrarily, plants and animals treated with contact insecticides do not absorb them. For these insecticides to work, they must come into close contact with the pest or a place the bug frequents.

Using pesticides correctly and in line with their labels. Examples of pesticide applications include placing baits in a crack to control cockroaches or dust pesticides to control ants in a wall void.Pesticides used to control pests are examples of chemical controls. To avoid serious harm to landscape plants, pesticides should be used as a last resort. They are also a viable and perhaps required option for treating agricultural products or safeguarding public health.

Although pesticides are useful tools, they should only be used as part of a management strategy when absolutely essential. Prior to using pesticides, it is advisable to assess the management procedures and cultural practises for a particular landscape, field, or property since the emergence of a pest issue often indicates subpar management practises.

Pesticides are often used as prophylactic measures in metropolitan environments to guarantee "ideal" landscapes. The use of pesticides for this reason is based on perceived pest risks, yet often neither a real pest nor observable harm has been found. This approach of applying pesticides is not only wasteful and costly, but it also may have a big impact on the ecosystem. For instance, excessive use of weed-and-feed treatments on lawns may seriously harm nearby ornamental plants, especially trees positioned inside or close to grass. Prior to using pesticides for structural and institutional pest management, it is important to consider how they could be exposed by building occupants and how that can affect their health. Pesticides tend to degrade more slowly within buildings than they do outside, therefore residual effects must be taken into account. As a result, there are less and fewer insecticides suitable for these purposes. These goods are closely controlled.

II. DISCUSSION

Pesticides are used to eliminate insects that pose a threat to plants. Pesticides eliminate certain plant pests like slugs, beetles, and flying insects. Most pesticides include compounds that are capable of killing beneficial soil-dwelling creatures in addition to plant pests. Some of these substances may linger in the soil for many years, preventing vital microbes from working the soil.

The following chemical pesticides are often used in gardens and by large-scale agricultural producers: Basic Copper Sulfate, Silica Gel, Sodium Fluoride, Hydrogen Cyanide, Carbon Disulfide, Methylchloroform, Fenthion, and Boric Acid are just a few examples.In the past, literally hundreds of different pesticides have been produced and sprayed on soil. We are only now starting to comprehend the effects of applying these harmful chemicals to the land. Plants will no longer grow or will develop slowly in areas where pesticides are utilised regularly.Categories of pesticides Chemical families may be used to classify a wide variety of pesticides. Organophosphates, carbamates, and organochlorines are three prominent pesticide families.

IPM, or integrated pest management, is a strategy of pest control that combines biological, mechanical, cultural, physical, and chemical control measures while minimising threats to the economy, human health, and the environment. Regular and thorough inspections are used to keep an eye on pests. Pests and environmental factors that contribute to pest issues are found during inspections. The technician then determines what steps are required based on the examination. Knowing the biology and habits of the pests can aid in deciding what strategies or procedures would work best to manage the pests with the least amount of exposure[10], [11].

IPM is defined as "the careful consideration of all available pest control techniques and subsequent integration of appropriate measures that discourage the development of pest populations and keep the use of pesticides and other interventions to levels that are economically justified and reduce or minimise risks to human health and the environment.

An example of integrated pest management is:

Integrated: An emphasis on how different management strategies interact with pests, crops, the environment, and other factors. This method takes into account all available options and how well they mesh with other farming techniques.

An organism that threatens our convenience, health, or profit is a pest. A species is not regarded as a pest if it does not exist in sufficient numbers to significantly impact these parameters.

Management: A strategy for preventing pest populations from rising to the point where they may harm businesses. Pest management does not include pest eradication. It entails identifying strategies that are practical, affordable, and minimise environmental harm.

Integrated pest management is essential

The integrated approach to pest management is necessary for a safe and effective operation against the pest population for the following reasons:

Side effect: The indiscriminate use of any control method may have negative environmental side effects.

Environmental contamination: Constant usage of any biological agent may result in unintended environmental modification.

Pest resurgence: Constant use of pesticides disturbs the ecosystem and may allow target species to rebound from the effects of the pesticides.Pests may become tolerant to the application of pesticides, leading to pesticide resistance.

Secondary pest outbreak: Other non-target insects may become pests as a result of the use of pesticide.Pesticide residue might pose a risk to people or their pets.

Non-target species: Consistent pesticide usage may harm beneficial species like pollinators and animals[12], [13].

III. CONCLUSION

Prior to considering chemical solutions for pest control, integrated pest management stresses nonchemical pest avoidance, concentrating on facility upkeep and cleanliness. IPM is a multidisciplinary endeavour that draws on knowledge from several sections of crop science as well as from fields including agronomy, entomology, plant pathology, agricultural engineering, and climatology. The development of IPM and how we discovered efficient methods to control pests are both framed by the history of pest management. The phrase "Integrated Pest Management" was first used in 1967. The phrase quickly spread to mean making wise management choices based on a detailed knowledge of the variables affecting the pest or pests in question.Using coordinated pest and environmental data, integrated pest management develops and puts into practise pest control strategies that are ethical from an economic, environmental, and social standpoint. IPM emphasises integrating different control tactics to create long-term pest management solutions and favours prevention over remedy. Information collecting, data interpretation, flexible management planning, prompt decision-making, and appropriate action are all components of IPM. Accurate pest identification, learning about the weak point in a pest's life cycle or biology, scouting and monitoring crops in fields and greenhouses, using action thresholds to reduce spraying, and keeping records of findings to assess the efficacy of management decisions are some techniques for gathering information and making decisions.

REFERENCES

[1] K. Karlsson Green, J. A. Stenberg, and Å. Lankinen, “Making sense of Integrated Pest Management (IPM) in the light of evolution,” Evol. Appl., 2020, doi: 10.1111/eva.13067.

[2] A. F. Bueno, A. R. Panizzi, T. E. Hunt, P. M. Dourado, R. M. Pitta, and J. Gonçalves, “Challenges for Adoption of Integrated Pest Management (IPM): the Soybean Example,” Neotropical Entomology. 2021. doi: 10.1007/s13744-020-00792-9.

[3] S. Gautam, P. Schreinemachers, M. N. Uddin, and R. Srinivasan, “Impact of training vegetable farmers in Bangladesh in integrated pest management (IPM),” Crop Prot., 2017, doi: 10.1016/j.cropro.2017.08.022.

[4] R. Dufour, “Biointensive Integrated Pest Management (IPM) ~ PDF,” Appropr. Technol. Transf. Rural Areas, 2001.

[5] T. R. Grasswitz, “Integrated pest management (IPM) for small-scale farms in developed economies: Challenges and opportunities,” Insects. 2019. doi: 10.3390/insects10060179.

[6] B. W. Muriithi et al., “Impact assessment of Integrated Pest Management (IPM) strategy for suppression of mango-infesting fruit flies in Kenya,” Crop Prot., 2016, doi: 10.1016/j.cropro.2015.11.014.

[7] R. Lee, R. den Uyl, and H. Runhaar, “Assessment of policy instruments for pesticide use reduction in Europe; Learning from a systematic literature review,” Crop Protection. 2019. doi: 10.1016/j.cropro.2019.104929.

[8] Y. Y. Chang, J. Tan, and J. L. Tan, “Knowledge and Attitude of Malaysian Fruit Growers on Integrated Pest Management (IPM),” ASM Sci. J., 2021, doi: 10.32802/asmscj.2021.804.

[9] A. Afandhi, “Rice Farming with Application of Integrated Pest Management (IPM): Analysis of Social and Economic Sustainability (Case Study in Besur Village, Lamongan District),” HABITAT, 2020, doi: 10.21776/ub.habitat.2020.031.2.13.

[10] M. S. Allahyari, C. A. Damalas, and M. Ebadattalab, “Farmers’ technical knowledge about integrated pest management (IPM) in olive production,” Agric., 2017, doi: 10.3390/agriculture7120101.

[11] A. Piwowar, “The use of pesticides in Polish agriculture after integrated pest management (IPM) implementation,” Environ. Sci. Pollut. Res., 2021, doi: 10.1007/s11356-020-12283-w.

[12] A. Dhakal and S. Poudel, "Integrated Pest Management (Ipm) And Its Application In Rice – A Review," Rev. Food Agric., 2020, doi: 10.26480/rfna.02.2020.54.58.
[13] G. Matthews, "Integrated Pest Management (IPM)," Int. Pest Control, 2018, doi: 10.1079/9781845936365.0275.

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Overview on E-Histolytica and Trypanosoma

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Abstract*—Entamoeba histolytica and Trypanosoma are two different types of parasitic protozoa that can cause serious illnesses in humans. Entamoeba histolytica is a protozoan parasite that causes amoebiasis, a disease that affects the intestines and sometimes the liver. The parasite is transmitted through contaminated food or water, and symptoms can range from mild diarrhea to severe dysentery and liver abscesses. Treatment typically involves antibiotics and supportive care. Trypanosoma is a genus of parasitic protozoa that includes several species that can cause different diseases in humans. One of the most well-known is Trypanosoma brucei, which causes African sleeping sickness. The parasite is transmitted by the tsetse fly, and symptoms can include fever, headaches, and fatigue, followed by neurological problems and sleep disturbances. Treatment typically involves medications that target the parasite, but the disease can be difficult to cure if it has progressed to later stages. Both E. histolytica and Trypanosoma are important pathogens that can cause significant morbidity and mortality in humans. Preventative measures such as improved sanitation and vector control are important in controlling the spread of these parasites, while early detection and appropriate treatment can help improve outcomes for those affected.

***Index Terms*— Diarrhea, Disease, Entamoeba, Trypanosoma, Parasite**

I. INTRODUCTION

Amoebiasis is a disease brought on by the protozoan parasite Entamoeba histolytica. It often affects the large intestine and, as its name implies (histo = tissue, lytic = destroying), produces interior inflammation. 50 million individuals throughout the globe are afflicted, mostly in tropical nations with subpar sanitation. The majority of infected patients in industrialised nations are immigrants, institutionalised individuals, and those who have recently been to underdeveloped nations [1]–[3].

Basic Characters of Entamoeba

1. It is more prevalent in rural and heavily populated urban regions, as well as the tropics and subtropics.
2. It is a monogenetic parasite that mostly affects children and adolescents.
3. The top portion of the large intestine is often home to this tiny endoparasite of men.
4. It may be found in the trophozite/magna form, the precystic/minuta form, and the cystic form.
5. It feeds by phagocytosis and is holozoic in nature.
6. This parasite's adaptation to survive under hard environments is encystation, or the creation of a cyst wall amid unfavourable environmental conditions.
7. Binary fission is used for its asexual reproduction.
8. The parasite's infectious stage is called the metacyst.
9. It results in the illness Amoebic dysentery.

Entamoeba histolytica thrives and replicates as a trophozoite within people. Trophozoites are oblong and range in size from 15 to 20 m. They enter the body and escape to infect other people. Entamoeba histolytica's life cycle doesn't need an intermediary host. A patient with the infection excretes mature cysts in their faeces, which are round and 12 to 15 m in diameter. By swallowing them in fecally contaminated water, food, or hands, another person might get sick. If the cysts make it through the stomach's acid, they will revert to trophozoites in the small intestine. Trophozoites are migratory and settle in the large intestine, where they dwell and divide by binary fission. In the faeces, trophozoites and cysts may both sometimes be seen. Trophozoites are often discovered in loose faeces, while cysts are typically seen in hard stool. Only cysts may remain outside of the host for extended times (up to several weeks) and spread infection to other people. When trophozoites are consumed, the stomach's gastric acid destroys them. Trophozoites may sometimes be passed along during sexual activity.

It is a parasite with a single gene. Its life cycle is completed inside of man, its main host. Entamoeba histolytica thrives and replicates as a trophozoite within people. Oblong Trophozoitesand 15 to 20 metres long. Trophozoites, which grow quickly by feeding on bacteria and host tissue, replicate asexually through binary fission within the large intestine wall. They enter the body and escape to infect other people. A patient with the infection excretes mature cysts in their faeces, which are round and 12 to 15 m in diameter. The parasite is spread by the consumption of tetra nucleate cyst-containing contaminated food and water. The cystic or minuta form is expelled along with faeces, which when consumed and passed through the alimentary canal and into the small intestine, infect a new host. Excystation, which releases a tetra nucleate amoeba known as the excystic amoeba or metacyst, occurs after 5–6 hours. They metacyst begin to divide right away, producing 8 tiny uninucleateamoebulae or metacystictrophozoites that infiltrate the lining of the intestine and develop into mature trophozoites. In the faeces, trophozoites and cysts may both sometimes be seen. Trophozoites are often discovered in loose faeces, while cysts are typically seen in hard stool. Only cysts may remain outside of the host for extended times (up to several weeks) and spread infection to other people. When trophozoites are consumed, the stomach's gastric acid

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destroys them. Trophozoites may sometimes be passed along during sexual activity[4]–[7].

Pathogenecity

Several Entamoeba protozoan species invade people, however not all of them are afflicted with sickness. The pathogenic ameba Entamoeba histolytica is widely known for causing extraintestinal and intestinal infections. The other species are significant because, during diagnostic procedures, they might be mistaken for E. histolytica.

Amoebiasis or amoebic dysentery is brought on by Entamoeba hystolytica. It results in flask-shaped ulcers that include lymphocytes, blood corpuscles, cellular debris, and bacteria and cause cavities to develop that are filled with pus. With the stool, the ulcer's blood and contents are expelled. Stool from an infected individual is often acidic and comprises of entamoeba swarms that spread the new infection. Trophozoites may sometimes enter the brain, liver, spleen, lungs, and gonads via blood circulation and cause tissue damage there.

These more serious infections' signs and symptoms include:

Anemia

genital and skin sores; exhaustion; fever; gas; appendicitis (inflammation of the appendix); bloody diarrhoea; intermittent constipation; liver abscesses; (can lead to death, if not treated)

Malnutrition, painful stool passage, peritonitis (inflammation of the peritoneum, the thin membrane lining the abdominal wall), pleuropulmonary abscesses, stomach aches, stomach cramps, toxic megacolon (dilated colon), and weight loss are some of the conditions that might affect an individual.

Prevention

One should maintain good personal hygiene in order to stop the virus from spreading to other people. Before eating or preparing food, always wash your hands with soap and water after using the restroom. Amoebiasis is widespread in underdeveloped nations. While visiting places with inadequate sanitation, you should wash your hands often.

Steer clears of uncooked foods.

Steer clear of fruits and vegetables that you didn't wash and peel yourself.

Steer clear of non-pasteurized milk and other dairy products.

Stick to carbonated (bubbly) beverages in cans or bottles, bottled water, or water that has been cooked.

By passing natural water through an "absolute 1 micron or less" filter and putting iodine pills in the filtered water, natural water may be rendered safe. Outdoor/camping supplies businesses have "Absolute 1 micron" filters.

Diagnosis

Your doctor will diagnose amoebiasis by looking for cysts and (occasionally) trophozoites in a stool sample under a microscope. If Entamoeba histolytica is absent from three separate stool samples, the findings are often regarded as negative. Due to the difficulty in locating the tiny parasite and the possibility that it may not be present in the specific samples, this does not necessarily imply that you are not affected. A blood test may also be offered, but it is only advised if your doctor thinks the illness may have spread to other body regions. From biopsy samples obtained after a colonoscopy or surgery, trophozoites may be recognised under a microscope.

It is important to distinguish Entamoeba histolytica from the harmless Entamoeba dispar. Since the two are morphologically similar, differentiation must be done via molecular, immunologic, or isoenzymatic approaches. When red blood cells are consumed by Entamoeba histolytica, they may be identified under a microscope. There are around ten times as many Entamoeba dispar. You are typically treated if any of these is discovered.

Treatment

Two antibiotics are used to treat amoebiasis symptoms in patients. The ideal medications are paromomycin, diloxanidefuroate, or iodoquinol soon after metronidazole or tinidazole. Treatment options for diloxanidefuroate, iodoquinol, or paromomycin for asymptomatic intestinal amoebiasis.

Trypanosoma

1. It is mostly found in Central and West Africa, as well as Southeast Asia.
2. Trypanosomes often inhabit areas that are damp.
3. The monophyletic group of unicellular parasitic flagellate protozoa known as Trypanosoma is distinguished by the presence of a flagellum towards the posterior end of the body.
4. Trypanosomes produce a variety of illnesses and infect a wide range of animals.
5. Trypanosomes exhibit polymorphism based on the location of the kinetoplast and blepharoplast and the flagellum's path.
6. Trypanosomes need more than one required host to complete their life cycle since they are heteroxenous.
7. A vector transmits them the majority of the time.
8. Trypanosomes are mostly found in blood-feeding invertebrates.
9. In the gut of an invertebrate host, as opposed to the blood stream of a mammalian host, they are often discovered.
10. It is tiny, elongated, and tapered at both ends like a leaf.
11. The free flagellum is located at the anterior end, whereas the blunt posterior end.
12. A thin, elastic layer known as the pellicle surrounds the whole body on the outside.
13. One adaptation for movement within the host body is an undulating membrane. It is a fold of membrane that is joined to the pellicle that comes from the flagellum.

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14. The pellicle encloses the cytoplasm.
15. Large, oval, and vesicular nucleus that reproduces asexually by longitudinal binary fission.
16. The long and thin trypanosomes adapt to the host body's antibodies and continue to live and grow.

Trypanosoma brucei, a form of tiny parasite, is what causes trypanosomiasis, sometimes referred to as "sleeping sickness." It is spread by the Glossina species of tsetse fly, which is exclusively found in rural Africa. While the virus is not present in the United States, it has traditionally been a significant public health issue in various sub-Saharan African countries. The World Health Organization now receives reports of 10,000 new cases annually, but it's thought that many more instances go unreported and untreated. If not treated, sleeping sickness is deadly but is treatable with medicine.

Life-Cycle

Trypanosoma shows polymorphism, which means that it may take one of four morphological forms. Round or oval leishmanial (amastigote) shape having a nucleus, blepharoplast, and kinetoplast. Reduced and embedded in the cytoplasm like fibrils, the flagellum.

Body elongated, big nucleus, anteriorly positioned blepharoplast, and kinetoplast are characteristics of the leptomonad (Promastigote) type. Unattached, short flagellum.

Body is elongated, blepharoplasts and kinetoplasts are situated directly anterior to the nucleus in the crithidial (epimastigote) form. Unnoticeable membrane undulation. Only the tse-tse fly's salivary glands exhibit the crithidial form.

Elongate body with blepharoplast and kinetoplast located close to the posterior end. Trypanosomid (Trypomastigote) type. Uneven membrane is noticeable.

Trypanosoma is digenetic, meaning it goes through two hosts to complete its life cycle. Man is the main host, while the tsetse fly, a bloodsucking bug, is the secondary host (Glossina palpalis). Trypanosome infection in humans is spread by the salivary glands of tsetse flies, which also carry infective metacyclic forms. As a tsetse fly feeds on mammalian blood, tainted trypanosomes are released into the fly's bloodstream. Every stage of the human trypanosome is extracellular, or present in the blood plasma. The blood and small stumpy forms that the vector takes in both continue to grow inside of it into long, thin forms and proliferate asexually. After changing within the vector, they migrate towards its mouth area and change into crithidial forms with a shorter body and smaller flagellum. The infective stage of the crithidial form.

Once within the lymphatic system, the parasites go on to the circulation. While within the host, they change into bloodstream trypomastigotes, travel to various locations across the body, enter other blood fluids (such as lymph or spinal fluid), and continue binary fission-based reproduction. Extracellular stages of African Trypanosomes comprise the full life cycle. As the tsetse fly feeds on the blood of an infected mammalian host, it contracts bloodstream trypomastigotes and becomes infected.

The parasites change into procyclictrypomastigotes in the fly's midgut, proliferate through binary fission, exit the midgut, and change into epimastigotes. The epimastigotes go to the salivary glands of the fly and continue binary fission multiplication there. The fly's cycle lasts around three weeks. Trypanosoma bruceigambiense is mostly found in humans, yet it may also be found in animals. The primary reservoir of T. b. rhodesiense is wild game animals.

Pathogenecity

T. b. gambiense produces West African sleeping sickness, while T. b. rhodesiense causes East African sleeping sickness. These two morphologically identical subspecies have different disease patterns in humans. (T. b. brucei, a third component of the complex, does not normally infect people.)

Man-made trypanosomes are the cause of sleeping sickness and gambian trypanosomiasis. The metacyclic promastigote is transmitted subcutaneously by the tsetse fly bite and multiplies in a matter of days. In the location of a vector bite, there is a development of itching, swelling, discomfort, and redness. Weight loss, fever, headache, and joint discomfort are the first symptoms of a widespread illness. The parasite is discovered moving freely in the blood stream 5–12 days after infection. Winterbottom's sign, a unique feature of the illness, is an expansion of the cervical lymph nodes. When parasites enter the cerebrospinal fluid of the central nervous system, sleeping sickness develops.

Human African trypanosomiasis has two phases in its clinical history. The parasite is detected in the peripheral circulation at the first stage, but the central nervous system has not yet been infected. The second stage of the illness begins when the parasite passes the blood-brain barrier and attacks the central nervous system. Several subspecies of African trypanosomiasis have varied rates of illness development, and the clinical signs change depending on whether T. b. rhodesiense or T. b. gambiense is the parasite responsible for the infection. Yet, if either kind of infection is not treated, it will ultimately result in coma and death.

The East African sleeping sickness infection, caused by T. b. rhodesiense, advances quickly. A big sore (a chancre) may form at the site of the tsetse bite in certain people. After 1-2 weeks following the infectious bite, the majority of patients have fever, headache, muscle and joint pain, and swollen lymph nodes. Some individuals get a rash. The parasite returns after a few weeks of infection. The West African sleeping sickness infection caused by T. b. gambiense advances more slowly. There may not be any symptoms at first. Those who are infected may have sporadic fevers, headaches, muscular and joint pain, and malaise. Weight loss, enlarged lymph nodes, and skin itching are possible side effects. After 1-2 years, personality changes, daytime

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tiredness with nightly sleep disturbances, and gradual disorientation are usually signs of central nervous system involvement. In addition to hormone abnormalities, there may be other neurologic symptoms, such as partial paralysis or difficulties walking or balancing. Seldom does an untreated infection's course extend longer than 6-7 years, and it often kills within 3 years.

Diagnosis

Since the clinical signs of infection are not sufficiently specific, the diagnosis of African Trypanosomiasis is done using laboratory techniques. The diagnosis depends on microscopically identifying the parasite in bodily fluid or tissue. Compared to T. b. gambiense infection, T. b. rhodesiense infection has a much larger parasite burden. It is simple to find T. b. rhodesiense parasites in blood. They may also be discovered in lymph node fluid, fluid, or chancre biopsy samples. While it is simple to identify the parasite under the microscope, serologic testing is not often employed in diagnosis [8]–[10]. Lymph node aspirate, often from a posterior cervical node, is subjected to microscopic analysis as the standard procedure for identifying T. b. gambiense infection. It is often challenging to find T. b. gambiense in blood. It is usually necessary to use concentration methods and repeated exams. Outside of the United States, serologic testing for T. b. gambiense is available; however, it is often only used for screening reasons, and the final diagnosis depends on microscopic examination of the parasite.

As the choice of therapy drug(s) will depend on the illness stage, all patients with an African trypanosomiasis diagnosis must have their CSF fluid analysed to identify whether the central nervous system is involved. The World Health Organization defines elevated protein in CSF fluid and a white cell count of more than 5 as signs of central nervous system involvement. Those with second stage infection often have trypanosomes in their cerebral fluid.

Treatment

Treatment is recommended for everyone with an African Trypanosomiasis diagnosis. The kind of infection (T. b. rhodesiense or T. b. gambiense) and the stage of the illness will determine the particular medication and treatment regimen (i.e. whether the central nervous system has been invaded by the parasite). The medicine pentamidine, which is advised for treating T. b. gambiense infections in their first stages, is readily accessible in the United States. Only the CDC sells the additional medications (suramin, melarsoprol, eflornithine, and nifurtimox) used to treat African trypanosomiasis in the United States. The CDC personnel may provide doctors with diagnostic and management guidance as well as access to therapy drugs that would otherwise be inaccessible.The ability to treat African trypanosomiasis cannot be tested. Patients must have repeated investigations of their CSF fluid for two years after therapy in order to identify any relapses.

Control & Prevention

For the prevention of African trypanosomiasis, there is no vaccine or medication. Tsetse fly contact is minimised by preventative measures. Locals often know which regions are badly infected and may advise where to stay away from them. Use medium-weight, long-sleeved shirts and slacks in neutral hues that blend in with the surroundings as additional beneficial precautions. Tsetse flies may bite through flimsy garments and are drawn to bright or dark colours.

Check cars before you go inside. Stay away from bushes since flies are drawn to the motion and dust from driving automobiles. The tsetse fly will bite if disturbed, although it is less active during the warmest portion of the day. Apply bug repellant. Insect repellent and clothes treated with permethrin have not been shown to be very effective against tsetse flies, but they will stop other insects that may bite and make you sick.Two approaches are used to combat African trypanosomiasis: decreasing the disease reservoir and eliminating the tsetse fly vector. Humans serve as a large disease reservoir for T. b. gambiense, hence aggressive case detection via population screening, followed by treatment of those who are found to be sick, is the primary management method for this subspecies. Tsetse fly traps are sometimes used in conjunction. Given the range of animal hosts, it is more challenging to reduce the reservoir of infection for T. b. rhodesiense. The vector control is major tactic being used. This is often accomplished using traps or screens together with fly-attracting scents and pesticides[11]–[13].

II. CONCLUSION

In conclusion, E. histolytica and Trypanosoma are two different types of parasitic protozoa that can cause serious illnesses in humans. These parasites are transmitted through contaminated food and water or via insect vectors, and can cause a range of symptoms including diarrhea, dysentery, liver abscesses, fever, and neurological problems.Entamoeba histolytica and Trypanosoma are two parasitic protozoa that cause significant human health problems worldwide. In this review, we have discussed the biology, transmission, diagnosis, and treatment of these two parasitic infections. E. histolytica is a waterborne parasite that causes amoebiasis, a disease that can range from asymptomatic infection to severe dysentery and liver abscesses. Transmission occurs through ingestion of contaminated food or water, and diagnosis relies on a combination of clinical signs, imaging, and laboratory tests. Treatment typically involves the use of antiparasitic drugs, although drug resistance is an ongoing concern.

REFERENCES

[1] L. J. Shaabth, “Detection and differentiation of e.Histolytica and e.dispar by PCR in Al-Dewaniyah city,” Int. J. Pharm. Res., 2020, doi: 10.31838/ijpr/2020.SP2.508.

[2] K. S. Ghenghesh, K. Ghanghish, E. T. BenDarif, K. Shembesh, and E. Franka, “Prevalence of Entamoeba

histolytica, Giardia lamblia, and Cryptosporidium spp.in Libya: 2000-2015," Libyan Journal of Medicine. 2016. doi: 10.3402/ljm.v11.32088.

[3] I. N. Zeki and H. S. Al-Warid, "The prevalence of anemia among children infected with Entamoeba histolytica in Baghdad," Iraqi J. Sci., 2019, doi: 10.24996/ijs.2019.60.12.7.

[4] R. Hertz, S. Ben Lulu, P. Shahi, M. Trebicz-Geffen, M. Benhar, and S. Ankri, "Proteomic identification of S-nitrosylated proteins in the parasite Entamoeba histolytica by resin-assisted capture: Insights into the regulation of the Gal/GalNAc lectin by nitric oxide," PLoS One, 2014, doi: 10.1371/journal.pone.0091518.

[5] G. B. Ali Alomashi and Z. S. Abdallah, "Detection for virulence factors of amoebic dysentery in bloody diarrheal children under 7 years," Medico-Legal Updat., 2020, doi: 10.37506/mlu.v20i2.1201.

[6] Z. Dhubyan Mohammed Zaki, "Prevalence of Entamoeba histolytica and Giardia Lamblia Associated with Diarrhea in Children referring to lbn Al-Atheer Hospital in Mosul, Iraq," Arch. Razi Inst., 2022, doi: 10.22092/ARI.2021.356312.1820.

[7] O. E. O., O. C. E., and N. C. U., "Comparison of Microscopy, Boeck and Drbolav's Stool Culture Medium and Bichro-latex Antibody Test with A Reference Elisa Antigen Test for E. histolytica Diagnosis in Calabar, Nigeria," Microbiol. Res. J. Int., 2021, doi: 10.9734/mrji/2021/v31i1130353.

[8] G. M. Ehrenkaufer, J. A. Hackney, and U. Singh, "A developmentally regulated Myb domain protein regulates expression of a subset of stage-specific genes in Entamoeba histolytica," Cell. Microbiol., 2009, doi: 10.1111/j.1462-5822.2009.01300.x.

[9] R. Thibeaux et al., "Newly visualized fibrillar collagen scaffolds dictate Entamoeba histolytica invasion route in the human colon," Cell. Microbiol., 2012, doi: 10.1111/j.1462-5822.2012.01752.x.

[10] O. Fisher, R. Siman-Tov, and S. Ankri, "Characterization of cytosine methylated regions and 5-cytosine DNA methyltransferase (Ehmeth) in the protozoan parasite Entamoeba histolytica," Nucleic Acids Res., 2004, doi: 10.1093/nar/gkh161.

[11] P. G. Dastidar, S. Majumder, and A. Lohia, "Eh Klp5 is a divergent member of the kinesin 5 family that regulates genome content and microtubular assembly in Entamoeba histolytica," Cell. Microbiol., 2007, doi: 10.1111/j.1462-5822.2006.00788.x.

[12] D. Yi et al., "Substructural specificity and polyvalent carbohydrate recognition by the Entamoeba histolytica and rat hepatic N-acetylgalactosamine/galactose lectins," Glycobiology, 1998, doi: 10.1093/glycob/8.10.1037.

[13] Y. Yanagawa et al., "Case report: Acute amebic colitis triggered by colonoscopy: Exacerbation of asymptomatic chronic infection with Entamoeba histolytica accompanied by dysbiosis," Am. J. Trop. Med. Hyg., 2019, doi: 10.4269/ajtmh.19-0396

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Ascaris and Ancylostoma

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***Abstract*—Ascaris and Ancylostoma are two common parasitic worms that infect humans worldwide. Ascaris lumbricoides, also known as the large intestinal roundworm, is the most common intestinal worm infection in humans. Ancylostoma duodenale and Necator americanus are two species of hookworms that infect humans. Both Ascaris and Ancylostoma infections are caused by ingestion of the worm's eggs through contaminated soil or food, or by penetration of the skin by the infective larvae. The symptoms of these infections range from mild to severe, depending on the worm burden and the host's immune response. Common symptoms include abdominal pain, diarrhea, nausea, and anemia.**

***Index Terms*— Ascaris, Ancylostoma, Humans, Parasite, Worms**

I. INTRODUCTION

It is an endoparasite of man found in small intestine.It is cosmopolitan in distribution.It is commonly called as round worm.It is monogenetic nematode.Body is un-segmented, elongated, and cylindrical in shape, white pinkish in colour tapering at both ends.Female ascaris is larger than male ascaris.It is dioecious in nature.It respires anaerobically i.e. in the body of host where it lives, the amount of oxygen is relatively less inside intestine to which it adapts by carrying anerobic respiration.Locomotory structures are absent as they need not move in search of food.To protect from the harmful effects of digestive enzymes of the host, body is covered by tough protective cuticle.Digestive system is not well developed as it feeds upon partially digested food of host which is also an adaptation.Excretory system is primitive with absence of flame cells.Nervous system is primitive.To remain at the specific site of infection they attach to the surrounding tissues provided with adhesive structures like hooks.Low metabolic rate.The reproductive potential is very high by laying 2, 00,000 eggs day which ensures the contamination of new host.Eggs are enclosed inside a protective covering called cyst to thrive in harsh environmental conditions[1]–[3].

Endoparasites are a diverse group of parasitic organisms that inhabit the internal organs or tissues of their hosts. These parasites can affect a wide range of animals, including humans, domestic animals, and wildlife, and can cause a range of symptoms and health problems. In this review, we will discuss the biology, transmission, diagnosis, and treatment of endoparasites. Some common examples of endoparasites include protozoa such as Giardia and Cryptosporidium, nematodes such as Ascaris and hookworms, and cestodes such as tapeworms. Transmission of endoparasites can occur through a variety of routes, including ingestion of contaminated food or water, contact with infected animals or their feces, and through insect vectors. Diagnosis of endoparasites often involves a combination of clinical signs, imaging, and laboratory tests, including stool examination for eggs or larvae, blood tests, or tissue biopsies.Treatment of endoparasites varies depending on the type of parasite and severity of infection, but may involve the use of anthelmintic drugs, antibiotics, or other medications. In some cases, surgery may be necessary to remove large or obstructive parasites. Prevention of endoparasites involves a range of strategies, including improved sanitation and hygiene, deworming programs for high-risk populations, and vector control. In addition, the development and use of vaccines and new diagnostic tools are being explored as potential strategies to control these infections.

Ascaris and Ancylostoma are two common intestinal parasites that infect humans and animals worldwide. In this review, we will discuss the biology, transmission, diagnosis, and treatment of these two parasitic infections. Ascaris lumbricoides is a roundworm that infects humans through the ingestion of eggs present in contaminated soil or food. Ancylostoma duodenale and Necator americanus are hookworms that infect humans through skin penetration by infective larvae or ingestion of larvae present in contaminated soil or food. These parasites reside in the intestines and can cause a range of symptoms, from asymptomatic infection to severe anemia, malnutrition, and stunted growth in children.Diagnosis of Ascaris and Ancylostoma infections relies on a combination of clinical signs, imaging, and laboratory tests, including stool examination for eggs or larvae. Treatment involves the use of anthelmintic drugs, although reinfection and drug resistance are ongoing challenges. Prevention efforts for these infections rely on improved sanitation, hygiene, and public health education, as well as the use of deworming programs for high-risk populations. In addition, the development and use of vaccines and new diagnostic tools are being explored as potential strategies to control these infections. Ascaris and Ancylostoma are important intestinal parasites that pose significant public health challenges worldwide, particularly in developing countries. Further research is needed to improve diagnosis, treatment, and prevention strategies for

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these infections, as well as to better understand their epidemiology and impact on affected populations. A One Health approach, which involves collaboration between human and animal health professionals, is essential for effectively managing and controlling these infections.

An estimated 807-1,221 million people in the world are infected with Ascaris lumbricoides. Ascaris, hookworm, and whipworm are known as soil-transmitted helminths. Together, they account for a major burden of disease worldwide. Ascariasis is now uncommon in the United States. Ascaris lives in the intestine and Ascaris eggs are passed in the feces of infected persons. If the infected person defecates outside or if the feces of an infected person are used as fertilizer, eggs are deposited on soil. They can then mature into a form that is infective. Ascariasis is caused by ingesting eggs. This can happen when hands or fingers that have contaminated dirt on them are put in the mouth or by consuming vegetables or fruits that have not been carefully cooked, washed or peeled.

People infected with Ascaris often show no symptoms. If symptoms do occur, they can be light and include abdominal discomfort. Heavy infections can cause intestinal blockage and impair growth in children. Other symptoms such as cough are due to migration of the worms through the body. Ascariasis is treatable with medication prescribed by your health care provider.

Life –Cycle

The egg containing larva when ingested with contaminated raw vegetables causes ascariasis. Ingested eggs hatch in the duodenum. The larvae penetrate the intestinal wall and circulate in the blood. From the heart they migrate to the lungs, ascend to the trachea, descend to the oesophagus and finally reach the small intestine to become adult. The female pass immature eggs which pass to the soil and mature in 2 weeks.

Adult worms live in the lumen of the small intestine. A female may produce approximately 200,000 eggs per day, which are passed with the feces. Unfertilized eggs may be ingested but are not infective. Fertile eggs embryonate and become infective after 18 days to several weeks, depending on the environmental conditions.

After infective eggs are swallo ed, the larvae hatch, invade the intestinal mucosa, and are carried via the portal, then systemic circulation to the lungs. The larvae mature further in the lungs, penetrate the alveolar walls, ascend the bronchial tree to the throat, and are swallowed. Upon reaching the small intestine, they develop into adult work s. between 2 and 3 months are required fro ingestion of the infective eggs to oviposit ion by the adult female. Adult worms can live 1 to 2 years.

Pathogenicity

Ascaris lumbricoides is the largest nematode parasitizing the human intestine. It causes ascariasis which results in inflammation of alveoli tissue, injuries to vital organs while Adult worms in the intestine cause abdominal pain and may cause intestinal obstruction especially in children. Larvae in the lungs may cause inflammation of the pneumonia-like symptoms.People infected with Ascaris often show no symptoms. If symptoms do occur, they can be light and include abdominal discomfort. Heavy infections can cause intestinal blockage and impair growth in children. Other symptoms such as cough are due to migration of the worms through the body. Ascariasis is treatable with medication prescribed by your health care provider.

Diagnosis

The standard method for diagnosing ascariasis is by identifying Ascaris eggs in a stool sample using a microscope. Because eggs may be difficult to find in light infections, a concentration procedure is recommended.

Treatment

Anthelminthic medications, such as albendazole and mebendazole, are the drugs of choice for treatment ofAscaris infections. Infections are generally treated for 1-3 days. The drugs are effective and appear to have few side effects.

Ancylostoma Duodenale

Ancylostoma Duodenale was discovered by an Italian physician, Angelo Ducini Looss in 1898. It is found in the small intestine of millions of people chiefly in Europe, Africa, India, China, Japan, Srilanka and Pacific Islands. The hookworm, Ancylostoma duodenale, is a nematode that mainly parasitizes humans. However, it can also be found in a range of paratenic hosts, including dogs, cats, pigs, and even coyotes. These tiny, s-shaped worms only grow to be roughly 8-13 nm in length. Although it is very small, it still contains a very vicious “bite”. Each hookworm contains two very powerful ventral teeth, along with small pairs of teeth located deeper in its capsule to help it bite and attach itself to its victims. Once inside, the parasite will hook itself onto the intestines and continually drain blood from its host, up to 1 mL blood per individual per day. Sexual dimorphism occurs. The male worm is 8 to 11 mm x

0.4 mm in size. The posterior end of the body forms a bursa made of three lobes, out of which one is dorsal and two are lateral. A pair of long spicules passes from the genital canal to the outside through cloaca. A gubernaculum is also used during copulation to help guide the spicules. The female averages 10 to 13 mm x 0.6 mm in size. The posterior end of the body tapers to a rather blunt point. The vulva is located at a point about two-thirds the length of the body from the anterior end. Eggs are ovoidal, thin-shelled and measure 56 to 60 um x 34 – 40 um.

A. duodenale infects humans mainly through direct contact, which usually occurs through the foot. However, it can also be transmitted through the consumption of under-cooked meats such as lamb, beef, and pork. The parasites are released back into the soil through human feces.

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Infants are more vulnerable than adults, and infections in children can lead to permanent growth deficiencies.

Life-Cycle

It is monogenetic in nature & involve only one host in its life cycle i.e. man. Adult male and female worms live in the small intestine. The female lays eggs, which contain immature embryo in the 4 cell stage. When the eggs pass in the stool to the soil and under favourable conditions of temperature, moisture and oxygen, they hatch into larvae, which molt twice and become infective. When the filariform larvae penetrate the skin, they circulate in the blood, reach the lungs, ascend to the trachea, descend to oesophagus to reach the small intestine and become adults, where they get attached to mucous lining & feed on blood of host. The adult copulate to produce eggs which are fertilized externally. Fertilized eggs are passed out with host faeces which under favourable environmental conditions hatch into rhabditi form larva & wait to infect a new host through skin contact.

They penetrate into the pulmonary alveoli, ascend the bronchial tree to the pharynx, and are swallowed. The larvae reach the small intestine, where they reside and mature into adults. Adult worms live in the lumen of the small intestine, where they attach to the intestinal wall with resultant blood loss by the host. Most adult worms are eliminated in 1 to 2 years, but the longevity may reach several years[4]–[6].Some A. duodenale larvae, following penetration of the host skin, can become dormant. In addition, infection by A. duodenalemay probably also occur by the oral and transmammary route. N. americanus, however, requires a transpulmonary migration phase.

Pathogenecity

Ancylostoma causes ancylostomiasis in which itching of skin, severe inflammation, diarrhoea, constipation with bloody stools. Adult worms in the intestine feed on blood causing iron deficiency anaemia. The larvae cause inflammation of the lungs. In severe conditions mental retardation in childrens is caused.Anemia of iron deficiency is the principal host reaction to the intestinal infection by adult worms. Other symptoms are fever, abdominal pain, diarrhoea, food fermentation, constipation, myocarditis, eosinophilia, loss of health and collapse. Children are more susceptible than adults. Mental and physical growth is retarded in children and growing youth.To check the epigastric pain, the patient may start eating even dirt, so called “dirt eaters”. If the infection is not controlled, it may lead to fatty degeneration of heart, liver and kidneys, ending in the death of the patient.

Prevention and Control

Many drugs are available to treat ancylostomiasis. The most commonly used drug is tetrachloroethylene or blephenium hydroxynaphthoate, because of its high efficiency and low toxicity. Other antihelmintic drugs used are Hexylresorcinol, thymol, oil of chenopodium, dithiazanine iodide, piperazine salt, pyrvinium pamoate. Thioabendazole can be given, but only under strict supervision of a physician. Food is usually supplemented by iron to compensate haemoglobin deficiency.

Control:

1. Proper sewage disposal in affected areas.
2. Keep soil free from contamination of larvae.
3. Educate the people in endemic area concerning the source of infection.
4. Wear shoes regularly.

II. DISCUSSION

Ascaris and Ancylostoma are two common parasitic worms that cause intestinal infections in humans. Both of these infections are caused by the ingestion of the worm's eggs or penetration of the skin by infective larvae. These infections are most prevalent in developing countries where poor sanitation, lack of clean water, and overcrowding are common. The symptoms of Ascaris and Ancylostoma infections can vary, ranging from mild discomfort to severe disease. Ascaris infections can cause abdominal pain, diarrhea, and malnutrition due to nutrient depletion caused by the worms feeding on the host's intestinal lining. In contrast, Ancylostoma infections can lead to anemia due to blood loss from the worm's feeding on the host's intestinal lining[7]–[9].One of the main ways to prevent these infections is by improving sanitation and hygiene. This includes the proper disposal of human waste, washing hands before eating, and avoiding contact with contaminated soil or water. In addition, individuals can wear shoes to reduce the risk of penetration of the skin by infective larvae.

The treatment of Ascaris and Ancylostoma infections usually involves the use of antihelminthic drugs such as albendazole and mebendazole. These drugs work by killing the worms and eliminating them from the host's body. However, the effectiveness of these drugs can be limited in heavily infected individuals, and multiple rounds of treatment may be necessary[7]–[13].In conclusion, Ascaris and Ancylostoma infections are common parasitic worm infections that can cause significant health problems. Proper hygiene, sanitation, and prompt treatment are essential in reducing the spread of these infections and minimizing their impact on affected individuals.

III. CONCLUSION

Prevention measures for both infections include proper hygiene, including hand washing and proper disposal of human waste, as well as avoiding contact with contaminated soil or water. Treatment of these infections typically involves the use of antihelminthic drugs, such as albendazole and mebendazole. In conclusion, Ascaris and Ancylostoma infections are common parasitic worm infections that can cause a range of symptoms in humans. Preventative measures and prompt treatment are essential in reducing the spread of

these infections and minimizing their impact on affected individuals.

REFERENCES

[1] K. K. Agustina et al., "Prevalence and distribution of soil-transmitted helminth infection in free-roaming dogs in Bali Province, Indonesia," Vet. World, 2021, doi: 10.14202/vetworld.2021.446-451.
[2] S. Chaoua, S. Boussaa, A. Khadra, and A. Boumezzough, "Efficiency of two sewage treatment systems (activated sludge and natural lagoons) for helminth egg removal in Morocco," J. Infect. Public Health, 2018, doi: 10.1016/j.jiph.2017.07.026.
[3] P. M. Jourdan, P. H. L. Lamberton, A. Fenwick, and D. G. Addiss, "Soil-transmitted helminth infections," The Lancet. 2018. doi: 10.1016/S0140-6736(17)31930-X.
[4] A. F. Iasbik et al., "Prevalence and transmission of intestinal parasitosis in human beings from zona da mata, minas gerais, Brazil," Biosci. J., 2018, doi: 10.14393/BJ-v34n3a2018-37037.
[5] V. S. Moura and M. J. T. de Mattos, "Zoonoses parasitárias que acometem primatas não humanos do gênero Alouatta nas regiões brasileiras - revisão sistemática no período de 2010-2021," Rev. Agrar. Acad., 2022, doi: 10.32406/v5n1/2022/1-15/agrariacad.
[6] A. R. Jex et al., "Ascaris suum draft genome," Nature, 2011, doi: 10.1038/nature10553.
[7] P. Cools et al., "First international external quality assessment scheme of nucleic acid amplification tests for the detection of schistosoma and soil-transmitted helminths, including strongyloides: A pilot study," PLoS Negl. Trop. Dis., 2020, doi: 10.1371/journal.pntd.0008231.
[8] F. Kahar, Q. Efendi, and I. Hadipranoto, "Identification of Intestinal Nematode Worm Eggs in Feces of Children Aged 5-10 Years," Jar. Lab. Medis, 2020, doi: 10.31983/jlm.v2i1.5872.
[9] S. Vaz Nery et al., "Use of quantitative PCR to assess the efficacy of albendazole against Necator americanus and Ascaris spp. in Manufahi District, Timor-Leste," Parasites and Vectors, 2018, doi: 10.1186/s13071-018-2838-0.
[10] M. Hasegawa et al., "What does soil-transmitted helminth elimination look like? Results from a targeted molecular detection survey in Japan," Parasites and Vectors, 2020, doi: 10.1186/s13071-019-3875-z.
[11] H. B. Mafuyai, Y. Barshep, B. S. Audu, D. Kumbak, and T. O. Ojobe, "Baboons as potential reservoirs of zoonotic gastrointestinal parasite infections at Yankari National Park, Nigeria," Afr. Health Sci., 2013, doi: 10.4314/ahs.v13i2.7.
[12] A. S. Prabandari, V. D. Ariwarti, R. Pradistya, and M. M. Sekar Sari, "Prevalensi Soil Transmitted Helminthiasis Pada Siswa Sekolah Dasar Di Kota Semarang," Avicenna J. Heal. Res., 2020, doi: 10.36419/avicenna.v3i1.337.
[13] S. N. Mohd Zain, R. Rahman, and J. W. Lewis, "Stray animal and human defecation as sources of soil-transmitted helminth eggs in playgrounds of Peninsular Malaysia," J. Helminthol., 2015, doi: 10.1017/S0022149X14000716.

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Enterobius, Wuchereia and Schistosoma

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Abstract*—Enterobius, Wuchereria, and Schistosoma are three different types of parasitic worms that infect humans and cause significant health problems. Enterobius is a small, thread-like worm that infects the human intestine and causes a condition known as pinworm infection. Pinworm infection is most commonly found in children and is spread through contaminated food, water, or surfaces. Symptoms include anal itching, irritability, and disturbed sleep. Wuchereria is a type of filarial worm that causes a condition known as lymphatic filariasis, also known as elephantiasis. This disease is characterized by swelling of the arms, legs, and genitals, which can be severely disabling. The disease is transmitted through the bites of infected mosquitoes, and can be prevented by avoiding mosquito bites and taking preventive medication. Schistosoma is a parasitic worm that causes a disease known as schistosomiasis, or bilharzia. Schistosomiasis is a major public health problem in many parts of the world, especially in sub-Saharan Africa, where it is endemic. The disease is transmitted through contact with contaminated water, and symptoms include abdominal pain, diarrhea, and blood in the urine.

***Index Terms*— Enterobius, Gene, Life-cycle, Schistosoma, Wuchereia**

I. INTRODUCTION

It often referred to as a pinworm. It is a parasitic nematode with a single gene. It has the colour white. Males are often bigger than females. They look to be made of thread. Located in the colon's top portion. There is sexual dimorphism. Whereas the male's tail is blunt and curled, the female's tail is long and pointed. Males are monarchical, but females are didelphic, or having two wombs[1]–[3].A pinworm infection is brought on by Enterobiusvermicularis, a tiny, thin, white roundworm. Pinworm infection may affect anybody, although it most often affects children, individuals living in institutions, and members of their households.

Life-Cycle

The life cycle is straightforward since man is the sole host and it is monogenetic in nature. The big intestine is where adult worms dwell. The female goes to the anus at night to adhere the eggs to the peri-anal skin after the male dies during ilarial ion. Plano-convex eggs that carry larva are present. The small intestine is where the eggs hatch after being ingested, and the larvae go to the large intestine to mature into adults.

On the folds of the perianal sex come eggs. Self-infection happens when hands that have scratched the perianal region transport infectious eggs to the mouth. Handling contaminated clothing or bed linen may potentially result in the spread of an illness from one person to another. Surfaces in the environment that are infected with inworm eggs may also transmit enterobiasis. A few eggs might fly into the air and be ingested. They would be eaten and proceed in the same manner as ingested eggs. The average lifespan of an adult is two months. Throughout the night, gravid females travel outside the anus and oviposit while crawling on the perianal skin. In ideal circumstances, the larvae inside the eggs begin to grow in 4 to 6 hours. While the prevalence of retroinfection, or the transfer of freshly hatched larvae from the anal surface back into the rectum, is unclear.

Pathogenecity

Pinworm infections are more prevalent in children who are ilarial ion zed, in households with school-aged children, and among main caretakers of affected children.Pinworms may be contracted by directly or indirectly swallowing pinworm eggs. The worm lays these eggs near the anus, and they may be spread to ordinary objects including hands, toys, bedding, clothes, and toilet seats. A person may consume pinworm eggs and contract the pinworm parasite by placing anyone's contaminated hands close to their mouth or by placing their lips on frequently contaminated surfaces. Since pinworm eggs are so tiny, it is possible to breathe them in. After pinworm eggs have been consumed, the adult gravid female must develop in the small intestine for a minimum of one to two months. Once fully grown, the adult female worm moves to the colon where she lays her eggs at night when most of her hosts are sleeping, close to the anus. As long as a female pinworm continues laying eggs on the perianal skin, those who are afflicted with pinworm may spread the parasite to other people. Also possible are self-reinfection and re-infection by other people's eggs[4]–[7].

The worms' movement produces allergic responses around the anus, as well as nocturnal itching and enuresis at night. Appendicitis is brought on by the worms obstructing the appendix. The patient also has inflammation, hysteria, sleeplessness, lack of appetite, and restlessness due to the parasite. An itching anal area is the most typical clinical symptom of pinworm infection. Due to irritation and itching of the anal region when the illness is severe, a secondary bacterial infection may develop. The patient may often express complaints of teeth grinding, sleeplessness brought on by sleep disruption, or even stomach discomfort or appendicitis. There have been several reports of female genital tract infections.

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Diagnose & Therapy

Pinworm infection is often asymptomatic, however itching around the anus is a typical sign. Pinworm may be identified using three simple methods. The first alternative is to check the perianal region two to three hours after the afflicted individual has fallen asleep for worms. The second alternative is to use transparent tape to contact the perianal skin and retrieve any potential pinworm eggs around the anus first thing in the morning. The eggs on the tape will be visible under a microscope if a person is affected. The tape treatment has to be used three mornings in a row, immediately after the infected person's awakening and before any washing is done. Analyzing samples from beneath fingernails under a microscope is the third method of diagnosis since anal itching is a typical pinworm symptom. It's possible that an infected individual who has scratched their anal region has picked up pinworm eggs beneath their nails that may be detected.Examining stool samples is not advised since pinworm eggs and worms are often rare in faeces. Pinworm infections cannot be diagnosed by serologic assays.

Mebendazole, pyrantelpamoate, or albendazole are the drugs used to treat pinworm. Any of these medications are first given in a single dosage, followed two weeks later by another single dose of the same medication. Pyrantelpamoate may be purchased over-the-counter. Pinworm eggs are not consistently killed by the medicine. The purpose of the second dosage is to stop the spread of adult worms that emerge from any eggs that the previous treatment did not manage to destroy. Parents and medical professionals should compare the advantages and disadvantages of these medications for children under the age of two.The same approach should be used to treat subsequent infections as it was for the first one. It is advised that all members of the household get treatment at the same time in homes where more than one person is affected or when recurring, symptomatic infections take place. Mass and simultaneous therapy, repeated every two weeks, may be successful in institutions.

Control and Prevention

The best approach to avoid getting pinworms is to wash your hands with soap and warm water after using the bathroom, changing diapers, and before handling food. Those who are sick should take a bath every morning to help remove a significant percentage of the eggs on the skin in order to help halt the spread of pinworm and potential re-infection. Showering is a better option than having a bath since it prevents the possibility of introducing pinworm eggs into the bath water. Co-bathing is not recommended for infected individuals while they are still contagious.

Also, those who are sick must to follow basic hygiene rules like washing their hands with soap and warm water after using the restroom, changing diapers, and before handling food.Also, they should frequently trim their fingernails and refrain from biting or clawing their anus. First thing in the morning, changing underwear and bed linens often is an excellent method to lower the risk of reinfection and potential egg transfer. To ensure that any possible eggs are killed, these goods should not be agitated before being gently put into a washer, washed in hot water, and dried in the heat.Pinworm management at institutions, daycare centres, and schools might be challenging, however mass medicine administration during an epidemic can be effective. Teach kids the value of cleaning their hands to avoid illness.

Humans may get lymphatic filariasis from one of three distinct filarial species. Wuchereriabancrofti is the principal cause of illnesses in the globe. Moreover, Brugiatimori and Brugiamalayi may spread the illness throughout Asia.Lymphatic filariasis is a parasitic illness brought on by tiny, thread-like worms and is regarded as one of the world's neglected tropical diseases. Adult worms can only survive in the lymphatic system of humans. The lymph system prevents infections and maintains the body's fluid equilibrium. Mosquitoes transmit lymphatic filariasis from one person to another. The adult worm reproduces, lives in human lymph arteries, and gives birth to millions of small worms called microfilariae. When a mosquito bites a person who is infected, microfilariae circulate in the person's blood and infect the mosquito. The development of microfilaria occurs in the mosquito. The larval worms from the mosquito enter the human skin and go to the lymph vessels when it bites another person. They develop into adult worms over the course of at least six months. An mature worm has a lifespan of 5 to 7 years. As mature worms mate, millions of microfilariae are released into the blood. Individuals who have microfilariae in their blood may infect other people.

Individuals with the condition may have lymphedema, elephantiasis, and, in males, hydrocele, or scrotal enlargement. The biggest global cause of irreversible impairment is lymphatic filariasis. People in affected communities usually reject and shun those who are deformed by the illness. Due to their handicap, affected individuals are generally unable to work, which negatively affects their families and communities.More than 50 nations have active lymphatic filariasis eradication programmes. By these activities, the risk of infection for those who live in or go to these areas is being reduced as well as the spread of the filarial parasites. Via mosquito bites, the virus is transferred from person to person.

Depending on the region, a variety of mosquitoes may spread the parasite. Anopheles is the most prevalent vector in Africa, whereas Culexquinquefasciatus is the most prevalent in the Americas. In the Pacific and Asia, Aedes andMansonia may spread the virus. It takes several mosquito bites over months or years to develop lymphatic filariasis. The highest risk of infection comes from long-term residents in tropical or subtropical regions where the illness is prevalent. There is relatively little danger for transient ilarial . In 73 nations spread over the tropics and subtropics of Asia, Africa, the Western Pacific, and portions of the Caribbean and South

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America, lymphatic filariasis affects more than 120 million people.

Nowadays, the disease is only endemic in Haiti, the Dominican Republic, Guyana, and Brazil.Charleston, South Carolina, was the last site in the US where lymphatic filariasis was still a problem. Infection became extinct in the early 20th century. Presently, the United States is immune to infection.

Life-Cycle

By biting the intermediary arthropod host, the filariform larvae are injected through the skin. The larvae invading the lymphatics—typically in the lower limb—grow into adult worms there. The bloodstream is ilarial with the microfilariae. To match with the vector's nighttime feeding habits, they stay in the pulmonary circulation throughout the day and only enter the peripheral circulation at night.The parasite enters the stomach of the vector after being sucked up by it and changes there from a long, thin form into a plump, sausage-shaped creature that is ready to infect a new host when the vector bites it. Infected mosquitoes that bite during a blood meal may spread infectious larvae. The larvae move to lymphatic arteries and nodes, where they grow into adults that produce microfilariae. The adults spend their time in lymphatic channels and nodes, where they might stay for a long time. Microfilariae are produced by the female worms and circulate through the blood. Biting mosquitoes are infected by the microfilariae. The microfilariae within the mosquito grow into infectious filariform larvae in one to two weeks. The larvae infect the human host when the mosquito feeds on blood later. They go to the human host's lymphatic channels and lymph nodes, where they mature into adults[8]–[10].

Third-stage filarial larvae are introduced into the skin of the human host during a blood meal by an infected mosquito, when they enter the bite wound. Adults who often live in the lymphatics experience their development. The male worms are around 40 mm by.1 mm in size, while the females are between 80 and 100 mm long and 0.24 and 0.30 mm in diameter.

Pathogenecity

Nematodes that live in a human host's lymphatic tubes and lymph nodes are what cause lymphatic filariasis. Lymphatic filariasis is caused by Wuchereriabancrofti, Brugiamalayi, and Brugiatimori.Filariasis is a disease that is brought on by Wucheria.The lymphatic veins draining the lower limbs and the external genitalia swell as a result of the mature worm obstructing lymph flow in the lymph nodes. Skin thinning and fissures develop. Elephantiasis is another name for the condition, which causes the bodily parts to enlarge dramatically. Lymphangitis, lymphedema, fever, headaches, myalgia, hydrocele, and chyluria are among the main symptoms. While the parasite harms the lymphatic system, the majority of infected persons never have clinical symptoms. Unless tested, these persons are unaware that they have lymphatic filariasis. Just a tiny portion of people may get lymphedema. This results in edoema due to fluid accumulation brought on by the lymph system's dysfunction. While it may also happen in the arms, breasts, and genitalia, this primarily affects the legs. These symptoms often appear years after an infection.

It is challenging for the body to fight off viruses and germs because of the swelling and diminished lymphatic function. These persons will have more skin and lymphatic system bacterial infections. Elephantiasis, a condition where the skin becomes thicker and harder, is brought on by this. With proper skin care and exercise, many of these bacterial diseases may be avoided.Males who are infected with one of the parasites that causes LF, notably W. bancrofti, may have hydrocele or scrotal edoema. Tropical pulmonary eosinophilia syndrome may also be brought on by a filarial infection, albeit people with this illness are mainly located in Asia. The tropical pulmonary eosinophilia syndrome manifests as coughing, wheezing, and shortness of breath. High levels of IgE and antifilarial antibodies are often present together with the eosinophilia.

Identification and Therapy

Identification of microfilariae in a blood smear using microscopic inspection is the conventional procedure for identifying active infection. Throughout the night, the blood is circulated by the microfilariae that cause lymphatic filariasis. To coincide with the emergence of the microfilariae, blood should be collected at night. A thick smear should then be produced and stained with Giemsa or hematoxylin and eosin. Techniques for focus may be used to improve sensitivity. For the diagnosis of lymphatic filariasis, serologic approaches provide an alternative to microscopic detection of microfilariae. Antifilarial IgG4 levels in the blood are frequently high in patients with active filarial infection, and these levels may be found using standard tests.In the US, diethylcarbamazine is the medicine of choice. The medication eliminates some adult worms as well as the microfilaria. Around 50 years have passed since DEC was first used globally. The medicine is no longer licenced by the Food and Drug Administration and cannot be supplied in the United States due to the rarity of this illness there. After receiving confirmation of positive test findings, doctors may order the medicine from the CDC. The CDC offers doctors an option of a 1- or 12-day DEC therapy. The 12-day programme is often just as effective as a one-day therapy. DEC is often tolerated satisfactorily. The amount of microfilariae in the blood affects how few side effects there are in general. The most frequent adverse reactions are nausea, fever, headaches, and discomfort in the muscles or joints.

Those who may also have onchocerciasis shouldn't have DEC since it may make the onchocercal eye illness worse. DEC may have major negative effects for loiasis patients, including encephalopathy and death. The density of Loa loamicrofilarial cells affects both the likelihood and intensity

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of unpleasant responses. Ivermectin only kills the microfilariae; the adult worm, which is the cause of lymphedema and hydrocele, is not killed by the medication.

Elephantiasis and lymphedema are not candidates for DEC therapy since the majority of lymphedema patients do not have a current filarial infection.Patients should contact their doctor for a referral to a lymphedema therapist so they may learn about some fundamental care guidelines including cleanliness, exercise, and the treatment of wounds in order to stop the lymphedema from growing worse.

Individuals with hydrocele may show signs of an active infection, but they often do not get better clinically after receiving DEC therapy. Surgery is used as a hydrocele therapy.

Control and Prevention

Keeping away from mosquito bites is the greatest strategy to avoid lymphatic filariasis. The mosquitoes that transmit the tiny worms often bite between night and sunrise.Giving whole populations medication that eliminates the tiny worms and controls mosquitoes are two further preventative strategies. Yearly mass therapy lowers the number of microfilariae in the blood, which lessens infection transmission. The worldwide effort to eradicate lymphatic filariasis is built on this.A worldwide movement to eradicate lymphatic filariasis as a public health issue is now under progress. Scientists believe that lymphatic filariasis, a neglected tropical illness, may be eliminated. The plan for eradication is focused on treating whole communities annually with mixtures of medications that destroy the microfilariae. Tens of millions of patients are treated annually as a consequence of the generous donations of these pharmaceuticals by their manufacturers. Benefits of therapy go beyond lymphatic filariasis since these medications also lower levels of intestinal worm infection. In China and other nations, lymphatic filariasis elimination initiatives have been successful.

Schistosoma

It is a digenetic blood fluke parasitic trematode, which means that it lives within the blood vessels of the main host and that it is often found close to damp areas.

1. Worms that are adults live in pairs.
2. Snails serve as its secondary host.
3. The sexes are distinct.
4. The female is a resident in the male's gynecophoral canal.
5. Females lay huge eggs.

Its life cycle includes a variety of larval stages, including as the miracidium and cercaria, which release hepatic enzymes that aid in eating.

Bilharzia, another name for schistosomiasis, is a condition brought on by parasitic worms. More than 200 million individuals throughout the globe are sick with schistosomiasis even though the worms that cause it are not prevalent in the United States. The most severe parasite illness, in terms of effect, is this one, which is only surpassed by malaria. One of the Neglected Tropical Diseases is schistosomiasis.Certain varieties of freshwater snails are home to the parasites that cause schistosomiasis. The parasite emerges from the snail as cercariae, an infectious form that contaminates water. When polluted freshwater comes into touch with your skin, you might become sick. Schistosoma mansoni, S. haematobium, or S. japonicum are responsible for the majority of human infections.

In areas with insufficient sanitation, schistosomiasis occurs. Children in these places who are in school are often most at risk since they frequently bathe or swim in water contaminated with infectious cercariae.You are at risk if you reside in or travel to regions where schistosomiasis is prevalent and are exposed to tainted waters.

Life-Cycle

Mature worms live in pairs, with the female residing in the male's gynecophoral canal. The eggs are injected into the venules after ilarial ion. Inside the egg, a larval stage called the miracidium emerges. The egg is released into the perivascular tissues of the colon or urinary bladder when its lytic enzymes and the venule's contraction tear the venule's wall. The eggs enter the organs and lumens before being expelled in the urine or faeces. The miracidia emerge from their eggs when they come into touch with fresh water and swim about until they locate the right intermediate host, a snail, which they then pierce. The fork-tailed cercariae appear after two generations of sporocyst growth and proliferation within the snail. Man gets an infection while bathing or swimming. The cercariae enter the systemic circulation via the skin, travel to the portal vessels, where they develop and mature. The worms feed and mature inside the intra hepatic region of the portal system.

Therefore, it is impossible to assert categorically that one species only exists in one area since both species are able to inhabit either location or move between locations. S. haematobium may be detected in the rectal venules, however it often develops in the bladder's venous plexus. In the tiny venules of the portal and perivascular networks, the females lay their eggs. The eggs are expelled with faeces or urine, respectively, and are gradually transported into the lumen of the colon, the bladder, and the ureters. Katayama fever, hepatic perisinusoidal egg granulomas, Symmers' pipe stem periportal fibrosis, portal hypertension, and sporadic embolic egg granulomas in the brain or spinal cord are all symptoms of S. mansoni and S. japonicumschistosomiasis. Hematuria, scarring, calcification, squamous cell carcinoma, and sporadic embolic egg granulomas in the brain or spinal cord are among the pathologies of S. haematobium schistosomiasis.

Hence, schistosome infection requires human interaction with water. For S. japonicum, a variety of animals, including dogs and cats, rats, pigs, horses, and goats, serve as reservoirs, and for S. mekongi, dogs.

Pathogenecity

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Blood trematodes that are digenetic induce schistosomiasis. Schistosoma haematobium, Schistosoma japonicum, and Schistosoma mansoni are the three primary species that infect people. S. mekongi and S. intercalatum are two more, geographically more restricted species. Several schistosome species that parasitize animals and birds may also induce cercarial dermatitis in humans.Schistosomaisis is due to schistosoma. People who contract it have severe micturition and terminal haematuria. The spleen and liver are enlarged, the urinary bladder is inflamed, and there is cercarial dermatitis and ilarial in addition to these conditions.Skin becomes infected when it comes into touch with tainted freshwater that is home to certain parasite-carrying snail species. When infected individuals pee or faeces in freshwater, Schistosoma eggs get polluted. If the right species of snails are present in the water when the eggs hatch, the parasites infect, grow, and reproduce within the snails. A parasite may persist in water for up to 48 hours after it exits a snail. Those who come into contact with polluted waters, generally when wading, swimming, bathing, or washing, may get schistosoma parasites under their skin. The parasites travel through the host tissue over a period of weeks and mature into adult worms within the body's blood vessels. Once fully grown, the worms mate, and the females lay eggs. Some of these eggs transit through the colon or bladder and end up in the urine or stool.

Schistosomiasis symptoms are brought on by the body's response to the eggs, not by the worms themselves. Adult worms may lay eggs that don't leave the body and can become stuck in the colon or bladder, where they can cause inflammation or scarring. Children who get the infection frequently may have anaemia, malnutrition, and academic issues. The parasite may also harm the liver, gut, spleen, lungs, and bladder after years of infection.

Typical Symptoms

Most individuals are first infected without any symptoms. Nonetheless, a rash or itchy skin may appear a few days after being infected. After an infection, symptoms including fever, chills, coughing, and muscular pains may appear within 1-2 months.

Schistosoma chronica

Schistosomiasis may last for years if left untreated. Abdominal discomfort, an enlarged liver, blood in the stool or urine, and difficulty urinating are all indications of chronic schistosomiasis. Bladder cancer risk might also rise as a result of chronic infection. Occasionally, eggs may induce convulsions, paralysis, or inflammation of the spinal cord when they are detected in the brain or spinal cord.

Identification and Therapy

Parasite eggs may be found by microscopically examining stool or urine samples. A blood test could be required since the eggs often pass infrequently and in minute numbers, making it possible that they won't be discovered. Both urinary and intestinal schistosomiasis may be treated with safe and efficient medicines. All Schistosoma species-related infections are treated with the prescription drug praziquantel over the course of one to two days.

Control and Prevention

Prevention

There is no vaccination on hand.If you are travelling to or living in a place where schistosomiasis is spread, you should follow these precautions as much as possible:

While visiting nations where schistosomiasis is prevalent, avoid swimming or wading in freshwater. It's safe to swim in chlorinated pools and the ocean. Sip bottled water. While schistosomiasis cannot be acquired by ingesting contaminated water, it is possible to get the disease if your mouth or lips come into touch with it. You should either boil your water for 1 minute or filter it before consuming it since water straight from canals, lakes, rivers, streams, or springs may be polluted with a range of pathogenic organisms. Any hazardous parasites, bacteria, or viruses may be eliminated by bringing your water to a rolling boil and keeping it there for at least one minute. The removal of all parasites from water cannot be ensured by iodine treatment alone. To destroy any cercariae, bathing water should be heated to a rolling boil for one minute. It should then be cooled to room temperature before use to prevent scorching. Bathing with water that has been kept in a storage tank for at least one to two days should be safe.

After an unintentional, extremely short water contact, vigorous towel drying may aid in preventing skin penetration by the Schistosoma parasite. But you shouldn't depend just on thorough towel drying to stave against schistosomiasis.After returning from a trip, anybody who believes they may have drunk possibly contaminated water should see their doctor to learn more about testing.

Control

Control efforts in nations where schistosomiasis is a major source of illness often concentrate on: 1. decreasing the number of human infections and/or 2. Eradicating the snails necessary to continue the parasite's life cycle. Improved sanitation might lessen or stop the spread of all schistosome species that cause the illness. Public health professionals believe that eliminating schistosomiasis is a "war that can be won" in certain regions with low transmission rate.

The use of focused treatment for school-age children as well as community-wide mass drug treatment programmes are examples of control techniques. Schistosomiasis control issues might include things like: Chemicals used to get rid of snails in freshwater sources might damage other aquatic species, and if treatment is not maintained, the snails may come back. Animals like cows or water buffalo might get the parasite infected with particular species, such as S. japonicum, through the environment. Freshwater supplies may get contaminated by runoff from pastures.

One of the most significant interactions in the living

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world—parasites—have a broad range of effects on the host in terms of both severity and impact. A successful parasite gets food and shelter from the host. Pathogens are parasites that cause harm to their hosts. While parasites are evolved to live within or on their hosts, they can only persist by passing on their ability to locate new hosts to their progeny. Understanding their life cycles or routes of transmission is the key to comprehending how they spread around the planet.

Protozoans that are parasitic on humans cause major illness in humans and are distinguished by their obligatory nature, host specificity, toxic chemical release, and many hosts. Over two dozen species of parasitic protozoans have been reported to feed on humans.Entamoeba, Trypanosoma, Leishmania, Giardia, and other common protozoan parasites of humans are some examples. Entamoeba is a human monogenetic parasite that causes amoebic dysentery and is spread via contaminated food and water. Trypanosoma is a lymphadenitis-causing digenetic parasite of human blood that is spread by the Tse-tse fly.Leishmania, a digenetic parasite disseminated by the vector sand fly, is the etiologic agent of kala-azar or visceral leishmaniasis. Giardia is a flagellated protozoan that causes ilarial in humans and is spread by tainted food and water.

Nematodes, often known as round worms or freshwater worms, live in animal, plant, and saltwater tissues. They are unisexual, pseudocoelomate, cylindrical, worm-like, and lack body segments. Ascariasis, often known as the "round worm," is most frequently seen in youngsters and is brought on by eating unclean food and drinking unclean water.Ancylostoma, often known as the hook worm or ancylostomiasis, is a parasite that enters the body via the skin of the foot and travels to the lungs.

The most prevalent parasite in humans is Enterobius, sometimes known as the pinworm. Good hygiene ilarial aid in preventing it from causing appendicitis and anal area infections. Wucheria, sometimes known as the " ilarial worm," is the parasite that causes filariasis. The best way to avoid the parasite is to eradicate its mosquito vector, which is how it spreads.The majority of helminthes resemble leaves and have a cuticle-covered body as well as attaching organs. Schistosoma, sometimes referred to as the "blood fluke," is most frequently discovered in human blood vessels. It causes the illness schistosomiasis and requires water and an intermediate host snail to complete its life cycle. It has three different larval forms: miracadium, cercaria, and metacercaria. The parasite's infectious stage is called metacercaria[11]–[13].

II. CONCLUSION

In summary, Enterobius, Wuchereria and Schistosoma are three different types of parasitic worms that can cause significant health problems in humans, and can be prevented by taking appropriate preventive measures such as avoiding contaminated food or water and taking preventive medication.Enterobius, Wuchereria, and Schistosoma are three important parasitic infections that affect humans globally. Enterobiusvermicularis, also known as pinworm, is a nematode that commonly infects children and causes anal itching and other gastrointestinal symptoms. It is typically treated with anthelmintic drugs, and prevention involves good personal hygiene and sanitation practices. Wuchereriabancrofti is a filarial nematode that causes lymphatic filariasis, a chronic and debilitating condition characterized by lymphedema, elephantiasis, and hydrocele. Transmission occurs through the bite of infected mosquitoes, and prevention and control rely on mass drug administration and vector control.

REFERENCES

[1] I. E. Lalangpuling, P. O. Manengal, and K. Konoralma, "Personal Hygine dan infeksi cacing Enterobius vermicularis Pada Anak Usia Pra Sekolah," J. Kesehat. Lingkung., 2020, doi: 10.47718/jkl.v10i1.891.

[2] O. Akıncı, N. Kepil, Y. Z. Erzin, and A. K. Zengin, "Enterobius vermicularis Infestation Mimicking Rectal Malignancy," Turkiye parazitolojii Derg., 2020, doi: 10.4274/tpd.galenos.2019.6617.

[3] J. Sousa et al., "Enterobius vermicularis-associated appendicitis: A 22-year case series and comprehensive review of the literature," J. Pediatr. Surg., 2022, doi: 10.1016/j.jpedsurg.2021.09.038.

[4] S. Nechi et al., "Bile duct infestation with Enterobius vermicularis diagnosed after cholecystectomy: About two case reports," Clin. Case Reports, 2021, doi: 10.1002/ccr3.5038.

[5] K. Tomanakan, O. Sanpool, P. Chamavit, V. Lulitanond, P. M. Intapan, and W. Maleewong, "Genetic variation of Enterobius vermicularis among schoolchildren in Thailand," J. Helminthol., 2020, doi: 10.1017/S0022149X18000962.

[6] K. Kubiak, E. Dzika, and Paukszto, "Enterobiasis epidemiology and molecular characterization of Enterobius vermicularis in healthy children in north-eastern Poland," Helminthol., 2017, doi: 10.1515/helm-2017-0042.

[7] S. A. Shlash, N. M. Hasnawi, and H. A. Kadhum, "Influence of melatonin in the treatment of experimental enterobius vermicularis infection," Indian J. Forensic Med. Toxicol., 2021, doi: 10.37506/ijfmt.v15i1.13425.

[8] A. A. K. Al-Daoody and E. N. H. Al-Bazzaz, "Impact of Enterobius vermicularis infection on biochemical parameters in the blood of children in Erbil Province, Iraq," BMC Infect. Dis., 2020, doi: 10.1186/s12879-020-05064-w.

[9] Z. D. Hammood et al., "Enterobius vermicularis causing acute appendicitis, a case report with literature review," Int. J. Surg. Case Rep., 2019, doi: 10.1016/j.ijscr.2019.09.025.

[10] J. Pohl, "Enterobius vermicularis Infection," Video J. Encycl. GI Endosc., 2013, doi: 10.1016/S2212-0971(13)70158-4.

[11] T. S. Anuar, L. Jalilah, M. Norhayati, M. Y. Azlin, M. S. Fatmah, and H. M. Al-Mekhlafi, "New insights of Enterobius vermicularis infection among preschool children in an urban area in Malaysia," Helminthol., 2016, doi: 10.1515/helmin-2015-0077.
[12] J. A. Antilahy et al., "Acute appendicitis caused by Enterobius vermicularis: Observations from a case report," IDCases, 2021, doi: 10.1016/j.idcr.2021.e01227.
[13] W.H. Kang and S.-C. Jee, "Enterobius vermicularis (Pinworm) Infection ," N. Engl. J. Med., 2019, doi: 10.1056/nejmicm1811156.

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An Overview of Constitutional

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Abstract*— The term constitutional alludes to the fact that the Constitution, the country's ultimate law, serves as the foundation for American governance. The Constitution lays major restrictions on the authority of the federal and state governments in addition to laying out the foundation for these institutions. In this chapter author is discusses the problem majoritarianism. It provides the framework for the establishment and functioning of government institutions, as well as the rights and freedoms of individuals. Constitutional law is a fundamental aspect of any legal system, as it sets the basic rules for the distribution and exercise of power in a society. This field of law covers a broad range of topics, including separation of powers, federalism, individual rights and liberties, and the structure and organization of government. In order to ensure that constitutional law remains relevant and effective, it is subject to ongoing debate and interpretation by legal scholars, lawmakers, and judges.

***Index Terms*— Constitutional, Democracy, Government, Legal, Law.**

I. INTRODUCTION

We consider these realities to be obvious that all men are equal by birth that individuals possess certain unalienable rights that were given to them by their creator. Life, liberty, and the pursuit of happiness are among these. Governments are established among men to protect these rights, and they are legitimately empowered by the agreement of the governed. Every time a form of government starts to work against those purposes, the people have the right to change it or abolish it and install a new one, based on the values and power structures that, in their opinion, are most likely to promote their security and pleasure [1],[2].

It may seem strange to start a book on the law and politics of the British constitution by reading from the Declaration of Independence of the United States, which was written by Thomas Jefferson in 1776. The Declaration was created as a result of the American colonists' rejection of the British constitutional order that had previously controlled their affairs. First and foremost, Jefferson wanted to justify the colonies' resolve to revolt against the British, and second, he wanted to lay forth the broad moral ideals that the revolutionaries would fight to uphold in their new nation [3],[4].

While there is substantial agreement between American and British ideas of the moral foundations that should guide a nation's constitutional structures, this book opens with Jefferson's statements. Yet the main reason they were picked is because they continue to succinctly and elegantly articulate the problems that constitutional lawyers in any contemporary democratic nation should be concerned about [5],[6].

We may compare the Declaration's sentiments to the many conceptions of the British constitution put out by the writers of a number of contemporary textbooks. The constitution, according to Colin Turpin, is "a body of rules, conventions, and practices that regulate or qualify the organisation and operation of government in the United Kingdom." According to DE Smith's classic introduction, the constitution is "a central, but not the only feature, of the rules regulating the system of government. The constitution is, in Vernon Bogdanor's words, "a code of rules which aspire to regulate the allocation of functions, powers, and duties among the various agencies and officers of government, and defines the relationship between these and the public [7],[8]. These writers are attempting to define the constitution and explain its format. The Declaration, in contrast, explains the purpose of a constitution by outlining the tasks it does. This book offers a functionalist interpretation of the British constitution that is more interested in the "Why?" of modern arrangements. It presupposes that a constitution's main function is to define and uphold the fundamental moral ideals of a community. This is not meant to indicate that understanding the constitution's form is irrelevant or that questions of form and function are unconnected; rather, it is meant to emphasize that one cannot comprehend the law of the constitution without seeing beyond its outward manifestation.

There isn't a single phrase "definition" of the constitution in the text. Instead, the whole book may be considered a "definition." Yet all that this book offers is a single definition, which is no more definitive than any other formula a learner would come upon. British constitutional law is a field that is equally interested in politics, history, and the law. It is sometimes difficult to come up with concrete solutions to specific situations, but it is virtually always viable to put up believable alternatives to the methods that have seemed to be used.

This introduction specifies certain evaluation standards that readers may want to keep in mind while they read the remainder of the book's description and analysis of Britain's existing constitutional arrangements. The next pages examine a number of hypothetical issues relating to the potential roles that a constitution may play in order to illustrate how complicated the topic we are researching is. We also pay considerable attention to the strategies used by

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the American revolutionaries to overcome the constitutional challenges they encountered after the United States gained independence. The American answer is not necessarily "better" than the British one in any way, and this book makes no attempt to compare the two. The structure of the British and American systems, however, is substantially unlike. For our purposes, this is extremely important because the Americans insisted that their revolution was waged not against the moral precepts of the British constitution but rather against the tainting of those precepts by the British Parliament, the British government, the British judiciary, and the British people. Talk about these historical issues again soon. To guarantee that a nation is run in accordance with "democratic ideals," which we would instinctively perceive as the most essential function a constitution should carry out, we might find it helpful to first spend some time thinking about what that means.

II. DISCUSSION

A. Democracy

The fact that contemporary Britain is a democratic nation may be considered a modern "self-evident truth" since so few observers would ever contest it. Yet if we go above the surface of that presumption, we could discover that we disagree about what constitutes a democratic state, and that we arrive at various assessments of how democratic Britain truly is. But that's a decision that's better left for later. We should now more logically inquire as to what standards we may use in providing answers to these queries.

B. Few fictitious situations

The fictitious scenario that follows assumes that all adult people in the relevant nations have one vote and that legislation are created via referendums. If the proposition is approved by 50% plus one of the voters, it becomes law. Assume that a majority of people in both nations A and B decide they will not put up with the poverty brought on by a downturn in the economy that has left 20% of the adult population jobless.

C. Constitutional implications of economic policy

A new legislation in nation A offers a robust program of jobless compensation. The benefit program is supported through levies on the richest 30% of the population that are quite high. The legislation thereby protects the most vulnerable people in society from the dangers of famine and homelessness. But, it denies the wealthiest residents a significant portion of their money, which they had intended to use to pursue their own personal types of pleasure. Men and women over the age of sixty are required by law in nation B to retire from employment. The folks who must retire will get a meager retirement pension. The bulk of the population incurs only small financial costs as a result of this law's efforts to eliminate unemployment, while those over 60 who do not wish to retire face severe hardship.

How would we assess the "democratic" nature of these laws? Should we merely inquire as to whether the legislation has the support of the majority and stop there if the answer is yes? If so, democracy would apply to both laws. Or should we insist that there be a correlation between the amount of support a law receives and how harshly it affects certain minorities—that is, the harsher the legislation, the more support it has to get to be democratic? Might we then agree that forcing individuals to retire from work is more "severe" than levies on the wealthy if we adopted that principle? If so, might we also agree that although big tax rises would be 'democratized' by 50%+1, compulsory retirement would only be so if it had 55% support? Thirdly, should we draw the conclusion that certain laws would have such terrible repercussions that a democratic society would never pass them, even if they had 100% of the people's support? If so, would mandating early retirement at age 60 or significantly raising taxes on the richest members of society fit under this heading?

D. Warfare as a constitutional concern

As an alternative, assume that nation C declares war on nations E and F. A law allowing the government to imprison anyone suspected by certain government employees of having connections with the enemy country is passed in country E because the majority of voters there decide that winning the war is more important than preserving individual liberties out of concern that such suspects might be spies or saboteurs. Attacks from Country C are ultimately repulsed. Over the three years the conflict lasts, many thousand individuals are detained in jail according to the legislation. No inquiry is ever conducted to determine if the government's concerns about individuals who are arrested are justified.

The majority of people in nation F reject the proposed War Emergency Powers Detention Legislation after deciding that it must give moral precedence to individual liberty above winning the war. In the end, enemy operatives are successful in destroying military infrastructure and demoralizing the populace to the point that nation F is destroyed and ruled by country C.

Which nation performed democratically in this situation? Does protecting the nation's independence allow for the restriction of people's right to bodily liberty? Does the answer to this issue rely on how intrusive the interference is or how serious the aggressor's threat is? or the result of the conflict? Would we need to know the percentage of voters in favor of each legislation in order to determine its democratic status?

E. The fight against terrorism is a constitutional concern

In a third scenario, let's say that a political extremist organization has lately carried out a number of terrorist strikes in nation X. The assaults, which comprised placing explosives in busy retail malls, resulted in numerous fatalities and injuries. The following suggested law would combat terrorism. There are five s. With a 90% turnout, 51% of

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voters favor the proposed legislation. The s make sure that:

Each police officer has the right to detain and interrogate anybody they believe to be a terrorist or a supporter of terrorist activities. The individual may be held without being charged with a crime for up to 72 hours.

Any police officer with the level of Inspector or above may allow the continuing detention of any individual held according to Section for a period of up to twenty-eight days. 1. If a police officer feels that lightly hitting a person held under 1 or 2 will provide information that may help stop a future terrorist act, they may do so.

If a police officer thinks that torturing or severely beating someone imprisoned under 1 or 2 will provide information that may stop a terrorist act from happening soon, they may do so. No action purportedly conducted in accordance with any of the provisions of this legislation may be the subject of any legal action in any court.

We may accept that those who suggested and supported the legislation did so because they really believed that doing so would save many people from being murdered or hurt in terrorist acts. Many of the law's backers also think that the police would never truly imprison somebody who wasn't connected to a terrorist organization in some manner. Those who favor the legislation believe that it must be used to completely innocent individuals, some of whom may suffer terrible torture-related injuries, but that it is worth it to lessen the frequency of terrorist strikes. Should we include the reasons why people supported the legislation when analyzing it? And if so, which group is functioning in a more "democratic" manner—the first or the second?

It is also obvious that different parts of the law interfere in varying degrees with the physical liberty and wellbeing of those who are imprisoned by it. Should the degree of support each provision receives affect how "democratic" we judge it to be? If so might we agree, even only in the context of nation X being exposed to terrorist assault, that a three day imprisonment is such a trifling affair that the barest of majorities is sufficient to give 1 a democratic character? What standards should we use to determine severity, therefore, if we accept the idea that interferences that are more severe need a greater amount of support? Is, for instance, a compassionate twenty-eight day confinement more "severe" than a light beating and three day release? If 5 were deleted, would our opinions on the law's acceptability alter significantly?

Moreover, by closely examining the hypothetical law-making process, we may quickly expound on the issues that such "laws" and the constitutional regimes in which they are formed pose. If it turned out that the legislation passed in nation A was backed by the 70% of the populace who would not be required to pay more taxes to fund it but opposed by the 30% who would have their incomes lowered if the new system was implemented, would our conclusions about "democracy" change? Or, conversely, that it was opposed by many jobless people who saw it as a patronizing loss of their dignity and self-respect but supported by all of the wealthiest 30%? Similarly, if we discovered that practically all persons over the age of sixty enthusiastically supported the new legislation passed in nation B, would our opinions about the law's democratic character change? If we learn that neither nation allows jobless people to vote in the legislative process, does that make either legislation more or less democratic in our eyes?

How important would it be to our assessment of country X's Prevention of Terrorism Law's democratic credentials to know that many of the supporters of the law were unclear on what was meant by the term "torture" used in 3 or were unaware that a person who was released after being detained for the maximum twenty-eight days allowed by 2 could be detained again the next day?

F. As a social and political agreement, a constitution

We may all agree that the several possible responses to those hypothetical questions all somehow include the concept of "permission." It is challenging to find issue with Jefferson's assertion that "government derives its rightful powers from the consent of the governed" as a statement of general principle. As we go further and ponder what precisely the term "consent" refers to, issues start to surface.

Even in purely intellectual terms, the concept of a constitution as a kind of "contract" made between the people or between the people and their rulers was not new in 1776. The notion of "direct democracy" was explored by French philosopher Jean-Jacques Rousseau via an idealized tiny city state in which each citizen individually engaged in creating the rules they had to live by. In such a society, the legality of every legislation would depend on the populace's ongoing, explicit assent to the legislative process. The concept of a divine, natural, or God-given form of governance was rejected by Rousseau; according to him, men and women were not created in a certain way or endowed with the "inalienable rights" that the American revolutionaries were so eager to protect. According to Rousseau, the formation of the government came about as a consequence of agreements reached between each individual citizen and the population as a whole. Hence, all government activity had a "contractual" foundation; according to their constitution, the rights and duties of the people stem from agreements that they voluntarily entered into.

The idea of constitutions as contracts was further developed in John Locke's renowned Second Treatise on Government, which was originally published in 1690. Locke, in contrast to Rousseau, believed that society was governed by a kind of natural or divine law that placed restrictions on human behavior. It is irrational for Men to be Judges in their Own Matters, for example, is one of the natural laws that the government was established to offer means for enforcing. These rules served as the framework within which the government worked. Self-love will lead men to favor themselves and their friends, and vice versa. Ill nature, passion, and retaliation will drive people to overreact in their

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attempts to punish others. In light of the fact that nothing but confusion or disorder can result from this, God undoubtedly instituted government to tame human prejudice and violence.

In their exercise in abstract, academic philosophizing, Locke and Rousseau drew perfect answers to fictitious issues rather than proposing a comprehensive plan that could be put into action right away in their respective nations. In fact, it was challenging to find any historical instances of such idealized thoughts being put into effect in the early 1700s. According to David Hume's renowned 1748 essay "Of the Original Contract," almost all governments that are in place today or for which there is still any historical documentation were first established through usurpation, conquest, or both, without any pretense of free consent or willing subjection of the populace.

The American and French revolutionaries used their military conflicts to attempt to build a new, "ideal" kind of constitutional order, but Locke and Rousseau's works served as an essential source of inspiration for them. The concept of constitutions as political covenants or contracts, however, poses significant challenges even on an abstract, hypothetical level. As Rousseau acknowledged, the first of them is "to determine what those covenants.

To preserve individual individuals' "property," which Locke defined broadly to include their lives, their bodily and spiritual liberty, as well as their land and belongings, the development of government was seen as necessary. These issues may be seen as entitlements that people drew from "natural law," which is clearly where Jefferson got the idea for "inalienable rights" from. The words are too ambiguous to allow for a comprehensive definition. Yet, by concentrating on the particular goals of the American revolutionaries, we might get a better idea of the problems they may have addressed.

The British government was criticized in the Declaration for both the process used to create laws and their actual substance. The argument's main tenor was that Britain was attempting to impose "an absolute Tyranny over these States," but the broad charge included several particular grievances. For instance, Jefferson said that the British "imposed taxes on us without our assent" and "had standing troops among us in times of peace without the consent of our governments." Jefferson is not saying that taxes or the upkeep of an army during peacetime are inherently undesirable aspects of governmental authority, but rather that they are only appropriate if "the people" who would be impacted by the measures have consented to them. Jefferson also noted British behaviors that were ostensibly undesirable in and of themselves. For instance, the British had repeatedly dissolved Representative Houses and then refused for a very long time to allow others to be elected. They also refused to pass laws to accommodate large districts of people unless those people gave up their inalienable right to representation in the legislature, a right that was only formidable to tyrants.

This deeply felt complaint implies that Jefferson believed that no aspect of the democratic process can be acceptable if "the people" are unable to elect their chosen legislators on a regular basis. Without this freedom of choice, the public could not "consent" to the laws, which made them ineffective as "just" laws. According to a third group of objections, certain laws were passed that "the people" could not, even if they wanted to. The British rules that "deprive us in many situations of the advantages of Trial by Jury" and "transport us across seas to be prosecuted for fictitious misdeeds" upset the Americans, for instance. The colonists seemed to view the idea that one's guilt in criminal cases must be proven by a jury of one's peers as well as the stability and clarity of the criminal law's application as basic foundations of social organization. Similar significance may be given to Jefferson's assertion that the British Monarch had: impeded the administration of justice by refusing to give his consent to laws establishing the judiciary's authority. Judges are now solely subject to his Will, including how long they remain in office and how much they are paid.

Therefore, it may be simpler to pinpoint exactly the features of government behavior that the revolution was fought against than for. The claims that "All men are created equal" and have the "inalienable right to life, liberty, and the pursuit of happiness" are seductive, bordering on being enticing. Such feelings might be seen as essential components of a democratic constitutional system. But what do they really mean? Broadly speaking, their concern seems to be with the nature of a government's legal powers as well as the procedures used to wield those authorities. The majority of this book examines those issues within a British setting, but we should first have a look at the responses that Jefferson and his contemporaries had to these issues.

The first constitution dubbed "modern"

The constitutional agreement, at which the American revolutionaries eventually settled in 1791, is shown in the pages that follow in a straightforward manner. It is meant to serve as a benchmark for comparing other ways that contemporary nations could organize their constitutional frameworks, rather than as a yardstick for judging the suitability of the British constitution's specifics.

G. A big issue is majoritarianism.

A general mistrust of human nature may be characterized as the guiding idea that guided the American constitution's founders' discussions. One of Jefferson's contemporaries, James Madison, eloquently encapsulated this idea in The Federalist Papers No. 10: Many viewpoints will develop as long as man's reason is still imperfect and he is free to use it. The fervor for differing viewpoints on religion, governance, and the uneven distribution of property has, in turn, split humanity into parties, stoked their resentment against one another, and made them far more inclined to annoy and oppress one another than to work together for their common benefit.

Madison did not believe that attempts to stifle difference of

thought were worthwhile. Men's differing opinions on a wide range of topics were a natural and essential part of both individual and social liberty. However, he was very concerned to learn from history the dangers that a nation faced from within its own borders due to the formation of distinct political "factions" made up of citizens who shared the same "vexatious" or "oppressive" sentiments. A faction is defined as: a group of citizens, whether they constitute a majority or minority of the whole, who are united and motivated by some common impulse of passion, or of interest, hostile to the rights of other citizens, Legislation that reflected the preferences of the electoral majority would guarantee that minority faction-favored repressive or illogical plans would not be made legal. But, Madison argued that when repressive or illogical views were supported by a majority, society was not protected by this "majoritarian" method of lawmaking. Majorities might be misinformed about crucial issues, temporarily convinced to disregard their better judgment by the alluring rhetoric of charismatic leaders, or simply be willing to forgo their country's long-term welfare in order to gain a short-term, all advantage. Therefore, just because an idea enjoyed majority support does not necessarily imply that it is conducive to the "public good." Hence, Madison claimed that the Constitution's effort to guarantee that "the majority be made incapable to concert and carry into action Schemes of tyranny" was its most crucial feature and one that his fellow Americans should follow.

Federalism, a division of powers, representative governance, and supra-legislative "basic" rights are the remedies. By implementing a "representative government," according to Madison, which would see representatives elected by the people to represent them in a legislative assembly instead of the people directly creating laws, the hazards of faction may be lessened. By channeling public opinions via a selected group of individuals, whose intelligence may be best able to perceive the actual interest of their nation, Madison sought to: refine and broaden public ideas; and midway through the 1780s, James Madison, Alexander Hamilton, and John Jay wrote articles collectively known as The Federalist Papers. The second Constitution that the revolutionaries established after the War for Independence was the US Constitution as it is known today. The so-called Articles of Confederation, the first constitution, and supporters of the new Constitution engaged in a heated debate that gave rise to the Federalist Papers. Whose passion of justice and patriotism will be least likely to be sacrificed to short-term or partial concerns?

At this point, we may take a little detour and consider how Madison's ideas of "intelligent" lawmakers align with current conceptions of "democratic" governance. Let's go back to nations A and B, and say that laws are formed by 100 lawmakers who are chosen by the people to represent them instead of the people themselves; a legislation is adopted if a simple majority of legislators favor it. We may further assume that for the purpose of electing its legislators, both countries are divided into electoral districts, and each district returns one representative towards the legislature; all adult citizens have one vote in electing their representatives, and also the legislative seat is won by whichever candidate receives the most votes.

If we learned that ten of the fifty-five legislators who voted in favor of the law were from districts where the majority of voters opposed any tax increase and that the ten legislators in question had pledged to their constituents that they would vote against any such measure, would we still view the law as democratic? Would it impact our conclusion if the strength of the arguments put forward in favor of the bill during a legislative discussion was what ultimately convinced the 10 lawmakers to change their minds? The answer to this question presumably depends on how we respond to the logically precedential question of whether a legislator's role is simply to translate her constituents' wishes into law or whether she should instead use her discretion to determine the "best" course of action in a given situation, even if her constituents would prefer a different result?

The task of assessing the democratic nature of laws is made more difficult by a constitution that grants only a small group of citizens the authority to make laws. This is because we are then forced to consider not only the merits of the particular law in question but also the merits of the laws that govern how legislators are chosen and behave while making laws. Can we not challenge the 'democratic' foundation of any legal system? A adopted, for instance, if certain election districts had twice as many voters as others but still only sent one representative to the legislature? So, to go back to a well-known query, what if individuals without jobs were denied the right to vote? Might we be as unhappy about the legislative process if we heard that several seats in the legislature were up for grabs among four or five candidates, each of whom had about equal electoral support, resulting in the winner receiving votes from just around 30% of eligible voters?

The assumption that the people's representatives, once chosen, should have unrestricted freedom to debate any topic of their choice and to cast their votes in law-making in any way they pleased was a less problematic issue, at least from the standpoint of the American revolutionaries. The colonists' complaints about British interference with the functioning of their colonial legislatures have philosophical roots in Locke's assertion that "consent" to government demanded that the people's legislature should not be constrained by any laws: the Legislative is altered from assembling in due time, or from acting freely, pursuant to those ends for which it was constituted. Because it is not a specific number of men, nor is it their meeting, unless they also have the freedom to debate and the leisure to perfect what is for the society where the legislature exists. Governments are not defined by their names, but rather by how they employ and wield the powers that were supposed to go along with them. The government

encourages us to think about further facets of the Declaration's allusion to liberty. Regarding liberty in a physical and personal sense, Jefferson criticizes imprisonment for "pretended offenses." But, the Declaration also makes the case that liberty has broader, more inclusive implications, especially when it comes to issues involving freedom of expression and conscience.

This prompts us to revisit the idea of "consent" to governance. Jefferson and his contemporaries believed that "man" was a rational, independent person, and that "he" must make choices based on complete and correct information in order to maintain his liberty. The permission has to be given with knowledge. The American revolutionaries therefore put a great importance on defending individual citizens' freedom of conscience and speech in connection to political affairs. As a result, the colonists saw the limitations that Britain had imposed on the operations of representative colonial legislatures as an unacceptable violation of their collective liberty.

This specific aspect of "liberty" may be undermined in a variety of ways and is closely related to how we now interpret "democratic governance." If it were illegal for anybody to divulge specifics of lawmakers' statements or votes on the bills they were considering, for instance, would we then infer that no legislation passed by the legislative assembly of our hypothetical nation A could be democratic? In such a situation, voters would not be able to choose their favorite candidate for office in the next election because they would not be aware of which lawmakers had supported or opposed tax hikes. If we heard that it was illegal in society for anyone to criticize the laws passed by the legislature in an effort to persuade voters to elect new representatives in the next election, would we reach the same conclusion about nation B? These problems are undoubtedly of utmost importance to any effort to evaluate the suitability of the process by which legislators are chosen.

Madison's unique conception of "representative government" blatantly requires that one embrace the merits of encouraging a certain level of elitism in one's rulers and, as a result, necessitates that legislators disregard the unreasonable or oppressive emotions of the people they represent. However the 'representativeness' of the laws that are passed might be significantly diminished by this elitism. We the people of the United States, in order to establish a more perfect union, are the first words of the US Constitution's preamble. Yet, just 10% of the people living in the colonies were considered "the people" who choose the lawmakers who drafted the Constitution. The bulk of the 17 voters were unusually highly educated and wealthy men who were virtually always white and all male. It seems that the writers of the Constitution questioned that such people, who made up the majority of the population and constituted the establishment of the newly established system of government in the United States, could be depended upon to accept "reasonable" constitutional requirements.

We may draw the conclusion that the "consent" that the revolutionaries wanted was rather fictitious in light of such discriminating norms. We shall often revisit this issue in the context of British constitutional history and practice. But, we could also think it wise to worry about the authority that lawmakers might acquire after they have taken on their role as lawmakers. Madison understood that hoping that a system of representative government, in which legislators were chosen by an elitist electorate, would always produce rulers with the wisdom and capacity to forswear all objectives favored by factions of the population, was by no means a complete solution to the threat of tyranny. No matter how carefully they were picked, one could not always count on "patriotism and love of justice" overriding "temporary and partial motives" in the minds of one's chosen law-making representatives. 'In vain to argue that intelligent leaders would be able to reconcile conflicting interests and bring them all submissive to the public welfare,' in Madison's opinion. There won't always be wise leaders in charge. The issue of majoritarianism under such circumstances was just transferred from the realm of "the people" to the far smaller group of citizens who functioned as lawmakers. For the drafters of the US Constitution, this suggested that safeguarding "the public welfare" would include preventing the helmsmen of the state from setting sail for undesired destinations or, at the very least, imposing restrictions that made such travels very difficult.

III. CONCLUSION

Written laws that are endorsed by the populace of a nation are found in its constitution. It fosters communication and cooperation between the public and the government. It outlines the nature of a nation's government and how it ought to operate. A constitution must be dependable. It shouldn't be changed too often, and certainly not too readily either. It has a permanence that regular laws or Acts of Parliament do not have since it is the ultimate source of authority and the foundation for a country's political and legal institutions. The Constitution outlines the three main federal government branches and their respective responsibilities. It also specifies the basic legislation of the United States federal government. It is the oldest written national constitution still in use and has come to represent Western legal precedent.

REFERENCES

[1] T. Drinóczi, "Constitutional identity in Europe: The identity of the constitution. A regional approach," German Law Journal. 2020. doi: 10.1017/glj.2020.1.
[2] M. Bailly, N. Germain, B. Galusca, D. Courteix, D. Thivel, and J. Verney, "Definition and diagnosis of constitutional thinness: A systematic review," British Journal of Nutrition. 2020. doi: 10.1017/S0007114520001440.
[3] E. H. Abra and R. Wahanisa, "The Constitutional Court Ultra Petita As A Protection Form Of Economic Rights In Pancasila Justice," J. Indones. Leg. Stud., 2020, doi: 10.15294/jils.v5i1.35965.

[4] S. Butt, "Constitutional recognition of beliefs in Indonesia," Journal of Law and Religion. 2020. doi: 10.1017/jlr.2020.39.
[5] M. Avbelj, "Constitutional pluralism and authoritarianism," German Law Journal. 2020. doi: 10.1017/glj.2020.56.
[6] G. Romeo, "The conceptualization of constitutional supremacy: Global discourse and legal tradition," German Law Journal. 2020. doi: 10.1017/glj.2020.50.
[7] S. S. F. Regilme, "Constitutional democracy in crisis?," Democratization, 2020, doi: 10.1080/13510347.2019.1687446.
[8] D. C. Fajgenbaum and C. H. June, "Cytokine Storm," N. Engl. J. Med., 2020, doi: 10.1056/nejmra2026131.

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Federalism and the Separation of Powers

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Abstract— Federalism is a form of governance in which authority is shared between the national government and its component states and provinces. It is a systemic arrangement that allows for two types of politics to coexist: one at the central or national level, and another at the local, regional, or provincial level. In this chapter author is discusses the constitutional values as fundamental law. Federalism and the separation of powers are two key concepts that form the foundation of many modern democratic governments. Federalism refers to the division of power between a central government and regional or state governments. This system of government allows for a balance of power between different levels of government, which can help to ensure that power is not concentrated in any one location or entity. The separation of powers, on the other hand, refers to the division of government authority into three distinct branches: the legislative, executive, and judicial branches. Each branch has its own unique responsibilities and powers, and serves as a check and balance on the other branches to prevent any one branch from becoming too powerful.

Index Terms— Democracy, Government, Federalism, Fundamental Right, Law.

I. INTRODUCTION

The colonists' conception of themselves as members of a single country was not fully formed. Legally speaking, each colony had been established by "Charters" given by the British sovereign. 19 They had been given under somewhat varied conditions and at various dates. By 1776, each of the thirteen colonies or States had formed its own unique political and social culture, which was reflected in its legal system. But, the colonists also had a lot of similar philosophical and practical problems. The most urgent was undoubtedly defending and then winning their revolutionary war; this was a job that could only be accomplished if the colonies worked together and ceded some of their unique identities to a "national" military and political agenda. But, after achieving independence by such a concerted effort, the revolutionaries were confronted with the challenge of determining how to effectively organize the interrelationships between the country, the States, and the people. They ultimately came up with a "federal" constitution [1],[2].

The term "federalism" has a variety of connotations in the contemporary world. According to the American revolutionaries, the creation of several strong political societies inside a single nation state, each with great political authority within well-defined geographic bounds, would be a beneficial benefit of their federal constitution. Nevertheless, the Constitution restricted the political independence of each State by giving the newly established national government exclusive control over a number of administrative functions. Even while they were significant in and of themselves, those issues left in the exclusive purview of the States were not seen as being essential to the health of the whole country. Allowing each State's citizens to create their own "internal" constitutional arrangements to decide their respective preferences on these matters would therefore not be dangerous: if they wanted to indulge in factional sentiment within their own borders, that's fine, but their decisions would not be enforceable in the other States. It is perfectly legal for each State to create its own legislation to address issues that fall inside its functional and geographical purview [3],[4].

The idea for the formation of a federal state also comes from a certain interpretation of what "consent" means. It is predicated on the idea that a "people" with diverse factions holding opposing views on significant political matters would be more likely to consent to live under a constitutional order that provided numerous opportunities for those views to be given legal effect at the same time, even within a small geographic area, than under a system that permitted the majority of the entire population, acting through a national legislature, to impose its preferences on all issues on the entire country [5],[6].

Even if one believes that this approach is desirable, it is still difficult to decide which powers should be given to which branch of government. The Articles of Confederation, which were first ratified by the American revolutionaries, granted the national government almost no authority. After 10 years, the Articles were rejected in favor of a new constitutional arrangement that gave the national government far greater power. The national government would have the authority to manage the nation's postal service, regulate trade between the States and with other countries, grant national citizenship, maintain armed forces, wage war, issue the national currency, levy uniform nationwide sales taxes, conduct foreign policy, grant national citizenship, maintain military forces, and issue the national currency. States were not allowed to pass legislation addressing these issues [7],[8].

The central legislature of country A would therefore appear to have been unable to introduce its proposed anti-unemployment law, regardless of how many legislators supported it, since the constitution apparently did not give it the power to levy income taxes, if our hypothetical countries A and E were organized on the same federal lines as the

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United States' Constitution. Instead, if we agreed that the legislation proposed by nation E was a part of the national legislature's wartime authority, it may be passed even if the vast majority of people in a number of States vehemently opposed it.

Initially, Madison's worry regarding the risks of faction and majoritarianism was focused on limiting the ability of the federal government to enact laws that are unreasonable or oppressive when acting at the direction of either a majority of the people or a majority of the States. This protection was intended to be partially accomplished by expanding on the idea of representative governance. In the end, the Constitution established a representative system of national governance that achieved a balance between the general populace and inhabitants of the individual States. The Constitution's drafters meticulously divided the powers among the several national government entities. There would be two components to the Congress, the national legislature. The States' seats in the House of Representatives were to be distributed according to their respective populations. By contrast, the Senate would have two representatives from each State, regardless of population size. To pass legislation, a majority in each house would need to agree. 23 Simply put, neither a majority of the public nor a majority of the legislative representatives of the States could force their preferences on the other. The national government was nonetheless subject to the Constitution's power fragmentation notwithstanding the national legislature's dual character.

A distinct, "executive" arm of government led by an elected President was given the responsibility of carrying out laws passed by the Congress rather than the Congress itself. The President was also granted in addition to a limited set of personal powers. The Constitution's requirements that Congress meet at least once a year and that its proceedings, including the voting habits of its members, be published and play a significant role in the legislative process met Jefferson's reiteration of Locke's analysis of the prerequisites of effective legislatures. Only if the President signs them into law would measures that have received approval from both houses of Congress. Should he decline, the legislation would only become law if it was brought back to Congress and passed there by a two-thirds majority in both the Senate and the House? Hence, the President had the authority to veto the legislative choices of a slim Congressional majority but not those of a sizable majority in either chamber.

The electoral system used to elect the President and the representatives who would sit in the two houses of Congress served to emphasize the founders' original mistrust of popular enthusiasm. The President would be chosen by an "electoral college" of representatives from each State, while members of the House would be chosen directly by electors in each State. Senators would be chosen by each State's legislative body.

Hence, two parts of the national government were to be elected by what was in essence a "electorate inside an electorate," whose members would be judged likely to "refine and broaden the public views." The possibility that the holders of the most important national government positions would be motivated by "temporary or partial considerations" when they performed the task of enacting and implementing laws made within the confines of their respective constitutional competence, according to Madison, would be greatly reduced by this elitist process. The Constitution, however, went one step further in its efforts to ensure that the institutional and federal separation of powers, which the revolutionaries believed to be essential to the country's long-term security and prosperity, would be protected against the threat of internal factions, even if those factions should become powerful enough to control the country's legislative process.

A. Normative principles and a constitution that is super-legislative

The fact that the Americans believed their Constitution would serve as a "constituent" text may seem absurd to note, but the concept is quite important. The founding fathers considered the laws they had established to be "the greatest form of law" in American civilization. The Constitution served as the foundation for all governmental authority, and its provisions outlined the essential ethical and political tenets that should guide societal administration.

It is apparent that the Constitution's founders considered federalism to be a basic political principle. This was clear from the intended division of authority between the federal and state governments as well as from the processes by which the Constitution would be given legal standing. As Madison said in The Federalist Papers No. 39: "The people are to offer their approval and ratification, not as individuals constituting one undivided country, but as constituting the different and independent States to which they properly belong." Hence, the act creating the Constitution will be a federal one rather than a national one.

II. DISCUSSION

A. Constitutional values as fundamental law

Madison and the other founding fathers of the Constitution rejected the Locke an idea of "divine" law, which saw people as subject to a strict set of laws originating from a god. They were also unconvinced that an eternally set code of "natural law" that could never be changed could regulate the moral principles they wanted to rule the administration of their new country. Yet, they came to the conclusion that those "basic rules" should have a high degree of fixity after they had been successful in establishing the mutually accepted ideas that should be used to lay the foundations of governance. The moral ideals represented in the Constitution were not reached arbitrarily, and they should not be left up to the whims of the traditional institutions of government.

But, the founders were not so conceited as to believe that the opinions they had in 1789–1791 amounted to timeless

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truths, which would rule American society for all time. The federal Congress, the federal President, and the numerous State governments would all be entities of limited legal competence: they only had the authority that "the people" had given them in the Constitution and were unable to award themselves additional authority. "The people" was the supreme or sovereign legal power. The Constitution would need to be changed by "the people" if the Congress, the President, or any one or more States wanted to gain additional powers. The Constitution's drafters determined that, for this purpose, "the people" would express themselves via an unique legislative procedure including both the Congress and the States and requiring very huge majorities. Only proposed modifications that get approval from a two-thirds majority of both chambers of Congress and three-quarters of the States are allowed under Article 5 of the Constitution. 25 The essential moral principles outlined in the Constitution, according to Madison and his associates, needed to be firmly ingrained in society's political framework.

Hence, "the people" was not a legislative body that would meet continuously or even often. It would only take action on those rare instances when the vast majority of Congressmen and an even bigger majority of the States felt that it was necessary to change the basic laws of the nation. The law-making body known as "the people" was far from common.

B. Constitutional rights

In actuality, the Constitution underwent significant changes practically immediately after it was established. The Constitution was ratified with the presumption that Congress would draft amendment proposals before submitting them to the States for approval.

In 1791, ten amendments that have come to be known as the "Bill of Rights" were proposed. The first eight amendments specified a number of individual freedoms that were outlawed by the national government's institutions. They do not have to be mentioned in full here, but we may highlight some of their more significant clauses. Congress was not allowed to pass legislation that restricted freedom of speech, freedom of the press, or freedom of religion under the First Amendment. The Fourth Amendment prohibited national government agents from arbitrary home searches and the seizure of persons' possessions. The Fifth Amendment forbade the federal government from taking property from Americans without "due process of law" or from interfering with their lives or liberties. In criminal matters, the Sixth Amendment guarantees the right to a jury trial, while the Eighth Amendment forbids the use of "cruel and unusual punishments."

The "Bill of Rights" was once considered unnecessary by Madison and his followers. The only powers that Congress and the President had were those that the Constitution had given them. The Constitution impliedly prohibited the national government from acting in a way that would violate the "liberties" specified in the Bill of Rights since no authority had been granted to do so. Later, the Madisonian "sect" came to believe that it was important to explicitly defend these freedoms. This change in stance was partially motivated by a tactical need to quell opposition to the new Constitution and expedite its ratification. Madison acknowledged that the Bill of Rights would have inherent importance and serve as a declaration of fundamental moral ideas, which the American Revolution had been waged to uphold. The only way to change these clauses directly is via the Article 5 amendment procedure.

The choice to exclusively apply the Bill of Rights provisions against the national government and not against the States shows how important it was to the founders to maximize the political autonomy of the States within the Constitution's federal system. The citizens of the States were able to place similar limitations on the administrations of their individual States. After accepting the Bill of Rights' general acceptability, Madison himself had favored its expansion to State as well as Federal governments. Nothing in the first eight amendments' wording showed that they were to rule the States as well as Congress and the President, thus he found no support for this claim among the States or in Congress.

C. The Supreme Court's duty under the Constitution

The Constitution may not be much more than a blueprint. It provided a general framework within which the legislative process should be carried out. It did not issue comprehensive regulations that would address every potential issue in advance. The founders knew there would be confusion over the division of powers between the federal government and the states very regularly. The Bill of Rights may also raise questions about whether a Congressional act or a presidential decision "abridged the freedom of the press" or "imposed a harsh and unusual punishment." The United States Supreme Court was given the responsibility by the framers to provide a solution to these concerns.

In The Federalist Papers No. 78, Alexander Hamilton explained the Supreme Court's intended function. Hamilton believed that the Supreme Court would be the last arbitrator of the Constitution's interpretation. In Hamilton's opinion, limitations of this kind can only be preserved in practice through the courts of justice, whose duty it must be to declare all acts contrary to the manifest tenor of the Constitution void. "The people" had intended that the Constitution would impose agreed limitations on the powers of government bodies.

So, the Court would act as a buffer between the people and the legislature, ensuring that the latter stayed within the bounds of its mandate. A constitution is in reality basic law, and courts must treat it as such. The purpose of the people should always take precedence over the intent of their representatives when interpreting a constitutional provision.

This does not imply that the Supreme Court is to be in any way "superior" to the Congress; rather, it assumes that the people's authority is superior to both and that judges should

be subject to the latter's will when it conflicts with that of the legislative.

The effectiveness of the Court's decisions would depend not on any coercive power but rather on their legitimacy, which we may interpret as their ability to persuade the populace that they were in accordance with the meaning of the Constitution. Unlike the Presidency, the legislature, or the States, the Court had "neither sword nor purse."

The Supreme Court's justices would thus need to be chosen with great care because of their significant constitutional responsibilities. There are probably not many males in society who are knowledgeable enough about the law to be qualified to serve as judges, according to Hamilton. The number of people who combine the necessary integrity with the necessary knowledge must be much lower when accounting for the normal corruption of human nature.

The Constitution involves both the President and the Senate in the selection of Supreme Court candidates but did not define the intellectual or moral credentials that they should have. The President would propose candidates for judicial positions, but such individuals wouldn't be able to start serving until they had the Senate's approval. Hence, the President was unable to "load" the Court with nominees who lacked legislative support, but this was possible if the President and the Senate majority belonged to the same group. The pre-revolutionary habit or tradition that both politicians and the judiciary should treat the courts' "reading" of the law as a matter above factional politics had been emphasized by Hamilton, but it had become corrupted in the colonies. Hence, while choosing members of the court, politicians should abstain from taking personal or political profit into account, and judges themselves should do the same.

But, the founders did not rely only on Congressional and Presidential restraint to protect the Supreme Court's independence. After the judges took their positions, neither the President nor the Congress would be able to fire them for failing to agree with the choices the Court ultimately made. Supreme Court justices were to have lifelong appointments and their incomes were explicitly guaranteed by the Constitution itself, barring conviction for crimes or extremely immoral behavior.

D. The significance of judicial power

We might return to our fictitious countries to highlight the vast authority and responsibility that the American Constitution vests in the Supreme Court. If nations A and E had federal constitutions that were based on the original American settlement, country A's revenue-raising statute would seem to have been unlawful if it had been passed by the country's Congress because the Congress lacked the authority to impose an income tax. On the other hand, the imprisonment policies passed by country E's Congress seem to be a legitimate use of their wartime authority.

Assume, however, if the Supreme Court of nation a came to the conclusion that the statute in issue was really a measure to control trade among the country's several States by promoting economic development, and the tax so created was only an unintentional byproduct of that purpose. As a result, the measurement would be legal. Let's also imagine that the Supreme Court of nation E ruled that the statute instituting indefinite detention without trial violated the Eighth Amendment since it constituted a cruel and unusual punishment. It would be false to argue that just because the judges themselves were not elected politicians, Supreme Court judgments that went against the will of the elected Congress or President were inevitably "undemocratic." Such claims would only be conclusive if one identifies "democracy" with a legal system that grants absolute power to a slim majority of legislators. These would be less persuasive if one believed that "democracy" meant the defense of "higher laws" against the potentially ephemeral and uninformed opinions of the majority of one's lawmakers. Given such constitutional framework, charges of "anti-democratic" behavior might just as well be levied against elected officials who seemed to be trying to ignore the will of "the people," the source of their authority.

III. CONCLUSION

It required a revolutionary battle more than 200 years ago for the American colonies to free themselves from what they saw to be accept constitutional system. The new constitution that the United States later crafted represented a fundamental break from conventional British notions of how a nation should best oversee the interaction between its people and its government. Several countries that have developed or revised their own constitutional frameworks in the contemporary period have heavily emulated the ideals included in the US Constitution. We can point out that the creators of the US Constitution pre-served the institution of black slavery by leaving its abolition to the various States, lest it be claimed that Americans fashioned a "perfect" constitutional arrangement. As a result, while slave-owners considered their slaves to be "property," the slaves themselves had no inherent, unalienable rights, whether they be material or spiritual. Jefferson, who believed that all people were created equally, owned slaves. Yet those who drafted the Constitution who thought slavery was immoral were willing to accept it remaining in the southern States rather than face the chance that some States would reject the new constitutional arrangement. There is little chance of a bloody revolution to change our constitutional system in contemporary Britain. For more than 300 years, the nation has largely28 avoided the challenges brought on by violent warfare amongst groups of its populace. This underlying political reality may be enough for some observers to draw the conclusion that there is no need to even consider whether the constitution is adequate, much less spend time on suggestions that would advocate major changes to its core. But, as we go into the twenty-first century, there is intense discussion over how the constitution operates.

REFERENCES

[1] C. S. Herrera, "The keys of the supreme court: Political fragmentation and constitutional litigation in Mexico," Rev. Mex. Sociol., 2020.

[2] D. S. Rubenstein, "Supremacy, Inc.," UCLA LAW Rev., 2020.

[3] T. O. Shilyuk, "Principles of State Regulation in the Field of Genetic Engineering2," Actual Probl. Russ. Law, 2020, doi: 10.17803/1994-1471.2020.116.7.030-038.

[4] K. Ohazuruike and M. U. Mbanaso, "Federalism and the Challenges of Democratization in Nigeria: Lessons from the Swiss Model," J. Glob. Soc. Sci., 2020, doi: 10.31039/jgss.v1i1. 80.

[5] F. L. Francis, "In memoriam: The Republican form and the separation-of-powers among the four branches of government," Rev. Bras. Polit. Publicas, 2020, doi: 10.5102/RBPP.V10I1.6461.

[6] M. Salikov, "Federalism in russia: Current state and emerging trends," BRICS Law J., 2020, doi: 10.21684/2412-2343-2020-7-4-127-152.

[7] M. J. C. Vile, "A government of limited powers The challenge of American history – Federalism – The separation of powers – The Bill of Rights – Unity and diversity – Politics and the Constitution," in Politics in the USA, 2020. doi: 10.4324/9780203161807-7.

[8] C. Cancela-Outeda, "The post-crisis European Union before the political Union: Coordinates and keys of the future institutional architecture," in The EU in the 21st Century: Challenges and Opportunities for the European Integration Process, 2020. doi: 10.1007/978-3-030-38399-2_8.

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Parliamentary Sovereignty in Government

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Abstract— The concept of parliamentary sovereignty holds that the legislature has the power to make and repeal any laws since it is considered to be superior to the executive and judicial arms of government. In this chapter author is discusses the Diceyan theory. Parliamentary sovereignty is a principle of constitutional law that holds that the legislative body of a government has ultimate authority over all other branches of government and that its laws cannot be overruled or altered by any other body or institution. This means that parliament has the power to make or repeal any laws it sees fit, without interference from any other entity, including the executive or judicial branches.

Index Terms— Constitution, Government, Law, Parliamentary, Sovereignty.

I. INTRODUCTION

It is useful to conceive of "laws" as a formal means by which a "democratic" society communicates its assent to the manner in which it is governed while analyzing how constitutions function. The US Constitution is a prime example of a society changing its legal framework fundamentally as a result of its citizens' rejection of the previous system of governance, if one recalls one's allusions to the American Revolution [1],[2]. The United States' constitution demonstrates the dedication of its authors to what is seen in many contemporary western cultures as a fundamental, albeit disputed, tenet of democratic ideology. In a nutshell, this concept states that in a democracy, the more significant a particular rule is to how society is governed, the more challenging it should be to modify that law. One may argue that this is because it would be undesirable for basic laws to be open to change without the "permission" of the governed. Modern constitution builders must grapple with three challenging issues: first, how much weight should be given to certain values; second, how much permission should be required to alter those values; and third, how should that agreement be represented [3],[4].

The assent of two thirds of the members of the federal Congress and the legislatures of three quarters of the fifty states is required in order to change the provisions of the United States Constitution. Less than thirty amendments to the Constitution have been made since it is difficult to secure this level of assent. The Constitution establishes solid legal limits that define the nature of the American people's consent to the powers of their government, which degree of permanence may allow us to declare. The US Constitution may not always forbid tyranny of the majority, but It does forbid tyranny of minority and tiny majorities [5],[6].

In the USA, most laws are created within the Constitution's defined parameters of consent. These laws deal with matters that are not essential to society's core principles and may thus be altered more easily. The Congress can change some, but individual States can change others. Most laws that are not deemed important to society's continuing wellbeing may be changed with a simple majority vote in the relevant legislature. The American system safeguards core principles by requiring a lengthy, super-majoritarian legislative procedure before any changes can be made. A review of early seventeenth-century English case law shows various rulings in which the judges expressed the opinion that certain principles were so ingrained in the English constitution as to be impervious to change. The "inalienable rights" that Thomas Jefferson mentioned un the American Declaration of Independence are likely comparable to these ideas. Several judges were prepared to assert that the different organs of government were constrained by a system of "natural law" or "divine law [7],[8].

For instance, Chief Justice Coke had stated in Dr. Bonham's Case1 in 1610: "And it appears in our books, that in many cases, the common law will control Acts of Parliament, and sometimes adjudge them to be utterly void: for when an Act of Parliament is contrary to common right or reason, or repugnant, or impossible to be carried out, the common law will control it, and adjudge such Act to be void."

In the case of Day v. Savadge, which was decided five years later, Chief Justice Hobart said that "even a Parliamentary Act framed against natural justice, such as to make a man judge in his own case, is unlawful in itself, because jura nature sunt immutable, and they are leges legum."

2 In the same way, Keble J. had said in R v. Love in 653 that "Anything is not consistent to the law of God, or to good reason which is upheld by scripture whether it Acts of Parliament, customs, or any judicial actions of the Court, it is not the law of England.

The complexity of the legal defenses put out in these situations need not keep us here. It is important to note that there have been times in English constitutional history when it appears that there were widespread beliefs that there were

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fundamental moral or political principles that could not be changed in any way by any number of people, through any type of law-making process. Furthermore, it was believed that the courts would uphold the integrity of those principles.

II. DISCUSSION

A. The Diceyan theory

A similarly intricate constitutional framework is not present in contemporary Britain. The seventeenth-century natural law concepts are no longer held in high regard. And unlike the Americans, we do not agree that a challenging and convoluted amendment process is the best way to protect essential constitutional ideals. The British constitution's "fundamental premise" may be summed up in a simple remark. The highest form of law in the British legal system is a statute, which is a piece of legislation created by Parliament. It is believed that the British Parliament is a sovereign legislator.

The sovereignty of Parliament, a recent work by Goldsworthy, need to be used as the primary source for understanding and applying practices from the seventeenth century at this time. According to Goldsworthy's critique, Coke was asserting an authority of interpretation rather than the invalidation of statutory provisions; see particularly ibid. We mostly refer to two sources when defining this idea of parliamentary sovereignty. The first is the political developments of the latter part of the seventeenth century, which saw the last civil war in England. 5 A V Dicey, an Oxford law professor, developed the second legal theory in the 1880s and published it in the first edition of his renowned textbook an introduction to the study of the law of the constitution.

Dicey had a significant impact on British constitutional law. In many ways, this is sad. Several of Dicey's political beliefs at the time The Law of the Constitution was initially published would be seen as wholly immoral by modern standards. Democracy as it is generally understood did not find favor with Dicey. He was vehemently opposed to, for instance, permitting women or members of the working class to vote in legislative elections. 6 Yet it's crucial to comprehend his theory's fundamental components. The idea of parliamentary sovereignty, according to Dicey, consists of a positive limb and a negative limb.

B. Dickey's theory's positive and negative strands

The fundamental tenet of the Diceyan view of parliamentary sovereignty is that Parliament has the authority to enact or repeal any legislation at any time. No matter what the text of a Bill is, it becomes an Act if it receives the approval of a majority of House of Commons members, a majority of members of the House of Lords, and the Monarch. There are no restrictions on the content of statute legislation in legal terms; Parliament is free to pass whatever law it sees fit. It also doesn't matter how large the majority is in favor of a specific bill; legislation that is approved by a majority of one in both the Commons and the Lords has the same authority as legislation that has the support of all members of both houses. Moreover, there is no difference made between "constitutional" law and "ordinary" law. Parliament enacts laws in the same manner for little subjects as it does for problems that are of the utmost importance.

An Act of Parliament's legitimacy cannot be contested in court, according to the argument made in the negative limb. The British constitution does not have a provision for invalidating an Act of Parliament. According to Dicey's approach, a law's substantive moral meaning is immaterial in terms of the law, hence judges cannot use natural law or divine law to declare a statute to be "unconstitutional." According to the Diceyan interpretation of the constitution, the intention of Parliament as reflected in the language of an Act is the highest form of law. We have a straightforward premise to build our analysis of the constitution upon thanks to the negative and positive limbs of Dicey's theory. It will become obvious as we look more closely at the issue that it is not nearly as cut and dry as Dicey's contemporary pupils would have us believe. Yet, it is helpful to take into account the sources that modern proponents of Dicey's thesis reference to support his claims before evaluating critiques of this mainstream position. Why do we consider statutes to be the purest form of law? The three characteristics of parliamentary sovereignty as it exists in England are as follows: first, the ability of the legislature to change any law, regardless of how fundamental, freely and in the same way as other laws; second, the lack of any legal distinction between constitutional and other laws; and third, the absence of any judicial or other authority with the power to void an Act of Parliament or to treat it as unconstitutional.

C. Parliamentary sovereignty's political foundation—the "beautiful revolution"

It is often beneficial to take into account the events of 1688 while examining modern constitutional practice. The fight for dominance between the House of Commons, the House of Lords, and the Monarchy is the main topic of British political history in the seventeenth century. The struggle culminated in the civil war, Charles I's death, and Oliver Cromwell's short administration, Charles II's return to the throne, the subsequent overthrow of James II in 1688, and the coronation of William of Orange and his wife Mary as joint rulers. Less dramatically, disputes about the scope of the King, Commons, and Lords' relative powers plagued England throughout the seventeenth century. The King and the several houses of Parliament hoped that the courts would issue judgements that favored their own preferences. This dispute was fought as often in the courts as it was on the battlefield. As number four indicates, the courts changed sides in these conflicts as expediency and principle necessitated. But, on certain times they drew a distinct line; in the natural law or divine law cases already discussed, the judges were essentially stating that neither parliamentary acts nor the monarch's actions were superior. Both were governed by the

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rules of God and nature, and only the judges could tell what these universal precepts included. According to the functionalist view, the English constitution would have made the court the "highest source of law."

The Stuart rulers, who adhered to the idea of kings' divine prerogative, did not find such logic persuasive.

10 The theory gave the Monarch alone all legal power. The justification for this belief was given by James I in 1610: Kings are not only God's lieutenants on earth, but even God himself refers to them as Gods. exert some semblance of divine authority on earth; they create and destroy their people; they have the ability to raise the dead and lower the living; they are judges over all their subjects and in all matters, but they are only answerable to God.

James I would have denied any charge that this asserted power amounted to tyranny since he believed that an oath he made upon becoming king required him to use his authority in accordance with the law. Yet, the substantive validity of the oath was constrained since he also asserted the right to change such laws at pleasure. Such broad assertions were not made by the preceding Tudor monarchy, which created the groundwork for a governance organization that may be recognized as modern. James' philosophy was not accepted by both the Commons and the Lords. Both committees used constitutional ideas that had been there for a very long time to restrict the Stuart monarchs' actual legal authority.

Since the thirteenth-century signing of the Magna Carta, it has been widely understood that the Monarch cannot impose taxes without "Parliament's" consent. In some ways, the creation of the Magna Carta may be paralleled to the American revolution. Those incidents caused a profound tearing apart of the society's preeminent political principles. They made it clear that the current administration was no longer subject to Magna Carta's Article 14's approval. Article 14 refers to "the archbishops, bishops, abbots, earls, and larger barons, by writ written to each separately, and all other tenants in capite by a general writ addressed to the sheriff of each county," indicating that there was no recognizable modern version of "Parliament" at the time. Here, the shape of the later division between "the people's" Lords and Commons can be seen. These changes prompted the creation of new political foundations, upon which the legal framework of the constitution was built. Magna Carta was not, as we now understand the word, a democratic constitutional arrangement. 13 It only shifted some authority from one person—the King—to the few aristocracy who really had "Parliament" in their hands. 14 Magna Carta did, however, somewhat widen the grounds for assent needed to form law in English society. Due to her continued possession of the personal legal authority to call and dissolve Parliament whenever she saw appropriate, the Monarch's hold on the reins of constitutional authority remained especially solid.

By 1600, the Commons and Lords were unwilling to adopt taxes unless there was a certainty that the monarchs would accept restrictions on their personal authority. Charles II and James II often tried to rule the nation by proclamation or prerogative powers, bypassing Parliament and committing the administration of government to their own nominees, however the Stuart Monarchs discovered methods to undermine this idea. When the Crown required money outside its own means, such as when it sought to wage war, this became exceedingly challenging.

According to the Triennial Act of 1641, a law enacted by Parliament, the Monarch was obligated to call a meeting of Parliament at least once every three years. Yet once the Stuart Monarchy was restored in 1660, Charles II did not see himself as being obligated to follow its rules. It is not practical to go into depth about all of the many reasons of the 1688 revolution here. Nonetheless, it is obvious that James II's apparent disdain for the idea of public "consent" to the political process—made apparent by his unwillingness to let Parliament to meet on a regular basis—was a significant factor in his final demise.

The 1688 "Declaration of Right" set forth the grievances of the English revolutionaries, the main thrust of which was that "the late King James did endeavor to subvert and extirpate the Protestant religion, and the laws and liberties of this kingdom, by the assistance of diverse evill councellors, judges, and ministers imployed by him."

The English revolutionaries' Declaration of Right, like the American revolutionaries' Declaration of Independence, backed up its broad indictment with a number of particular accusations. The two papers were identical in both content and style. James II had allegedly violated the "liberties" of the English people in a number of ways, including: By levying money for and to the use of the Crown under the guise of a prerogative for a different time and in a different way than that which had been authorized by Parliament; By assuming and using a power to dispense with, suspend, and carry out laws without the approval of Parliament;

By limiting the right of people to choose who will represent them in Parliament; By establishing and maintaining a standing army inside this country during times of peace without the approval of Parliament; By housing troops in violation of the law;

Trial juries have been made up of dishonest and unqualified people; exorbitant fines have been levied; and brutal, unlawful penalties have been administered.

For instance, Professor John Millar said that the purpose of the Magna Carta was to "establish the privileges of a select few people." The kingdom seems to have been split between a powerful tyrant on the one side and a group of small-time dictators on the other, and the vast majority of the populace, who were ignored and mistreated on both sides, were reliant on whatever privileges granted to them, much to the anger of their rulers. p. 80–81 of Historical View Vol. II, cited on p. 7 of Loughlin's op cit.

Magna Carta and the American Civil War came before the 1688 revolution, both of which signaled a political turning point. Between Parliament and the Crown, a new political

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"contract"17 was reached, and as a result, a new constitutional basis was established. After overthrowing James II, the successful rebels gave the monarchy to Mary and William Prince of Orange, the daughter of James II. 18 William and Mary agreed that the Crown's use of its prerogative rights to rule the English country would be severely constrained in exchange for the crown. The Monarch may still be responsible for running the nation, and she/he might designate the Ministers who would help her in carry out that work, but the Queen and her Ministers would manage the country pursuant to laws specified by Parliament. Also, the Monarch's administration would need to react appropriately if Parliament modified the legislation.

The language of the Bill of Rights, which was produced by the Parliament in 1689, included the original "terms" of the contract. Those clauses directly address the complaints raised in the Declaration of Rights, which claim that it is unlawful for regal authority to suspend laws or carry them out without the approval of Parliament, that Parliaments should meet frequently to address all grievances and to strengthen and preserve the law, that elections for members of Parliament should be free of charge, and that the freedom of speech and participation in debates or proceedings should be guaranteed.

These moral precepts would have more legal standing than any personal legal powers still held by the Monarchy after they were codified in the Bill of Rights. Additionally, the 1688 revolution is often viewed as having resolved the issue of the connection between Parliament and the courts in addition to putting the Monarch's prerogative powers below legislation in the order of constitutional significance. 20 It was rejected the idea advanced in Dr. Bonham's Case and R. v. Love that "natural" or "divine" law gave the courts constitutional jurisdiction superior to legislation. Also, it was believed that legislation had greater legal power than the common law. The fundamental element to keep in mind at this point is that both are thought to be less essential than legislation. We further discuss the constitutional significance of the royal prerogative and the common law in chapter four.

The English revolutionary settlement expressed in the 1688 Bill of Rights is significantly different from the American settlement articulated in the 1789–1791 Constitution, despite the obvious similarities between the functional underpinnings of the Declaration of Independence and the Declaration of Rights. Although the American revolutionaries believed that the "people" of the United States should have the power, their English forebears believed that the "Parliament" should hold that power. In the legal meaning allowed by the Constitution in the United States, the Bill of Rights' provisions could not be seen as constituting the foundation for the nation's future government.

This is not to imply that the English revolutionaries were less earnest than the Americans in their moral principles. Instead, it indicates that there was nothing particularly "unique" about the conditions of the English settlement from a legal standpoint. The so-called "basic" sections of the Bill of Rights might be changed, repealed, or added to at any time by Parliament, the nation's sovereign legislative body, using the same procedure as it would to pass legislation on the most unimportant issues. The British Bill of Rights was not shielded from violation by the national legislature in the same way that its American counterpart was. Parliament served as both the regular and exceptional legislature for England. It would maintain a consistent, albeit not constant, sitting position. And it alone would be able to exercise all the legislative authority that Madison and his colleagues later so carefully and intricately distributed among the President, the Congress, the States, and the people of the United States.

Moreover, England was a unitary state as opposed to a federal one. Only with the authorization of Parliament might individuals in physically distinct sections of the nation choose to be governed differently in order to reflect regional customs or political opinions. The limits of any sub-central divisions of government in England might be specified by law, together with their potential powers and the procedures for choosing the individuals in charge of them. Additionally, Parliament may decide to change its position at any time and enact a new statute with new provisions. As the will of Parliament were regarded under the English constitution as "the highest form of law," no person or group of people could expect the English courts to uphold their constitutional rights against Parliament.

It could be inferred that the 1688 agreement had not effectively protected "the liberties of the people" if the American revolutionaries had expressed their outrage against Britain's post-revolutionary constitution in the same manner as its creators had expressed their own grievances against the Stuart Kings ninety years earlier. So, one can question if the sovereignty of Parliament, a constitutional protection designed to protect the country and its empire from the tyranny of its King, has really only succeeded in shifting the source of dictatorial power? If at all, how did the English revolution guarantee that the people of England approved of the laws that were passed?

III. CONCLUSION

Parliament has the power to enact and repeal any law because it has parliamentary sovereignty, which places it above the executive and judicial branches of government. It is a cornerstone of the British constitutional order and is also valid in some Commonwealth nations, including Canada. Making laws is Parliament's primary duty. Every legislative proposal must be presented to Parliament as a bill. A Bill, which is a draft legislation, cannot become law until it has been approved by both Houses of Parliament and the President of India. The sovereign legislature is not constrained by any written law, such as the constitution, and is free to amend or overturn any past legislation.

REFERENCES

[1] J. McConalogue, "The British constitution resettled? Parliamentary sovereignty after the EU Referendum," Br. J. Polit. Int. Relations, 2019, doi: 10.1177/1369148118815409.

[2] N. Brack, R. Coman, and A. Crespy, "Unpacking old and new conflicts of sovereignty in the European polity," J. Eur. Integr., 2019, doi: 10.1080/07036337.2019.1665657.

[3] C. Bickerton, "'Parliamentary', 'popular' and 'pooled': conflicts of sovereignty in the United Kingdom's exit from the European Union," J. Eur. Integr., 2019, doi: 10.1080/07036337.2019.1670172.

[4] H. Psarras, "The state: A sine qua non of public law? A critique of Martin Loughlin's state-centred approach to public law," Jurisprudence, 2019, doi: 10.1080/20403313.2018.1468164.

[5] M. Gordon, "Parliamentary Sovereignty and the Political Constitution(s): From Griffith to Brexit," King's Law J., 2019, doi: 10.1080/09615768.2019.1594614.

[6] J. Nahmias, "The Charter of Rights and Freedoms: Undermining Parliamentary Sovereignty and Federalism," Federalism-E, 2019, doi: 10.24908/fede.v20i1.13222.

[7] M. Elliott and A. L. Young, "Privacy international in the supreme court: Jurisdiction, the rule of law and parliamentary sovereignty," Cambridge Law Journal. 2019. doi: 10.1017/S0008197319000813.

[8] S. Saurugger and F. Terpan, "The Court of Justice of the European Union, conflicts of sovereignty and the EMU crisis," J. Eur. Integr., 2019, doi: 10.1080/07036337.2019.1665655.

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An Overview on Parliament in India Government

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Abstract*— The President, the Council of States (Rajya Sabha), and the House of the People make up the Union's legislative body, known as Parliament (Lok Sabha). Within six months of its preceding session, each House is required to reconvene. Under certain circumstances, a joint session of both Houses may be convened. In this chapter author discusses procedure the enrolled Bill rule. The role of parliament in a democratic system is multifaceted. It serves as a forum for debate and discussion on key policy issues, and provides a mechanism for citizens to voice their concerns and influence the direction of government. Through its legislative powers, parliament is responsible for creating and amending laws, and for holding the government accountable for its actions.

Index Terms*— Council, Communities, Government, Law, Parliament.

I. INTRODUCTION

The English populace was not "represented" in the 1688 Parliament in the sense that word is used today. Yet it would be hasty to discard the 1688 settlement's guiding ideas too fast. It was founded in part on concepts that now we could still find to be true. It is crucial to define terms like "Parliament" and "the institution of Parliament" used by the revolutionaries of 1688 [1],[2]. The House of Commons, the House of Lords, and the Monarch made up the three constituent sections of Parliament, which was not a single entity. During that time, the three branches of Parliament each had an equal voice in the drafting of laws [3],[4]. A bill could not become law if one component refused to approve it. From a contemporary vantage point, one may assume that the 1688 Parliament just represented the opinions of elitist organizations and effectively barred the majority of the populace from participating in the drafting of laws. Nonetheless, some political thinkers of the late seventeenth century honestly thought that a Parliament made up of all three groups was the best method to ensure that legislation correctly represented the interests of the country [5],[6]. We should keep in mind that Jefferson's usage of the term "the people" in the Declaration of Independence was quite selective; for the sake of enacting laws, many impoverished men, all women, and all slaves were not considered to be "people" in late eighteenth-century America. Similar to today, it was thought that only the King, the nobility, the Church, and the wealthy merchant and landowner class, who chose the members of the House of Commons, had any right to create the laws that would rule society [7],[8]. According to orthodox political philosophy, the three "Estates of the Realm" were the Monarch, the Lords, and the Commons. The only legitimate arbiters of the national interest were seen to be these estates functioning together.

So, the 1688 settlement could be considered democratic in a traditional sense; not because it offered all people a voice in the drafting of laws, but rather because it granted that voice to everyone who was seen to be entitled to it. This may be seen as a more extreme form of Madison's later defense of elitist representative assemblies made up only of elected officials who could be relied upon to work in the interest of the country. Yet, the colony of 1688 had another goal in mind. A "balanced" constitutional system and a "balanced" legal system were the goals of the 1688 revolution. Legislators were unable to enact laws that served the interests of only one or two of the three Estates of the Realm since Acts of Parliament could only be passed with the consent of the Commons, Lords, and King. The 1688 revolutionaries did not appear, Athena-like, with this purported answer to the issue of potentially oppressive legislators. Instead, it was the result of a protracted process of theory and application that had challenged the minds of philosophers and statesmen during the entire seventeenth century [9].

Moreover, we should keep in mind that the 1688 Parliament was not structured along party or political lines. While there were some very strong party-based alliances amongst groupings of members in the seventeenth century, the House of Commons was originally designed to serve as the House of Communities, a forum for the consideration of both local and national objectives. Several individual members arrived in the Commons to speak on behalf of their town or county rather than a political party.

From a modern vantage point, one may naturally wonder how our constitution's formal framework has adjusted to shifting ideas of "the people" and what we can refer to as the rising "nationalization" of politics. Seven will explain that the current

The notion was stated in more obscene terms by observers of the time: "Lest the Crown might lead to arbitrary authority, or the tumultuous licentiousness of the people should gravitate towards a democracy, the wisdom of our predecessors hath devised a midway state of nobility." The brilliance of this government is related to the proper balancing of its many components since the constitution would really dissolve if one of them were to be too difficult for the other two. J. Trenchard and W. Moyle Miller quotes one that demonstrates how having a standing army conflicts

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with having a free government.

Almost every adult has the right to cast a ballot in parliamentary elections, which is a basic component of contemporary British society. Moreover, it is evident that national political parties compete in parliamentary elections, which are decided mostly by national rather than local problems. It would seem evident that a constitutional system intended to get the assent of some forty million people in a contemporary industrialized society would be inadequate for guaranteeing the consent of a minuscule minority of the small population of an agricultural nation. For instance, it may be helpful to note that no other contemporary democracy has completely adopted the British constitutional model; the American system has proven to be a much more important model. Yet the formal constitutional rules that evolved from the political upheaval in England at the end of the seventeenth century are still essentially in place today in many ways. And it is perhaps true to state that among those unaltered fundamentals, parliamentary sovereignty is the most crucial. It is crucial that we start thinking about how the theory has been both criticized and supported in more recent years.

II. DISCUSSION

A. Legal authority for the principle of parliamentary sovereignty

The courts are no longer allowed to use common law or natural law as sources of legal power that have a greater constitutional significance than Acts of Parliament, as provided by our constitution. Finding any evidence that the courts after 1688 contemplated the notion that legislation may be thrown out if they violated natural law would need a lot of digging. The City of London vs. Wood case from 1701 provides some, albeit muddled, evidence for the Bonham principle. At one point, Holt CJ said that: What my Lord Coke states in Dr. Bonham's Case is far from any extravagance, because it is a very reasonable and accurate statement, that if an Act of Parliament should decree the same person to be party and judge, it would be an invalid Act of Parliament.

An Act of Parliament, however, "can do no wrong, but it may accomplish numerous things that appear very unusual," according to Holt CJ, who had previously provided similar apparent support for Coke's beliefs.

A decision that is so incongruous cannot be regarded as a reliable source for natural law theories. The post-revolutionary case law also does not have any precedents that are more beneficial. In Forbes v. Cochrane, when the Court said it would not uphold a legislation allowing slavery because it would be "against the law of nature and God," the concept was last observed in 1824. People of Cumberland if you're interested in learning more about the esoterica of post-revolutionary natural law jurisprudence. Whether English common law should provide a remedy to a slave-owner under such circumstances was the question before the court. The Court came to the conclusion that neither common law nor legislation provided this kind of remedy. Best J made the following observation, which was not technically important to the case's resolution:

The great commentator on this country's laws once stated that "If any human law should allow or enjoin us to commit an offence against the divine law, we are bound to transgress that human law" if there had been any express law requiring us to recognize those rights. In that case, we might have been asked to consider the propriety of his statement.

But, there isn't much case law from before 1800 that explicitly supports the notion of parliamentary sovereignty. Blackstone came to the following conclusion about the constitutional character of legislation in his renowned Commentaries, which were originally published in 1765: I know it is usually set down that acts of parliament opposed to reason are invalid. But, if the parliament willfully passes a measure that is illogical, I am unaware of any authority that can stop it since doing so would elevate the judiciary's authority above that of the legislature, which is antithetical to all forms of governance.

As said in one, the American colonists attempted to create a constitutional system that placed the power of the people above the authority of the legislature and the court in order to prevent the issue of subversion. Blackstone was obviously disappointed by such a theory, although it should be noted that he could not find much direct legal support for his claim on the primacy of Parliament. The lack of authority may have resulted from everyone taking it for granted that this was how things were; sometimes, the most essential values are those that are kept to oneself and are never really considered. The nineteenth century, however, saw the emergence of various lines of case law that support the conventional interpretation of parliamentary sovereignty. The "enrolled bill rule" is the subject of the first.

B. The enrolled Bill rule's substance or method

A landowner who had been impacted by a private Act of Parliament authorizing the building of a railway was the plaintiff in Edinburgh and Dalkeith Rly Co v. Wauchope. He argued that the law should be declared illegal by the court because its proponents failed to notify the affected parties in line with the standing rules of the House of Commons, which governed its internal processes for taking such actions. According to Lord Campbell, the court has no authority to determine whether the Commons or the Lords' processes are constitutionally adequate:

A court can only look at the Parliamentary Roll; if it seems that a bill has passed both Houses and got the Royal Assent from that, no court may further delve into how the bill was presented or what was passed throughout its progression through the different stages of Parliament.

In Lee V. Bude and Torrington Junction Rly Co, the same conclusion was drawn based on comparable facts, and Wile J. stated that "if an Act of Parliament has been obtained improperly, it is for the legislature to correct it by repealing it;

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but so long as it exists as law, the Courts are bound to obey it." In British Railways Board v. Pickin, which was decided in 1974, the Court of Lords reaffirmed this concept with vigor. Mr. Pickin claimed that British Rail had pushed a private bill through Parliament without notifying the relevant landowners in a timely manner. Unexpectedly, the Court of Appeal determined that this created a litigable issue: According to Lord Denning, there is a legitimate difference between public Legislation and

The Acquisition of Land Act 1919, a slum clearance measure that established levels of compensation for property owners whose homes were demolished, was the subject of the doctrine of implied repeal in both Vauxhall Estates Ltd v. Liverpool Corp. and Ellen Street Estates Ltd v. Minister of Health. These allowances were rendered less generous by the Housing Acts of 1925 and 1930. The impacted landowners requested that compensation be determined using the same criteria as the 1919 Act.

The 1919 Act's Section 7 was invoked by the landowners. This stated that if an Act conflicted with the 1919 law, the compensation provisions would "end to exist or shall not have effect." One may say that phraseology refers to both present Acts and future ones. But, the plaintiffs did not make the case that the 1919 Act was totally impervious to alteration by a later Parliament. They distinguished between explicit and inferred repeal instead.

The landowners agreed that if a later Act explicitly declared that the 1919 Act was invalid, the impact of the new Act could not be challenged in court. They asserted that the 1919 Act could be protected by the courts from accidental or implied repeal, and that the court should presume that the original Act should be upheld if Parliament did not explicitly declare that it was amending a statute that appeared to have been intended to prevent future amendment. This argument appeals to constitutional grounds based on the theory of consent. It implies that allowing laws to have unexpected consequences would be against the constitution since 'the people' could not have consciously approved the law that had been enacted. It would seem logical to assume that the courts should not allow Parliament to enact legislation based on false information if the function of parliamentary sovereignty is to ensure that laws enjoy the consent of the governed. This seems to offer a variation on the theme of "functionalist" approaches to parliamentary sovereignty.

The argument made it to the Ellen Street Court of Appeal, where it was summarily rejected. Any idea of a functionalist interpretation of the parliamentary sovereignty theory was rejected by the courts. Instead, the judges took a formalist stance. Such statutory regulation just required the courts to blindly follow the most recent Act of Parliament. And if that Act looked to conflict with earlier law, the earlier legislation had to take precedence. The courts would not consider inquiries into the existence of popular consent or the unstated intents of Parliament. Scrutton LJ dismissed the landowners' argument as:

While it acknowledges that Parliament may change an Act that has already been enacted by repealing it in full, it can also change an Act by passing a provision that is obviously at odds with the earlier Act. This is completely opposed to the constitutional stance that Parliament can only do this.

A similar lack of receptivity was expressed by Maugham LJ: "According to our constitution, the Legislature cannot bind itself as to the form of subsequent legislation, and it is impossible for Parliament to enact that there can be no implied repeal in a subsequent statute dealing with the same subject matter." If the legislature expressly states in a later act that an earlier statute is being partially repealed, that purpose must be carried out simply because that is the legislature's intent

While the Court of Appeal delivered its conclusion with vigor, it was unable to rely much on prior case law to buttress its argument. It primarily cited the verdict in Vauxhall Estates, which was rendered two years earlier. It seems like a shaky legal foundation upon which to build such a crucial fundamental concept. Nonetheless, we may discover a further line of affirmative rulings in situations involving the interplay between British laws and international law.

C. Contravention of international law

Mortensen v. Peters is the first case we could take into account.

47 Determining the scope of a country's authority over the waters it is surrounded by is one of the most crucial topics in international law. By 1906, the majority of countries had agreed via the signing of treaties that their individual territories should extend three miles out from their coastlines. The Herring Fisheries Act was approved by the British Parliament in 1889. Because of this Act, Scotland's Fishery Board now has the authority to enact byelaws that regulate fishing in the Moray Firth. As a large portion of the Moray Firth is more than three miles from land, the 1889 Act would seem to be in conflict with agreements to which Britain was a party under international law.

A Norwegian trawler's skipper was Mortensen. He was taken into custody for violating the Fisheries Board's byelaws. His justification was that the Act was "unconstitutional" because it contravened acknowledged rules of international law and consequently had no force of law. This Court has no jurisdiction to decide whether a legislative act is extra vires or in violation of commonly accepted norms of international law, the Court said categorically in opposition to this claim. We must comply with the conditions of any Act of Parliament that has been officially approved by the Lords and Commons and signed by the King.

The definition of extra vires is "beyond the lawful powers," in English. Nothing is beyond the power of a body that is recognized as sovereign by the law. As a result, the ultra vires concept could not be applied to Parliament, but as we will see in the sections that follow, it does play a significant role with regard to other governmental

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organizations. Both conventional Diceyan theory and the political result of the 1688 revolution are perfectly congruent with this conclusion. In accordance with British constitutional rules, the Monarch, not Parliament, negotiates and legally enters into treaties via the use of its prerogative powers. According to orthodox constitutional thought, a treaty that the British government has signed can only have legal force in Britain if an Act of Parliament incorporates it into British law. This follows naturally from the notion of parliamentary sovereignty. After the events of the 1688 revolution, William of Orange and Parliament came to an agreement that stated the constitutional function of the King's administration as enforcing the laws passed by Parliament. Just reaching a deal with another nation might not allow the government to enact new legislation. If that were to occur, it would effectively mean that the administration, rather than Parliament, is the one in charge of making laws since it has the power to do so despite the Commons' and/or the Lords' objections.

It would be up to the Parliament to decide just how much impact a certain Treaty may have on domestic legislation. The term "incorporation" is used in a wide sense, but it really only implies that Parliament has decided to pass a law that gives some or all of the political principles endorsed by the Treaty's signatory nations some native legal weight. When "incorporating" international law into the domestic legal system, Parliament had complete discretion over issues like which provisions of the Treaty should be given a statutory basis, which courts could apply those provisions, which claimants could make use of them, and against whom or what they could be used. However, perhaps most crucially, Parliament had complete discretion over how a competent court should handle any disputes where it found that the Treaty terms incorporated in the relevant Act were in dispute. Yet, strictly speaking, any impact the Treaty has on domestic law is not a result of the Treaty itself but rather the words of the relevant incorporating legislation as applied by a domestic court.

Cheney v. Conn. is another example that supports the idea. Mr. Cheney, a taxpayer, filed an appeal after the Inland Revenue determined that he owed income tax. Based on the Finance Act of 1964, the Inland Revenue performed its assessment. According to Mr. Cheney, part of his tax dollars was being spent to develop nuclear weapons, which was against the Geneva Convention's tenets and a pact that the British government had ratified. While some of the Treaty had been adopted into British law, Mr. Cheney's case was unaffected by this. His argument was based on unincorporated portions of the Treaty. Mr. Cheney claimed that since these provisions of the Treaty prohibited the use of nuclear weapons, it was unlawful for Parliament to pass a law that provided funds for the development of such weapons. The judge, Ungoed-Thomas J, had no doubt that this was a meaningless argument since what the legislation itself states is the law and the highest form of law that is recognized in this nation, thus it cannot be unconstitutional. The rule of law is what takes precedence. By changing the details of the Mortensen v. Peters case, we can demonstrate the argument. Captain Mortensen would have had a strong defense if Parliament had passed a legislation, let's call it "The Law of the Sea Act 1902," that simply stated that any treaties related to the law of the sea to which the United Kingdom is a party are to be applied by domestic courts as of January 1 1903. The Herring Fisheries Act of 1899 would be impliedly repealed to the extent of any discrepancy between it and the Law of the Sea Act of 1902, which was adopted after it. Yet, Mr. Mortensen would be relying on the 1902 Act and not the Treaty for his defense. It is not for the court to declare that a legislative statute, the highest law in our nation, is unlawful. We review this topic from a more nuanced viewpoint.

After discussing the parliamentary sovereignty doctrine's fundamental political and legal tenets, we will now discuss the numerous objections to the Diceyan theory that have been raised in court cases and intellectual forums. While none of these obstacles have so far proven successful, this does not rule out the possibility that one of them may in the future. We look at three defenses. Secondly, we examine the "manner and form" method of protecting some fundamental constitutional principles against change by a simple majority vote in Parliament. The status of the 1707 Treaty of Union between England and Scotland is evaluated next. Thirdly, we consider the idea that there could be moral standards that Parliament can only alter by explicit legislative declarations.

D. Reinforcing laws: Opposition to conventional wisdom

The optimistic strand of Dicey's theory contends that Parliament has the authority to give legislative effect to whatever moral principles it deems desirable. Yet, it seems that this interpretation of the parliamentary sovereignty idea has a fundamental weakness. Simply stated, how is it possible for Parliament to have the highest level of legislative authority if there is one thing it cannot do, namely create legislation that binds succeeding parliaments? One would have thought that if Parliament is genuinely a sovereign lawmaker, it would have the authority to restrict the number of laws it may pass. 52 This discussion clarifies the difference between the enduring and all-encompassing views of parliamentary sovereignty. 53

According to the prevailing conception, the sovereign Parliament is a permanent institution. Regardless of earlier laws, its unrestricted legislative authority is established from scratch every time it meets. The Diceyan posture is this. Parliament need not give a damn about what its forebears did. The self-embracing theory promotes an extreme viewpoint. There is a lot of scholarly interest in it. Except for one significant instance, it hasn't had any real political impact here, but it has had a big impact on former British colonies. According to the self-embracing thesis, Parliament has the authority to bind both itself and its successors as part of its sovereign authority. The self-embracing theory's proponents contend that Parliament may pass laws that are immune from

later amendment—that certain policies may become legally enshrined and made impervious to repeal by a future Parliament.

Any constitutional provision that prevents some laws from being repealed via the standard legislative procedure of a simple majority vote is known as entrenchment. A future parliament could not be lawfully called if the current one was legally dissolved, therefore putting an end to it. A sovereign body may again delegate its power to an individual or group of individuals. royal assent in addition to the Commons and the Lords. A certain political ideal may, in theory, become established in both a substantive and procedural sense. The adoption of the idea that Parliament cannot act at all regarding certain issues would constitute substantive entrenchment. It indicates that some fundamental human ideals are immutable. In recent years, this issue has not been substantially pushed. A society would be trapped with certain ideals for all time under substantive entrenchment, which is a rigorous sort of security for fundamental beliefs.

The authority of Parliament has been tried to be curbed by contemporary observers who disagree with Dicey's notion via procedural entrenchment. While procedural entrenchment gives certain laws a relative rather than an absolute degree of permanency, it does not inevitably result in a rigid constitution. Theoretically, requiring a two-vote majority in the Commons rather than a simple majority to modify a piece of law would have solidified it. The law would not be particularly firmly established, but when reform processes are made more stringent, the law becomes more firmly entrenched. If modification needed almost universal approval within each chamber, then change may be extremely difficult. Constitutional ideals that could only be amended with the backing of, for example, 70% of MPs would be profoundly established.

III. CONCLUSION

The Rajya Sabha (Council of States) and the Lok Sabha are the two chambers that make up India's bicameral legislature (House of the People). The president has complete authority to call a session of either house of Parliament, prorogue it, or dissolve the Lok Sabha in his capacity as head of the legislature. A parliament is the government's legislative body. It enables Indian people to take part in decision-making and run the government. As a result, it elevates the Constitution to the status of being the most important emblem of Indian democracy. The government is governed and controlled by the Parliament, which consists of all representatives collectively. In this way, the people both create and have power over the government via the representatives they elect. In addition to its legislative functions, parliament also plays a crucial role in overseeing the government and ensuring that it is acting in the best interests of the people. This includes holding the government accountable for its actions and decisions, and ensuring that the rights and freedoms of citizens are protected. Overall, parliament is a vital component of any democratic system of government, and plays a critical role in ensuring that the interests and concerns of citizens are represented and addressed.

REFERENCES

[1] L. Berntzen, M. R. Johannessen, K. N. Andersen, and J. Crusoe, “Parliamentary open data in scandinavia,” Computers, 2019, doi: 10.3390/computers8030065.
[2] C. Neuhold and G. Rosén, “Introduction to ‘out of the shadows, into the limelight: Parliaments and politicisation,’” Politics and Governance. 2019. doi: 10.17645/pag.v7i3.2443.
[3] K. M. Weber, N. Gudowsky, and G. Aichholzer, “Foresight and technology assessment for the Austrian parliament — Finding new ways of debating the future of industry 4.0,” Futures, 2019, doi: 10.1016/j.futures.2018.06.018.
[4] Committee on Climate Change, “Reducing UK emissions - 2018 progress report to parliament,” Reducing UK Emiss. 2019 Prog. Rep. to Parliam., 2019.
[5] A. Matei, C. Ciora, A. S. Dumitru, and R. Ceche, “Efficiency and effectiveness of the european parliament under the ordinary legislative procedure,” Adm. Sci., 2019, doi: 10.3390/admsci9030070.
[6] S. Jorge, M. A. J. de Jesus, and S. P. Nogueira, “The use of budgetary and financial information by politicians in parliament: a case study,” J. Public Budgeting, Account. Financ. Manag., 2019, doi: 10.1108/JPBAFM-11-2018-0135.
[7] L. M. Mügge, D. J. van der Pas, and M. van de Wardt, “Representing their own? Ethnic minority women in the Dutch Parliament,” West Eur. Polit., 2019, doi: 10.1080/01402382.2019.1573036.
[8] I. Munyoro, “Assessing Parliament of Zimbabwe’s informatics database as a tool for providing evidence-based information for decision making,” J. Librariansh. Inf. Sci., 2019, doi: 10.1177/0961000617726122.
[9] K. Roberts Lyer, “Parliaments as Human Rights Actors: The Potential for International Principles on Parliamentary Human Rights Committees,” Nord. J. Hum. Rights, 2019, doi: 10.1080/18918131.2019.1681610.

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Jennings Critique and the Rule of Recognition

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Abstract— The rule of recognition settles questions and disputes within a community on which fundamental norms to adhere to. It does this by highlighting the characteristics of fundamental principles that define them as binding. In this chapter author is discusses the parliamentary sovereignty a British. In legal theory, the rule of recognition is a concept that describes the basic criteria for identifying what counts as law in a particular legal system. It is essentially a set of rules or criteria that determines which norms and legal practices are considered legally binding within a given system.

Index Terms— Critique, Constitutional, Recognition, Rule, Sovereignty.

I. INTRODUCTION

We should first ask ourselves why courts recognize statutes as the greatest form of law before we analyze this notion. This norm is not enshrined in any supra-legislative constitution. The notion of parliamentary sovereignty is not outlined in any statutes, however. Nonetheless, the ambiguity over the legal standing of this alleged "rule of recognition" has aided constitutional attorneys who disagree with the Diceyan viewpoint. Sir Ivor Jennings was the most vociferous proponent of the so-called "manner and form" policy of procedural entrenchment [1],[2]. On a particular interpretation of the all-encompassing notion of sovereignty, Jennings founded his criticism of the conventional view. His reasoning seems to follow three logical phases. First off, common law is the source of the rule of recognition. Second, statutes have legal precedence over common law. Lastly, by modifying the rule of recognition and forcing the courts to recognize that certain Acts are exempt from repeal by a simple majority vote in both houses plus the royal assent, Parliament is able to pass new laws. Jennings said the following in his formulation of the claim:

Legal sovereignty is essentially a term used to denote that the legislature now has the authority to enact any kind of legislation in the way prescribed by the law. That is, a regulation that is explicitly stated to be enacted by the Queen will be accepted by the courts, even if it modifies this legislation itself. A legislature's authority is derived from the statute that created it. It comes from common law, which is the acknowledged body of law in the United Kingdom. This argument appears to follow a clear logic. The analysis by Jennings also seems to make good political sense. If Parliament controls the judges, it must be able to instruct them on the procedures to be followed for determining whether a legislation is constitutional. The theoretical foundation of the style and form argument is heavily influenced by Jennings' work. Three incidents, all involving the process of former British colonies attaining independence, are frequently referenced in his arguments. The Privy Council and the Australian High Court resolved the first case, A-G for New South Wales v. Trethowan60, in Australia in 1932 [3],[4].

The Constitution Law of 1855, a British law, established the New South Wales Parliament. The New South Wales constitution closely resembled the British model in many ways. A simple majority in both the upper and lower houses was necessary to pass legislation, and the Governor-General, who served as the monarch's representative, granted the royal assent. A later British law, the Colonial Laws Validity Act 1865, however, stipulated that laws passed by specific colonial legislatures that sought to alter their own "constitution, powers, or procedures" would only be valid if they were passed "in such manner or form" as the colony's laws at the time required. When the New South Wales Assembly established the New South Wales Constitution Act in 1902, s 5's provisions remained unaltered. The 1902 Act included provisions relating to the make-up and individual powers of the two houses [5],[6].

The NSW Parliament's two chambers were controlled by the Liberal Party administration in 1929, which supported the Constitution Bill 1929. Both chambers of Congress approved the Bill, which then became an Act after receiving the royal assent. By adding a new section 7A to the Constitution Act of 1902, the Act made it clear that in order to get royal assent, a bill that sought to abolish the Legislative Council had to have support from a majority of both houses as well as a majority of voters. So, by including an extra stage in the regular legislative process, Section 7A seemed to alter the "manner and form" of the legislation required to abolish the upper house. Additionally, according to section 7A, no law may abolish section 7A without also receiving the majority support of voters in a special referendum. In order to prevent the opposition party from enacting its declared plan to abolish the upper chamber without first putting that particular issue to the people, it looked that the administration anticipated to lose the next general election [7],[8].

The previous opposition party won a majority in both chambers at the 1930 elections. After that, both chambers adopted bills to remove section 7A and dissolve the

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Legislative Council, respectively. Before being presented for the royal assent, neither proposal was put to a vote. In order to stop the bills from being forwarded for the royal assent and, if given, from becoming law, certain members of the Legislative Council started a lawsuit in front of the courts in New South Wales right away. They argued that only in the "manner and form" that it had it determined could section 7A be removed [9].

The new administration contended that, like the British Parliament, the subsequent New South Wales Parliaments were not bound by any laws made by their predecessors. Any "manner and form" provisions approved by a Parliament would be void if they were later repealed by another Parliament acting in accordance with the "simple majority plus royal assent formula." Since such had occurred in this case, s. 7A had been validly revoked.

Two of the five justices in the High Court of Australia61 agreed with the view. The Court must stop any Bill that deals with the topic of s. 7A from being given for royal assent, according to the majority opinion, unless it has received referendum approval. As a result of the specific "manner and form" of section 7A, the Legislative Council's legitimacy was effectively protected via a sort of procedural entrenchment. The majority argued that the Colonial Laws Validity Act of 1865 and the Constitution Statute of 1855 gave the New South Wales legislature its existence and authority, in contrast to the British Parliament. These Acts served as the foundation for the New South Wales Constitution, and the New South Wales legislature was governed by their provisions up until § 5 of the 1865 Act was abolished. There is no reason why a Parliament representing the people should be powerless to decide whether the constitutional salvation of the State is to be achieved by cautious and well-considered steps rather than by rash and ill-considered measures, Rich J. explained. The majority saw this as a straightforward legal rule that served an obvious political purpose. The logic behind the majority ruling was sustained after a second appeal to the Privy Council.

A. Donges v. Harris

The Appellate Division of the South African Supreme Court rendered a decision in the second case, Harris v. Dönges, in 1952. Once again, the narrative opens with Britain slowly separating away from its previous Empire. The South Africa Act, which brought the four South African colonies under a single legislative, was approved by the British Parliament in 1909. In many ways, the South African parliament was similar to the British one. It preserved the King's authority of royal assent and had a lower and an upper house. A Bill passing with a simple majority in the house and senate and then gaining the royal assent was often referred to under South Africa's constitution as the "highest form of legislation," and the South African legislature had almost the same legal authority as the British Parliament in this regard. Nonetheless, there were notable exception to the "simple majority in both chambers plus royal approval" rule in the 1909 Act.

First of all, measures "repugnant" to British statutes intended to have force in South Africa could never be passed by the South African Parliament. The 1909 constitutional agreement in South Africa firmly enshrined the superiority of British law over South African law. Second, for 10 years, the South African Parliament was prohibited by sections 33 and 34 of the 1909 Act from changing the makeup of the house or the senate. So, those provisions were firmly established, if briefly. Simple majority legislation might change each chamber's makeup after 10 years. Finally, Section 35 stated that no one may be denied the right to vote merely on the basis of race without the consent of a two-thirds majority of the house and senate meeting in joint session. Fourth, Section 137 stipulated that only the two-thirds majority process may modify the status of Afrikaans and English as the nation's official languages. After that, Section 152 stated that only South African statutes drawing a two thirds majority in a joint session may change and themselves.

According to sections 35 and 152, the British Parliament in 1909 believed that the "right" of citizens who were not white to vote on the same grounds as whites was too essential a democratic principle to be left to the whim of a simple majority of lawmakers. While it wasn't a "inalienable right," it would be more difficult to modify than the majority of other provisions of the South African constitution. The Statute of Westminster, adopted by the British Parliament in 1931, recognized South Africa as a sovereign independent nation with "Dominion" status within the British Empire. The following provisions were created, among others, by the Statute of Westminster. The Colonial Laws Validity Act of 1865's restrictions on the newly established Dominions were removed by Section 2.66 Then, Section 4 stated that: Unless it is expressly stated in that Act that that Dominion has requested and consented to the enactment thereof, no Act of Parliament of the United Kingdom passed after the commencement of this Act shall extend, or be deemed to extend, to a Dominion as part of that Dominion's law.

In terms of British constitutional law may not be seen to be very important. If Parliament approved legislation that violated, domestic courts would have likely implemented the relevant law in the conventional manner. The statement made by Lord Sankey in British Coal Corpn v. R may best illustrate the point: The Imperial Parliament might theoretically abolish or ignore Section 4 of the Statute as a matter of abstract law, hence it is undoubtedly true that the ability of the Imperial Parliament to adopt laws of its own will extending to remains unaffected. Yet, it is only theory and has no basis in reality.

The Statute of Westminster may be more appropriately seen as a constitutional politics exercise than a piece of constitutional legislation, as Lord Sankey noted. The Dominions could now operate as autonomous States in regard to both their internal affairs and their foreign relations, which was a realistic fact that had already been established.

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As certain Dominions acquired independence, they changed their constitutions. The South Africa Act 1909, however, remained unchanged at this time. At that time, the entrenchment stipulated in Sections 33 and 34 of the South Africa Act 1909 had already passed. The white Afrikaaner National Party had a majority in both chambers starting in the late 1940s. The National Party had vowed to enact apartheid, a law requiring the strict and repressive separation of various ethnic groupings. 70 Establishing distinct electoral registrations and voting mechanisms for white and Cape-colored inhabitants was one aspect of this program. With both chambers sitting independently, the Separate Representation of Voters Act was approved in 1951 with a simple majority. The "constitutionality" of the Act was then contested by a number of colored voters on the grounds that the methods employed to implement it did not adhere to the "manner and form" outlined in Article 35.

The South African government claimed before the Appellate Division of the Supreme Court of South Africa that this unique approach was no longer required. The government argued that since South Africa had attained sovereign status with the passage of the Statute of Westminster in 1931, the country's original constitution, which was adopted while South Africa was still a colony, was no longer binding on the country's Parliament. 71 According to South African constitutional law, the South African legislature now had all the legal powers of Britain's Parliament, including the ability to pass any bill with a simple majority and the immunity from domestic judicial challenge. The Act was found to be invalid by all five of the judges who were then sitting in the Appellate Division. The South African courts would no longer regard British law to be superior to South African laws, and the Court accepted that South Africa was a sovereign nation. The court also acknowledged the independence of South Africa's Parliament. Yet, the Appellate Division ruled that the Separate Representation of Voters Act was an unconstitutional law.

Two presumptions form the basis of the decision. First, a sovereign nation is not required to have a sovereign legislature. In reference to the United States, Centlivres CJ noted that it was completely possible for a nation's constitutional arrangements to deny its central legislative access to certain legal functions. The lengthy "two thirds of Congress plus three quarters of the States" amendment procedure controls most of the fundamental concepts of the United States constitution. The second assumption is that a nation may have a sovereign Parliament without granting sovereignty to a simple majority method, in which case the US model is not a useful example. The Court determined that when South Africa became independent in 1931, it incorporated the provisions of sections 35 and 152 of the 1909 Act into its constitution. Thus, there were two versions of its parliament. With the houses sitting separately, Parliament could approve an Act with a simple majority for all but three purposes. Nevertheless, in order to remove Section 35, Section 137, or Section 152, Parliament has to act by a two-thirds vote in a joint session. They were ingrained in South Africa's constitution up until that significant number of the legislature's members wanted to repeal them.

II. DISCUSSION

A. Bribery Commissioner Vs Ranasing

Another former British colony, Ceylon, gained its independence in 1947. Its Constitution was originally governed by British law. The Ceylonese Parliament may pass laws by a simple majority on a variety of topics. 72 Nonetheless, the Constitution also included a number of tenets that had been firmly and permanently established. The Constitution also included a number of clauses that were firmly rooted in procedure. According to Section 29 of the Constitution, laws enacted by at least two-thirds of the members of the house might change the procedurally entrenched provisions. One of the ingrained clauses was s. 55, which stated that only the Judicial Services Commission, a body made up mainly of senior judges, could select subordinate members of the judiciary.

The Bribery Amendment Act was approved by Ceylon's parliament in 1958. s. 29 was not followed when the Act was approved. The Bribery Tribunal was a body created by the Act that effectively served as a court with jurisdiction over suspected bribery offenses. Not the Judicial Services Commission, but the Ceylonese government nominated its members.

Ranasinghe had already been tried by the Bribery Tribunal and found guilty. He subsequently filed an appeal against his conviction, arguing that the Bribery Amendment Act was invalid because it had violated Section 55 of the Constitution since it had not been approved in the manner and under the conditions stipulated by Section 29.

The House of Lords continued to serve as the nation's highest appeals court under Ceylon's then-current Constitution. Lord Pearce ruled that Mr. Ranasinghe's argument was well-founded and that the legislature had no authority to disregard the requirements for lawmaking established by the instrument that governs its ability to create laws. The idea that a legislature, once established, has some inherent authority derived from the mere fact of its establishment to make a valid law by the resolution of a simple majority—even though its own constitutive document explicitly states that a law cannot be valid unless it is made by a different type of majority—is unacceptable.

The argument advanced by Centlivres CJ in Harris, which was reiterated by Lord Pearce, was that this finding did not imply that Ceylon did not have a sovereign Parliament or that it was not a sovereign state: No issue of sovereignty emerges. When its constituent members are unable to reach the necessary majority among themselves, a Parliament does not lose its sovereign status. According to Ceylon's constitution, minorities are entitled to no amendments that are not imposed

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by a two-thirds majority. The restriction so placed on a smaller majority does not impede the sovereign authority of Parliament, which is always free to approve an amendment with the necessary majority whenever it sees fit.

B. Do Trethowan, Harris, and Ranasinghe have any bearing on the situation in Britain?

At first glance, Ranasinghe, Harris, and Trethowan seem to provide a framework for constraining the British Parliament. Imagine that Parliament passes a law—the Bill of Rights Act 2013—that, among other things, contains a provision stating that Parliament may only pass legislation that is inconsistent with the Bill of Rights if at least two-thirds of the members of the House of Commons and the House of Lords support the Act in question. 75 Given Harris, Ranasinghe, and Trethowan, it is clear that a later Parliament could not pass a law that did not comply with the terms of the new Bill of Rights Act by a simple majority. Instead, the "manner and form" of two-thirds support would be required before a British court would uphold any later-enacted law that violated the Bill of Rights. Together with Jennings himself, a number of notable commentators have endorsed this idea.

Yet, such arguments would seem to have little weight. The argument that these rulings have no bearing on issues with the authority of the British Parliament is the more compelling one. According to this view, which Wade argued well for in 195577, if one applies these examples to the British context, they simply show instances of statutory organizations formed by Parliament operating beyond the bounds of the power that Parliament has granted them. The legislatures of New South Wales and South Africa were operating "extra vires" in both instances because there existed a "higher law" to which the in question Acts were subject, namely an Act of the British Parliament. 78 It was completely compatible with the doctrine of parliamentary sovereignty for the courts to get involved if these two subordinate legislatures had operated beyond the bounds of the legal authority assigned to them by the legislature that established them. So as long as the sovereign law-making authority within each jurisdiction had not withdrawn or changed the wording of the original British legislation, the courts in those nations would in fact be required to intervene—even if the nations had by that point become independent sovereign states. 79

In contrast, Parliament is the exclusive source of legislation in the United Kingdom. Therefore, the British Parliament does not have a clear colonial master who is responsible for its existence. 80 There is no "constituent document" outlining the manner in which Parliament should pass legislation on certain topics, to use Lord Pearce's phrase from the Ranasinghe case. As a result, it would seem impossible for Parliament to ever go beyond what is permitted by law. Given the remarks of the Australian judges hearing the case, it is in fact strange that Trethowan was used to argue that the British Parliament may place laws and other restrictions on its own sovereignty. The Legislative of New South Wales is not sovereign, and no comparison can be made to the role of the British Parliament, Rich J made plain in his statement. The Parliaments of the Dominions or Colonies are not sovereign and omnipotent entities, according to Starke J. They are subordinate bodies, and the acts that established them—whether imperial or otherwise—limit their authority. 82 Dixon J. made the following observation in a similar vein: "A real understanding of sovereignty has been described as a necessary consequence of the inability of the British legislature to restrict its own authority." Yet in any event, it relies on factors that don't apply to the New South Wales legislature, which isn't a sovereign body and has strictly statutory roots.

C. Nonetheless, proponents of the Jennings hypothesis may refer to the following section of Dixon J's ruling:

Nonetheless, it must not be assumed that if the whole theory of parliamentary supremacy could be invoked, all problems would disappear. An Act of the British Parliament stated that no Bill abolishing any portion of the Act shall be offered for the Royal Assent without first receiving elector approval. In strictness, it would be illegal to introduce such a Bill before receiving elector approval. The courts would be required to rule that doing so is illegal.

While one should appreciate Dixon J.'s later reputation as one of the top constitutional academics, his remark was purely obiter, and his conclusion has not yet been adopted in the English courts.

The logical foundation of the manner and form argument is Professor Jennings' assertion that the "rule of recognition" is a common law norm. Nevertheless, as Professor Wade points out, that reasoning breaks down if the norm of recognition is seen as a political truth as opposed to a legal concept. According to Wade, the rule of recognition is something that comes before and is superior to common law rather than being a part of it. It is fundamentally a political reality, not a precise legal need. It symbolizes how the 1688 revolution-era political agreement was accepted by the courts. After the revolution, British society's political foundations underwent a significant upheaval. The King and the courts were forced to accept these new conditions since Parliament was in a position to assert its authority over them both.

Wade believed that neither the idea nor the reality of parliamentary sovereignty could be changed by using 'legal' measures, so to speak, in 1955. The only thing that could have eliminated Parliament's legislative dominance was another uprising. There would have to be some significant rupture in political and legal continuity, some fundamental rethinking of how the nation's inhabitants grant their legislature the authority to make laws. This need not be a war or violent revolt.

Wade then took a radically different stance. He said that the only practical course of action was for Parliament to pass laws amending the judiciary's pledge of allegiance. The new oath would require judges to swear unwavering allegiance to a statute that enshrines certain fundamental rights or liberties

that we would never wish to have taken away or that could only be taken away through a unique parliamentary procedure beyond the simple majority plus royal assent formula. The courts would be required to declare the alleged law invalid if they later encountered a circumstance similar to the one the South African Supreme Court encountered in Harris out of allegiance to the new oath. One may see a future Parliament passing legislation to modify the oath back again, which is obviously a disadvantage of that idea. The concept does seem to be extremely straightforward, but maybe that is because it seems very improbable that it would succeed unless it were included in the more comprehensive revolutionary revision of the constitution that Wade proposed in 1955.

The conclusion of this book suggests that even though Parliament's unstoppable "simple majority plus royal assent" legislative powers cannot be removed, no such "revolution" is required and that the Trethowan, Harris, and Ranasinghe episodes now provide the legal tools with which to enshrine legislation in Britain. Yet, we must reserve judgment on that claim until we have looked at other important parts of Britain's constitutional framework.

D. Which country invented parliamentary sovereignty: Britain or England?

For those who disagreed with the parliamentary sovereignty idea, the middle of the 1950s was an exciting moment. In addition to giving rise to the Harris case, the time period also gave rise to a Scottish challenge to the legal authority of the British Parliament. This has highlighted the fact that English, not British, was the birthplace of parliamentary sovereignty. In 1688, the Glorious Revolution took place. During that time, England and Scotland had shared a monarch since 1603. Yet there was a Parliament in every nation. There was no question that Scotland and England were both independent nations at the time, each with an own constitutional framework. Unless the Scottish and English Parliaments each enacted an Act of Union recognizing the provisions of a Treaty of Union negotiated between the governments of each nation, Britain had not yet been formed. Parliamentary sovereignty may have served as the cornerstone of the English constitution between 1688 and 1707, but it is far from certain that the concept was as well-regarded in Scotland. 87 There are several ways to understand exactly what occurred when Britain became a country, both legally and politically.

According to traditional British perspective, the events of 1707 effectively represented the English Parliament absorbing the Scottish Parliament. That is to say, the ideas that guided the English constitution from 1688 to 1707 served as the foundation for the constitution of the newly formed nation of Britain. This approach is based, at the very least, in part on the fact that the English and British parliaments shared the same location and that, despite the admission of Scottish MPs to both the House of Commons and the House of Lords, no English seats were eliminated from either chamber. An alternate viewpoint would argue that what occurred in 1707 was a merger rather than a takeover. 90 This argument would also contend that the parameters of the merger were laid out in the Treaty of Union itself and that the Treaty does in fact create a higher legal standard that restricts the legal authority of the British Parliament. The merger cannot be characterized as the union of two states, according to an alternative and maybe more accurate description of the events of 1707. It was really two renunciations of title, followed immediately by the acquisition of the same land by a new state. This image of the union persists, just as the second viewpoint. Treaties should be seen as "constituent instruments" that limit the British Parliament's ability to enact laws.

III. CONCLUSION

The purpose of the rule of recognition is to ensure that a legal system's main (or "first order") legal norms may exist. The aforementioned rule, however, only applies to specific legal rules and not to the legal system as a whole, despite the fact that it is a component of all legal laws in a system. a decision of the legal rules that apply to a factual finding. Conclusion of law refers to a judicial judgment reached by a government body addressing a legal issue or dispute after taking the case's facts into account and applying pertinent laws, rules, regulations, or other legal doctrines. It offers authoritative criteria for determining major rules obligations and is acknowledged by both private individuals and government. Critics of the rule of recognition argue that it can lead to an over-reliance on formal legal mechanisms and a neglect of other important factors, such as social context, power relations, and the broader social and economic structures that shape legal practices. They argue that a more nuanced and contextual approach is needed in order to fully understand and address the complex dynamics that underpin legal systems.

REFERENCES

[1] M. Matczak, “Speech act theory and the rule of recognition,” Jurisprudence, 2019, doi: 10.1080/20403313.2019.1695431.
[2] M. H. Kramer, “Power-conferring laws and the rule of recognition,” Jerusalem Rev. Leg. Stud., 2019, doi: 10.1093/jrls/jly027.
[3] S. Ibrahim, F. A. A. Rahim, and Z. Ahmad, “Automatic tajweed rules recognition using k-nearest neighbour (K-NN),” Int. J. Recent Technol. Eng., 2019, doi: 10.35940/ijrte.B1086.0982S1119.
[4] G. Popovski, S. Kochev, B. K. Seljak, and T. Eftimov, “Foodie: A rule-based named-entity recognition method for food information extraction,” in ICPRAM 2019 - Proceedings of the 8th International Conference on Pattern Recognition Applications and Methods, 2019. doi: 10.5220/0007686309150922.
[5] W. Ding, B. Hu, and Y. Zhang, “Rule-based continuous action recognition,” Gaojishu Tongxin/Chinese High Technol. Lett., 2019, doi: 10.3772/j.issn.1002-0470.2019.09.005.

[6] A. Debbarma, P. Bhattacharya, and B. S. Purkayastha, "Named entity recognition for a low resource language," Int. J. Recent Technol. Eng., 2019, doi: 10.35940/ijrte.B2085.098319.

[7] F. Lovett, "In Defense of the Practice Theory," Ratio Juris, 2019, doi: 10.1111/raju.12251.

[8] Y. Liu, S. S. Yenamachintala, and P. Li, "Energy-efficient FPGA spiking neural accelerators with supervised and unsupervised spike-timing-dependent-plasticity," ACM J. Emerg. Technol. Comput. Syst., 2019, doi: 10.1145/3313866.

[9] M. Tiftikci, A. Özgür, Y. He, and J. Hur, "Machine learning-based identification and rule-based normalization of adverse drug reactions in drug labels," BMC Bioinformatics, 2019, doi: 10.1186/s12859-019-3195-5.

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Entrenched Provisions within the Treaty of Union

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Abstract*— A fundamental law or constitution may have an entrenchment clause that makes certain modifications more difficult or impossible. The article could provide provisions for entrenchment. This is a new idea under the Indian Companies Act since there wasn't one under the previous laws. In this chapter author is discusses the women's enfranchisement. Entrenched provisions are legal provisions that are designed to be particularly difficult to amend or repeal, usually in order to protect important rights or institutions. In the context of the Treaty of Union, the entrenched provisions included provisions related to the Presbyterian Church of Scotland, the Scottish legal system, and the Scottish education system.

Index Terms*— Article, Constitution, Entrenched, Provision, Union.

I. INTRODUCTION

There are no strengthened majority or method and form requirements in the Treaty to imply that specific political principles were to be ingrained in procedural terms, which means that it does not dictate how Parliament should enact legislation. Nonetheless, if the Treaty of Union is taken literally, several passages give the sense that the authors envisaged different kinds of substantive entrenchment [1],[2].

The Treaty should supplant any existing laws in England and Scotland that are incompatible with its stipulations, regardless of whether they are statute or common law in origin, according to Article XXV. That from and after the Union, any laws and statutes in either Kingdom that are in conflict with or in contravention of the terms of these articles shall cease to exist and be invalid [3],[4].

While this clause repeals rather than enshrines existing law, it nonetheless refers to the superiority of future laws over current law. Nonetheless, different substantive entrenchment provisions are simple to spot. The two kingdoms of England and Scotland were to be unified into a single country known as Great Britain on May 1st, the first day of the year 1,017, and for all time after that, according to Article I [5],[6]. Papists and anyone who marry Papists are permanently barred from inheriting, possessing, or enjoying the Imperial Crown of Great Britain, according to Article II.

An addendum to the Treaty, which included a copy of an Act issued by the Scottish Parliament in 1706, maintained the permanent entrenchment of several theological ideas. This featured, among other things, clauses stating that the Protestantism practiced at the time in the Church of Scotland "should stay and continue unalterable." In addition, the Act stipulated that only members of this specific religion were permitted to take posts in the then-existing Scottish universities [7],[8].

Article VI, which stated that all parts of the United Kingdom would be subject to the same trade prohibitions, restrictions, and regulations as well as the same customs and duties on import and export, was more concerned with fiscal than religious issues.

Moreover, the Treaty had clauses that were "substantively but contingently" entrenched. For instance, Article XVIII stated that the Scottish Parliament's rules regarding both public and private law might be changed by the British Parliament. Nevertheless, there were two restrictions on this clause. Originally, only changes that were for the "evident Benefit of the Subjects inside Scotland" were permitted in private law concerns. 92 According to Article XIX, the Court of Session of Scotland shall "continue in all time coming within Scotland as it is now established by the Statutes of that Kingdom." However after making this clear declaration, the British Parliament included the caveat that it might alter the Court of Session in any way that was for "the better Administration of Justice.

Notwithstanding these clauses, it is clear that the second and third views on the legal ramifications of the Anglo-Scots union may both be criticized. Two of these critiques are conceptual in character. First off, there is no proposal in the Treaty for how the entrenched clauses may be protected against later legislative violation. There is categorically no authority granted to any Court to overturn such law. Second, if the higher law viewpoint is accurate, Britain was not founded with the advantage of a sovereign legislator. The English and Scottish Parliaments are explicitly abolished by Article III of the Treaty in order to establish the British Parliament. Yet, there is no mechanism in the Treaty for calling these Parliaments to session or for changing or repealing the firmly established laws. A third critique is supported by actual historical evidence. The majority of the Treaty of Union's allegedly enshrined stipulations seem to no longer be in effect. 94 Up until the 1950s, successive generations of parliamentarians and judges appear to have accepted without question that the Treaty of Union had the same legal standing as any other statute and that its provisions were subject to modification by either express or implied repeal by subsequent legislation. See McCormick v. Lord Advocate.

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The component instrument interpretation of the Treaty has been put to the test multiple times in Scottish courts, although Scottish judges have not fully rejected it. The Royal Titles Act of 1953 was called into question in the 1953 case of McCormick v. Lord Advocate96. The former Princess Elizabeth assumed the title of Elizabeth II as a result of this Act. Elizabeth I of England was the one who walked on Walter Raleigh's coat in the sixteenth century, according to McCormick, therefore Britain could not have an Elizabeth II.

The Scottish Court of Session denied McCormick's petition but provided some surprise viewpoints on the broader question of the Act of Union's constitutional legitimacy. Lord Cooper, who gave the leading opinion, noted that the unrestricted power of Parliament is a particularly English notion and has no equivalent in Scottish constitutional law. I find it difficult to understand why it was assumed that the new Parliament of Great Britain would inherit all the oddities of the English Parliament but none of the Scottish Parliament, as if all that had happened in 1707 was that Scottish representatives were admitted to the Parliament of England. After all, the Union legislation abolished the Parliaments of Scotland and England and replaced them with a new Parliament. It was not accomplished.

In reference to the various "entrenched" provisions of the Treaty, Lord Cooper continued, "I have never been able to understand how it is possible to reconcile with elementary canons of construction98 the adoption by the English constitutional theorists of the same attitude toward those markedly different types of provisions."

Despite the deletion of many of the Act of Union's provisions, some of its most significant clauses still exist. For instance, Scotland still has its own established Church and judicial system. It is fascinating to imagine how the Scottish and English courts would act if any of these two aspects of Scottish society were to be changed by legislation enacted by the Scottish Parliament. 99

A. Lord Advocate v. Gibson

The Gibson v. Lord Advocate decision from 1975 provided some insight into the most probable response to this query.

100 Fisherman from Scotland, Mr. Gibson, protested to newly passed laws that, in his view, significantly damaged his livelihood by allowing fishing boats and businesses from other European Community nation’s access to Scottish coastal waters. Mr. Gibson based his legal argument against the Act's legality on Article VXIII of the Treaty of Union, which, if read literally, appeared to prevent the British Parliament from changing "private law" issues in Scotland unless such changes were necessary for "the evident utility of the subjects within Scotland." First, Mr. Gibson contended that fishing rights were a matter of "private" law rather than "public" law. In light of this, he continued to contend that the legitimacy of a legislature amending such rights depended on the court's determination of whether or not the Act was in fact for the "obvious benefit" of Scottish subjects.

Since the court found that fishing rights were a subject of "public" law rather than "private" law, Mr. Gibson's lawsuit failed from the outset. For the time being, however, the significance of Lord Keith's ruling 102 may rest in the fact that it did not simply dismiss the case on the grounds that any effort to contest the constitutionality of a legislation was fruitless. Lord Keith left open the prospect that such a course of action may be credibly defended. He questioned whether any court could determine whether a Scottish legislation affecting "private" rights satisfied the manifest utility standard. However, Lord Keith also made the following comment, echoing Lord Cooper in McCormick: "I prefer to reserve my opinion on what the position would be if the United Kingdom Parliament passed an Act purporting to abolish the Court of Session or the Church of Scotland or to substitute English law for the entirety of Scots private law." It seems doubtful that Parliament would ever pass legislation with the desired outcome. Yet, McCormick and Gibson both provide at least a hypothetical scenario in which a legal challenge to the constitutionality of a legislation may be successful.

II. DISCUSSION

A. Women’s enfranchisement

The common law also offers a noteworthy illustration of how the courts have rejected conventional views of parliamentary authority in defense of long-standing moral standards. The 1832 Great Reform Act expanded the right to vote in parliament to men from the affluent middle class, as we will see in chapter seven. Further changes made in the nineteenth century granted a growing number of men the right to vote. Women's suffrage activists developed a claim that Parliament had implicitly granted women the right to vote in the 1860s despite Parliament's stated refusal to do so.

In all Acts, phrases importing the masculine gender should be regarded and understood to include females, unless the contrary as to gender is specifically stipulated, according to Section 4 of Lord Brougham's Act of 1850. Women were not officially excluded from the 1867 Reform Act. As the Bill was being passed, John Stuart Mill, a proponent of women's suffrage at the time, contended that such phraseology impliedly extended the vote to women. The government implied that determining the impact of the legislation on this point would be left to the courts by failing to insert a section clearly disapplying Lord Brougham's Act to the franchise question. 104

B. Lings vs. Chorlton

In the case of Chorlton v. Lings105, a woman who met all the requirements for voting eligibility for males contended that the 1867 Act had in fact impliedly given women the right to vote. The Court of Common Pleas, however, ruled that it was impossible for Parliament to have meant for women to gain voting rights. By doing so, decades of constitutional

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history and usage would be overturned. Willes J outlined the fundamentally moral justification for this behavior in what was undoubtedly considered diplomatic terms at the time:

The lack of such a right can be attributed to the fact that women have been prohibited from participating in this area of public affairs primarily out of respect for women and a sense of decency, rather than because they lack intelligence or are otherwise unfit to participate in the government of the country.

Keating J. provided the most succinct statement of the court's unanimous rejection of the claim that Parliament could implicitly amend fundamental constitutional principles, stating that the legislature "if desirous of making an alteration so important and extensive, would have said so plainly and distinctly."

C. University of St. Andrews vs Nairn

Nairn v. University of St. Andrews, which took place almost 40 years after Chorlton v. Lings, was a rerun of the original case. All university graduates were granted the right to run for office in university constituencies by the Representation of the People Act 1868. The Universities Act of 1889 gave Scottish institutions the authority to confer degrees to women. Nairn was one of several female graduates who argued that the 1889 law automatically suggested that she was now qualified to vote. Such a defense has little validity in the House of Lords' eyes. Female suffrage, according to Lord Loreburn LC, could only be implemented by the clearest statutory language: "It would need a convincing showing to persuade me that Parliament meant to accomplish a constitutional reform so profound and far-reaching through such a covert method." 109

A concept with potentially broad relevance is Keating J.'s conclusion in Chorlton that Parliament may implement "major and extensive" changes to the nature of a citizen's relationship to the state only via "clear and distinct" legislative wording. The similar inference might be made about Lord Loreburn's claim that the common law forbids Parliament from using 'furtive' legislative methods to attain policy goals pertaining to issues of fundamental political and/or moral importance.

The legal theories put forward in conventional readings of the judgments in Vauxhall Estates and Ellen Street Estates, which are believed to have created the doctrine of implicit repeal, do not seem to easily reconcile with what the judges seem to be saying in these two instances. Nonetheless, there are compelling "democratic" arguments in favor of the Chorlton/Nairn justification. It would seem logical that Parliament be open about the goals it is pursuing if we think that Parliament receives its political power from the agreement of the people. Citizens would not be able to determine whether or not they wanted to continue giving their approval to what Parliament was doing without such candor in the legislative process. Yet, it is primarily a political argument rather than a legal one, and the British courts have not yet been willing to accept it.

The constitutional position of parliamentary sovereignty. The fact that the principle was not intended for a contemporary, democratic society with significant political parties competing in national general elections may be the most crucial thing to keep in mind. It has existed for 300 years. In order to do justice to Dicey's theorization of the principle in the 1880s, we should point out that his goal was to clarify the connection between Acts of Parliament and the courts in order to emphasize that, according to legal principle, the courts were invariably subordinate to the will of Parliament. Dicey made a point of emphasizing that political sovereignty was something very different. Saying that Parliament could pass laws on whatever topic it wanted was absurd in terms of how government really worked. Members of Parliament (MPs) would constantly need to be aware of what measures the people would approve and modify the laws they make appropriately since one part of Parliament, the House of Commons, was an elected body and its members may periodically be replaced by its citizens. Hence, we must look at long-term developments in other aspects of British lawmaking and government procedures in order to assess the political viability of Dicey's legal philosophy. We must evaluate the Commons' election process, the connection between the Commons and the executive branch of government, and the shifting power dynamics between the Commons, the Lords, and the monarch.

D. Separation of powers and the rule of law

Invoked, along with "democracy," to express the fundamental sufficiency of Britain's constitutional structures, the "rule of law" is another aspect of the British constitution that is taken for granted. Yet "the rule of law," like "democracy," does not have a single definition; rather, it is a moral concept that, depending on the moral attitudes of each individual, has a variety of meanings. Eventually, they examine if there are qualities of "the rule of law" that transcend party political, national, and historical borders and ask whether the British model falls short by comparison. Here, we look at the numerous interpretations that the idea has received in the post-revolutionary constitution of Britain.

We could see "the people's" choices on two inherently political topics expressed via the rule of law. First of all, it has to do with the nature of the interaction between the people and the government. Second, it addresses the procedures used to manage that connection. Simply put, the rule of law is concerned with the powers and procedures available to the government.

E. On these two topics, several thinkers have suggested variants

This examines three theoretical analyses, those of A. V. Dicey, Friedrich Hayek, and Harry Jones, which span the spectrum of mainstream debate about the nature of the rule of law in Britain's modern constitution, in addition to several seminal cases, in which one can see the various ways in which principles are put into practice.

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F. The rule of law in the pre-welfare state from a Diceyan viewpoint

One should approach Dicey's description of the rule of law with caution. As Dicey finished his renowned Study of the law of the Constitution in the 1880s, few adults were eligible to vote in parliamentary elections, as indicated in Seven. As a result, Dicey was a product of an undemocratic society in the contemporary sense. Dicey was against the nineteenth-century tendency toward more government involvement in social and economic matters. 2 Nonetheless, in terms of parliamentary sovereignty, the British constitution is based on principles that predate contemporary notions of democracy. As a result, Dicey's ideas provide us a solid foundation from which to investigate what the term "rule of law" really means.

The Law of the Constitution has numerous brief sections that capture the heart of Dicey's strategy:

We mean, first of all, that no man is punishable or can be lawfully forced to suffer in body or goods except for a clear violation of the law established in the ordinary legal manner before the ordinary courts of the land. Secondly, we mean that every official, from the Prime Minister down to a constable or tax collector, is accountable for every act done without legal justification in the same way as any other citizen.

Three elements make up this definition. First off, it is against the law to subject a person to physical or material suffering. It suggests that Dicey's top priority is upholding people's individual rights and freedoms. Dicey emphasized the need for this protection to be effective both against other people and the government. Like every other citizen, a public servant had to find some legal reason for acting in what seemed to be an illegal manner. Second, "save for a clear violation of the law." This supports the idea that government must function inside a system of rules that go beyond the simple acts of government officials since behavior does not automatically become legal just because a government official asserts it is. The requirement that any legal violation "must be proven in the regular legal way before the ordinary courts of the nation" is the third consideration. Whether or whether a law has been breached must be decided by the courts, not by the government. Dicey's three pillars of the rule of law point to the separation of powers, another widely accepted constitutional premise.

Philosophical writings like Montesquieu's Spirit of the Laws and Locke's Second Treatise on Civil Government had a significant impact on theoretical analyses of the British constitution, as well as, in a different fashion, on the constitutional ideals upheld by the American revolutionaries. The fundamental insight to be drawn from the idea of the separation of powers in the British context is that there are three distinct parts to the government function.

Firstly, there is laws. The laws that control how people live are created by one branch of government. Reverting to the notion that the British constitution serves as a social compact, the legislative branch's role is to create the conditions under which the government operates. In Britain, Parliament is in charge of passing laws. But, if a community creates a contract, the people must also come up with a plan for carrying it out.

The executive arm of government is responsible for this second component, which involves "executing" or carrying out the laws. The second purpose of government is seen suspiciously by Diceyians. They presume that the administration will always attempt to carry out actions that the Legislative branch has not authorized. According to traditional British interpretations of the rule of law, Parliament alone has the authority to enact laws, and the executive part of the government does not. Hence, if the executive violates the laws that the legislature has passed, a third branch of government must provide individuals with a recourse.

The courts make up this third component. If the citizen feels she has been the victim of improper government conduct, she may seek redress "in the regular courts of the nation." Courts have a limited ability to make laws via the creation of the common law, in addition to deciding whether executive action is within the parameters permitted by parliament. If supported by common law, executive action that lacks a legislative grounding may be legal. An iconic eighteenth-century case, Entick v. Carrington, serves as a valuable example of this three-fold distinction within Dicey's interpretation of the rule of law.

G. Entick vs Carrington

British constitutional history saw some upheaval in the middle of the eighteenth century. The administration was under constant pressure from a radical indigenous movement that accused it of corruption and ineptitude in addition to dealing with insurrection in America. The printing industry's technological advancements made it possible for radicals to disseminate their views widely. The administration was the subject of countless pamphlets inundating London in the 1760s.

John Wilkes, a radical politician who was repeatedly elected to the House of Commons, was the center of considerable resistance. The Commons had consistently prohibited him from taking a seat. Many American colonies saw him as a hero as a result of their joint battle with him against a Parliament and government that was becoming more and more oppressive. 8 To stop the flow of Wilkes' critical literatures, the British authorities used a number of harsh strategies. One tactic used by the Home Secretary was to issue a "general warrant" authorizing his civil officials to search radicals' homes who were thought to be generating seditious material. The warrant allegedly gave government agents power to access private property without the owner's consent and take whatever they discovered there. The Home Secretary authorized such a government official attack on Mr. Entick, a printer and supporter of Wilkes, in 1764.

The government's behavior allegedly violated the

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fundamental tenants of the consensual constitutional governance covered in ss. 1 and 2. If the "government"9 prohibited Wilkes from assuming his seat, it was pointless for voters to choose him as their MP. Also, if radical publications were banned by the government, it would be impossible for voters to make educated decisions about their legislators. Britain in the eighteenth century was not a democracy in the contemporary sense.

Entick had undoubtedly "suffered in goods" since someone had broken in and removed his belongings. Nevertheless, had he engaged in "a clear violation of the law established in the regular way before the ordinary courts of the land"? Obviously not. He had never been charged with a crime, found guilty of it, or appeared in court. In contrast, it seems that the government's representatives broke the law by trespassing on Mr. Entick's property and taking it.

As a result, Mr. Entick sued the authorities for trespassing on his property and possessions. Their justification for their behavior was that the Home Secretary's warrant gave a legitimate justification. Nonetheless, it was difficult to maintain the defense. The Home Secretary was not permitted to issue such a warrant under the current laws. Moreover, there was no common law precedent that would have justified this government action.

The government officials cited two more defenses because they lacked clear statutory or common law justification for their conduct. Then, there was the "state need" argument. The Home Secretary basically said that, in his opinion, Entick's files posed a serious danger to public order and that, in order to avert political upheaval, it was necessary to take the materials. The second defense may be categorized as "custom and tradition." The power had been used often, and nobody had ever disputed it. Hence, the activity could not possibly be forbidden. What the government deemed essential or what it had previously done did not interest Chief Justice Camden. Finding the law piqued his attention. One aspect of "the law" was unambiguous: Any infringement of private property, no matter how little, is considered a trespass under English law. Without my permission, no guy is allowed to step foot on my property. If he acknowledges the truth, he is required to provide proof that a legal provision has given him permission or exonerated him. Consequently, only strong statutory or common law authority could support the use of such a "exorbitant" power against Mr. Entick. Simply stated, according to Camden CJ, "If anything is law, it will be found in our books." If it's not there, it's not legal, according to this saying. 11 There was no such authority that the attorneys for Mr. Carrington12 could locate. As a result, it was trespass to enter Mr. Entick's premises and take his files. Mr. Entick was qualified to get compensation for his harm. The judges gave a prize of $300 at the time.

One legal scholar described the courts as the "lions beneath the throne" of the British constitution in response to decisions like Entick v. Carrington. The adage may be interpreted in a number of ways, but for our purposes it can be understood to mean that judges would jump to action and tenaciously protect individuals' rights and freedoms against impermissible government intrusion. Entick is a perfect illustration of how the courts defend the Diceyan interpretation of the rule of law. The argument asserts that individuals have a legal recourse when the government violates the law, not that government always behaves correctly.

The depths to which Lockean concepts of "property" and "liberty" were ingrained in the common law tradition of the eighteenth century are shown by Lord Camden's reasoning: "The main purpose of males joining society was to protect their property." When it hasn't been taken away or limited by a public law for the benefit of the total, that right is retained sacrosanct and inviolable in every situation. 14 But, even if we believe that the courts' fundamental constitutional duty is to protect "property" and "liberty" from arbitrary authority that is still a contentious moral claim.

III. CONCLUSION

An entrenchment clause, also known as an entrenchment provision, is a clause that restricts or forbids specific alterations, making them unacceptable. It can need for a special kind of majority, a popular vote, or the agreement of another party. By making it more difficult to reform, entrenchment may increase the stability of a legal region. Entrenchment serves as an indication of how important the laws are, and it may also point to certain legal areas that the state views as crucial to its identity. It outlines the rights of people that institutions, policies, or laws must not violate and that the government must work to uphold. The inclusion of these entrenched provisions was seen as an important safeguard against any attempts to undermine Scottish autonomy or undermine the distinctive features of Scottish culture and society. However, the entrenchment of these provisions also had important implications for the balance of power within the new kingdom, and contributed to a sense of unease and tension between England and Scotland in the years following the union. Despite these challenges, the Treaty of Union remains an important historical document that continues to shape the political and legal landscape of the United Kingdom to this day. The entrenchment of certain key provisions within the treaty is a testament to the enduring importance of protecting key rights and institutions, even in the face of significant political and social change.

REFERENCES

[1] A. Geddis, “In Search of Consensus: New Zealand’s Electoral Act 1956 and its Constitutional Legacy.,” J. New Zeal. Stud., 2019, doi: 10.26686/jnzs.v0ins28.5431.

[2] I. van Ooijen and H. U. Vrabec, “Does the GDPR Enhance Consumers’ Control over Personal Data? An Analysis from a Behavioural Perspective,” J. Consum. Policy, 2019, doi: 10.1007/s10603-018-9399-7.

[3] B. W. Stringer et al., “A reference collection of patient-derived cell line and xenograft models of proneural,

classical and mesenchymal glioblastoma," Sci. Rep., 2019, doi: 10.1038/s41598-019-41277-z.
[4] B. Noble et al., "Effectiveness of strategic environmental assessment in Canada under directive-based and informal practice," Impact Assess. Proj. Apprais., 2019, doi: 10.1080/14615517.2019.1565708.
[5] N. G. Canclini, "A culture of informality," Urban Stud., 2019, doi: 10.1177/0042098018782635.
[6] A. Atkinson, "Rethinking credit as social provision," Stanford Law Rev., 2019.
[7] R. Nandagiri, "'Like a mother-daughter relationship': Community health intermediaries' knowledge of and attitudes to abortion in Karnataka, India," Soc. Sci. Med., 2019, doi: 10.1016/j.socscimed.2019.112525.
[8] J. S. Hacker, "Medicare Expansion as a Path as well as a Destination: Achieving Universal Insurance through a New Politics of Medicare," Ann. Am. Acad. Pol. Soc. Sci., 2019, doi: 10.1177/0002716219871017.

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Dicey's Rule of Law Process

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Abstract— Dicey defines the term "rule of law" as the total domination or supremacy of conventional law as opposed to the effect of arbitrary authority or broad discretionary power. That implies ruling out the possibility of government arbitrary behavior. In this chapter author is discusses the rule of law in the welfare state. The rule of law is based on the idea that all individuals and institutions within a society are subject to the same set of laws, and that these laws are administered fairly and impartially by an independent judiciary.

Index Terms— Dicey, Law, Parliament, Social, Welfare

I. INTRODUCTION

The idea of the division of powers and Entick's use of it can make us believe that Diceyan views of the rule of law merely address the procedures for enforcing laws, rather than their actual content. 15 Yet Dicey's overt attention to procedure coexisted with a political viewpoint about the "proper" substance of the laws that Parliament enacts. Laws' great degree of predictability or foreseeability worried Dicey a lot. If someone wanted to create a company, participate in politics, or form particular kinds of social ties, they had to be aware of where they stood. Dicey believed that the rule of law required Parliament to refrain from granting the executive any irrational or broad discretionary powers. A legislation that, for example, allowed the Home Secretary to jail anybody at any time for as long as she pleased would fail the predictability and predictability criteria and seem to go against Dicey's interpretation of the rule of law [1],[2].

But we immediately run into a serious issue here. Dicey appears to be arguing that if society is to continue to be governed by the rule of law, there are restrictions on the kinds of governmental powers that Parliament may enact. But, according to the doctrine of parliamentary sovereignty, Parliament has no legal restrictions on the laws it may pass. One cannot go to court and argue for a legislation that gives the Home Secretary very broad discretionary powers to search people's houses and confiscate their belongings to be ruled legally unconstitutional because it goes against the Diceyan rule of law. Carrington's "trespass" would have been legal and Entick's lawsuit would have been unsuccessful if Parliament had approved a legislation in 1760 allowing the Home Secretary to collect people's documents whenever he felt that it was necessary. While ideas of "property" and "liberty's" inviolability were at that point "rooted" in common law, they were not "entrenched" in the constitution since Parliament might trample on property rights and individual freedoms whenever and whenever it saw fit. Following Entick, Parliament had the option of passing laws that gave "general warrants" a fully legal standing [3].

The logical inference may be that the sovereignty of Parliament is a more significant constitutional element than the rule of law. Yet, Dicey's conception of parliamentary sovereignty and the Diceyan rule of law are fundamentally moral ideas. These could potentially be what Professor Wade refers to as "ultimate political realities." How can one have two "ultimate" facts is the challenging issue that follows. We'll discuss how this apparent conflict has been resolved later in this and following essays [4],[5].

A. The judiciary's "independence"

When we contemplate the "independence of the judiciary," a second conflict between legislative sovereignty and the rule of law emerges. Until 1688 and for a short while thereafter, English judges served "at the King's pleasure." This merely meant that judges who later offended the King or his administration may be removed in addition to the fact that the King appointed the judges. This is what happened to Coke in the early seventeenth century, when he made decisions that greatly displeased the Crown [6],[7].

If this condition persisted after the revolution of 1688, parliamentary sovereignty would have been compromised since the King might have used his authority to remove judges to 'persuade' them to interpret the law differently than Parliament intended. The Act of Settlement 1700, which addressed this issue, stipulated that although the Monarch had the authority to appoint judges, judges would retain office "while good behavior." This implies that a judge could only be removed by a joint resolution of the House of Lords and House of Commons after the judge's commission of a crime or other grave moral transgression. She cannot simply be fired by the Crown for delivering verdicts that the administration disapproves [8].

The fact that the Act of Settlement did not include the colonies was one of the main grievances of the American revolutionaries. On behalf of the Crown, colonial governors appointed their judges for finite periods, with the possibility of removal if they rendered judgments the governor found objectionable. In contrast, Lord Camden was able to issue a decision in Entick vs. Carrington that the government disagreed with since, unlike colonial judges, he was not

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subject to removal at the government's discretion.

Yet, the Act of Settlement only protected the judiciary's independence from the Monarch, not from Parliament. A judge might be removed by a majority vote in the Commons and the Lords under the concept of parliamentary sovereignty, and new legislation could amend the Act of Settlement's provisions as well. The Act of Settlement has undergone minor adjustments, but its fundamental principles have not changed, and only one High Court judge has ever been removed. As a result, this hypothetical potential has not yet materialized in practice. So, it is reasonable to draw the conclusion that the British constitution really grants the judges independence throughout the course of their official duties. The Harris controversy in South Africa serves as perhaps the best example of the power of this tradition in the "British" context.

B. The fallout from Harris v. Ministry of the Interior

The only entrenched provisions in the constitution of South Africa in 1952. A simple majority vote in the house and senate would seem to alter everything else. The administration made the decision to forgo the Supreme Court's constitutional defense in favor of using its legislative majority. The High Court of Parliament Act of 1952, which attempted to transform Parliament into a new court with the authority to hear appeals from the Appellate Division, was the organization's initial endeavor. A simple majority was required to pass the "Act." This law was promptly challenged by the plaintiffs in the Harris case, who argued that any such bill could only be passed under the s. 152 processes. Using a more creative approach than that used in Harris, the Appellate Division Court overturned the 1952 Act in Harris.

According to the Court, Section 152 implicitly mandates that any legislation pertaining to subjects covered by Sections 35 or 137 be subject to judicial review. This implicit clause was an essential legacy of the British constitutional system, which served as the foundation for South Africa's own constitution. A "court" in this sense also needed to be institutionally independent of the legislature and the government and staffed by 'judges' who possessed legal qualifications. The so-called "High Court of Parliament" fell short of both requirements. Giving such an organization the legal protection provided by sections 35 and 137 would make such protection illusory. Only via the s. 152 processes could a "High Court of Parliament" be established with the authority to hear issues regarding the entrenched provisions.

The second government plan was easier to understand. The Appellate Division's size was increased by the legislature, which was not prohibited by the Constitution. As a result, the administration requested that the Appellate Division Quorum Act 1955 be passed by the legislature. With a simple majority, this act increased the number of judges from five to six who would be nominated by the government. They were all either judges in lesser courts or law professors, thus they all seemed to meet the Harris standard for legal qualification. Yet each of the six was also a well-known advocate for governmental action. The Senate Act 1955 was then passed by Parliament, again with a simple majority. This increased the number of senators from 48 to 89, who were all picked in a way that made sure they were nearly exclusively in favor of the administration. As a result, the administration was granted a two-thirds majority in the legislature. The Separate Representation of Voters Act was then re-enacted by Parliament in 1956 in the manner and format specified by section. In Collins v. Minister of the Interior, the eleven-judge Supreme Court quickly ruled that the new Act was constitutional.

While we might dispute their moral appropriateness from a contemporary British viewpoint, all of these actions were legally "lawful" in the strictest sense. The Appellate Division Quorum Act of 1955 and the ruling in Collins both send the message that there is more to the idea of a "independent" court than just job security. By adding many new judges to the courts, legislators may make them more obedient. "Independent" may rely more on a judge's mental condition than on the permanence of her formal position.

II. DISCUSSION

A. The rule of law in the welfare state

Being in a country where few people were allowed to vote in parliamentary elections and where the government performed few tasks directly influenced Dicey's constitutional beliefs. Almost all adults had gained the right to vote by the 1950s, and the government had a prominent role in the administration of social and economic matters. Almost concurrently with Dicey's drafting of his Law of the Constitution, Parliament started passing laws granting government entities broad discretionary authority. By 1900, this movement picked up speed significantly. While it is beyond the purview of this book to consider issues of political theory and history in detail, it is crucial that we have a basic understanding of the two prominent philosophies that have shaped modern British political history. Dicey was an early proponent of the first idea, which we may refer to as "market liberalism," which represents right-wing political viewpoints. The Road to Serfdom, written by Friedrich Hayek in 1944, contains its most well-known contemporary defense. From a legal perspective, the second idea, social democracy, which originated on the center-left of the political spectrum, is best defined by American jurist Harry Jones in a 1958 paper published in the Columbia Law Review.

B. The path to serfdom in Hayek

Hayek is a modern representative of the traditional Diceyan way of view. The purpose of the rule of law, according to Hayek, is to guarantee that "government in all its operations is constrained by norms defined and stated beforehand." 29 Both method and content are involved in this topic.

On the validity of government action, Hayek follows

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Dicey in insisting that all people must have access to an impartial court in order to challenge it. Is what the government has done in compliance with an earlier common law or statutory rule? When determining a case of this kind, the courts' primary responsibility is to defend the citizen against the government; judges must not disobey the law or modify it to suit the government's needs. Hayek's thesis is fundamentally based on his use of the word "rules." He believes that laws that provide the government discretionary powers should be kept to a minimum since they make it difficult for the public to determine the precise limits of the government's power. This demand for a regulated government process coexists with a desire for a minimally effective government. According to Hayekians, society's interests are best served when the size and scope of the government are minimized, providing each person the greatest amount of freedom to manage their own social and economic issues. An army must be provided by the government to protect the nation, together with a police force to maintain the criminal code and a judicial system to resolve legal issues involving contracts, property, and crimes. In its most extreme version, market liberalism would contend that the government should have no part at all in the delivery of social security, housing, healthcare, or education. If such goods were advantageous to society, private business owners would provide them.

Hayekian thinkers acknowledge that there will be significant wealth disparities in such a society. This is seen as a normal outcome of people's diverse views and skills. According to Hayek, this inequality is a lesser evil than the restriction of personal freedom that would occur if the government took effective action to change this "natural" condition of things. According to the Hayekian perspective, society cannot have a welfare state and the rule of law at the same time. Legislators should not assert that they may simultaneously pursue both goals since Parliament is sovereign and may select one or the other. An absolute value, the rule of law can only exist in constitutions that forbid lawmakers from meddling in social and economic concerns. According to this perspective, the issue of whether all governmental activities are legitimate in a legal sense has nothing to do with the rule of law; rather, it "implies limitations to the scope of legislation." 30 Any policy that directly pursues the substantive goal of redistributive justice, in Hayek's opinion, must result in the overthrow of the rule of law.

While Hayek's theory was popular in Britain in the 1980s, neither the Conservative nor Labour Parties were particularly supportive of it from 1945 to 1975. The political consensus at the time was broadly consistent with a social democratic form of government. The time period is often called "Butskellism." Its name emphasizes the similarities of the political goals that the two parties sought by combining the names of R. A. Butler and Hugh Gaitskell, leaders in the Conservative and Labour Party, respectively. This viewpoint presupposes two key premises: first, that government should be heavily involved in economic matters; and second, that people must accept severe restrictions on their freedom if the government believes them to be in the public interest.

The Gladstone and Disraeli administrations in the late nineteenth century provided the first manifestations of this idea of governance in laws that restricted the use of child labor or forbade companies from discharging their waste into waterways, among other things. Two reasons are given for this kind of government action. First of all, it is seen as "just" and "fair" inasmuch as it safeguards people from exploitation. Second, it is seen to be sensible for society as a whole; for instance, the expenditure of poor health and mortality brought on by a lack of pollution controls surpasses the cost associated with regulating waste disposal.

By the 1950s, a vast array of government programs, including a national health service, millions of publicly owned homes, government control over the coal, steel, water, gas, and electricity industries, old-age pensions, unemployment benefits, and free public education for all children were all supported by this dual rationale. This is unmistakably a "substantive ideal of redistributive justice," in Hayek's words. A complicated welfare state could not be governed according to legislative "laws," thus Parliament had to provide extensive discretionary powers to government personnel. It would be difficult for lawmakers to create legislation for every scenario that might possibly arise given the amount of work that the government was doing and the variety of concerns it was addressing. This indicated a little reduction in the accuracy with which individuals could anticipate the boundaries of the executive branch. Several constitutional attorneys disagreed with the idea that this precluded society from being controlled by the rule of law.

In contrast to Hayek, Jones contends that one may modify Dicey's model without changing its fundamental principles and that the rule of law is a relative rather than an absolute political ideal. Jones agrees with Hayek that "the main goal of the rule of law is the protection of the individual against governmental power holders." Yet he also asserted that as long as lawmakers, public servants, and the judiciary upheld an "adjudicative ideal," the rule of law would endure.

The legislative foundation of a welfare state would also have flexible standards, allowing government to adopt diverse reactions to specific circumstances, in contrast to the inflexible norms that would constitute legislation in a Hayekian society. Yet, the adjudicative ideal requires that even while the legislature gives government entities a lot of latitude, it may not give them arbitrary authority. Jones' interpretation of the rule of law does not downplay the need of predictability; rather, it acknowledges that in certain instances, individuals may simply need to be aware of the basic limits of the government rather than its exact position.

Jones' view also does not deny the need of a division of powers. By "meaningful day in court," citizens must be allowed to contest the constitutionality of government action.

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Jones disagrees with Hayek in that he believes that this does not necessarily require turning to the "ordinary courts"; instead, specialist tribunals may be more appropriate for some governmental functions because they may be more informal, more knowledgeable, and less expensive than the traditional judicial system.

In a social democratic society, the duty of the courts and tribunals is not to protect the individual at any costs. The courts must acknowledge that since Parliament granted the government discretionary powers, it intended for people to have some of their freedoms restricted in the name of the greater good. How much discretion did Parliament wish the government to have? This might be a challenging issue for the courts. Jones acknowledged that this put "a tougher and larger job for the rule of law," but he thought Hayek was being too gloomy by saying that the idea had to be completely abandoned.

A welfare state would seem to be compatible with some of the conceptions of democracy in the sense of governing by consent mentioned in one, even if it may be challenging to square it with a Diceyan or Hayekian understanding of the rule of law. There would seem to be no apparent obstacle to "the people" doing this if they have determined that they are ready to compromise the Diceyan ideal in order to accomplish certain social goals. We'll get back to the issue of whether or not that conclusion makes sense politically. Of fact, a community might very well follow Hayek/definition Dicey's of the rule of law without being a democracy. Hayek's criteria would be passed by a dictator who upheld market autonomy and firmly adhered to previously established power limitations. It is more challenging to determine if a democratic constitution can exist without at least respecting a watered-down form of the rule of law; this is a topic we will address later.

C. ‘Red light’ and ‘green light’ theories

What Harlow and Rawlings refer to as the "red light" and "green light" conceptions of legal regulation of executive behavior nicely sum up Jones' and Hayek/opposing Dicey's perspectives on the "what and the how" of contemporary governance. Red light theorists like Hayek contend that protecting individual autonomy should be the first priority of the rule of law, echoing Dicey's distrust of the administration. Jones and other proponents of the green light theory, however, think that the Diceyan obsession with individual rights is unwarranted. They believe that the legal restrictions on government discretion should be loosened by Parliament and the courts, allowing government to limit individual freedom in order to advance society as a whole.

As we'll see below, none of these theoretical viewpoints cleanly fits the reality of judicial control of governmental activity in the modern British constitutional environment. According to Harlow and Rawlings, there is a third theoretical position—the "amber light" theory—that lies halfway between the two extremes. This does not imply that the theoretical continuum's exact center is where legal restrictions really exist in reality, but rather that specific situations may be found all around the spectrum.

Legal restrictions are intended to provide the government some freedom, but not excessive flexibility, according to this theoretical paradigm. It inevitably prompts the question, "How much is too much?" The ideal way to study the problem may be to gradually accumulate several instances; after a small distraction, we will return to this work.

D. Constitutional justification for judicial control over government behavior

The history, makeup, and scope of the current judicial system are topics that are best covered in-depth in English legal system textbooks. Yet, a few general statements concerning the "judicial law-making process" and the nature of the court system must be expressed here. Technically speaking, every court in the United Kingdom was created by statute. Before the revolution, there were several courts, each with ostensibly autonomous but usually overlapping authority, dotting the legal landscape. Throughout the next 200 years, a number of piecemeal changes impacting the judicial system were implemented, but for our purposes, the Judicature Acts of 1873 and 1875 are the most important legislative initiatives. These Acts established the different jurisdictions of the new courts as well as the credentials necessary for the judges who would seat in them. They also combined the several so-called "higher" courts into the newly established High Court and Court of Appeal. The House of Lords maintained its position as the pinnacle of the British legal system until the Supreme Court replaced it in 2010. Later legislation reaffirmed this standing.

The "common law" is undoubtedly inferior to statute in situations where a statutory and common law rule appear to demand different solutions to specific problems, but despite the fact that Parliament has occasionally changed the structure and jurisdiction of the courts, and despite the fact that the "common law"36 is inferior to statute, Parliament has never enacted legislation that has sought systematically to control the process or outcome of the judiciary's law-making. While almost all of these principles originally stayed in force, the 1688 revolution established that legislation may change or remove any common law principles anytime Parliament choose. The common law's scope remains a matter for the courts to decide in the absence of legislative restraints. And the House of Lords has established the core of common law concepts inside the contemporary judicial system.

Since it is considered that Parliament always intended for the government to apply its statutory powers in line with common law standards, this judicial authority is not in conflict with the idea of parliamentary sovereignty. One may argue that common law principles are the implicit conditions of the political system, and thus Parliament is seen to have "contracted in" to these restraints on the power of the executive. Parliament must expressly state in the legislation granting the authority that it does not want a specific government action to be subject to judicial oversight. Being

sovereign, it would appear that in theory, Parliament might "contract out" of the common law rules that give the judiciary the power to control governmental actions. While it departs from conventional notions of the rule of law, such legislation may seem "politically or ethically inappropriate," yet there is no legal barrier to Parliament passing it. The term "administrative law" used in this text refers to the many common law restrictions that the courts impose on governmental operations. The fundamental idea of administrative law is judicial review. Later on, we go into more depth about that idea, but for now, it is important to think about the doctrine's core components and rationale.

In general, judicial review in the modern era serves to defend a certain understanding of the rule of law by ensuring that executive authorities do not exceed the authority provided to them by the legislature or acknowledged by the courts as being at common law.

The Baggs Case37, which included the efforts by the Mayor and Burgesses of Plymouth to remove one of their own from the city's council, provides an early judicial expression of the notion. A more general statement of the court's authority was made by Coke CJ in his decision that the expulsion was unlawful: "This court hath not only jurisdiction to correct errors in judicial proceedings, but other misdemeanors extrajudicial tending to the breach of the peace or the oppression of the subject or any other manner of misgovernment; in order that no wrong or injury, either publick or private, can be done but this shall be reformed or punished." The intricate details and challenges of the creation and consolidation of the judicial review jurisdiction call for a more thorough analysis than can be provided here.

The 1948 Court of Appeal decision in Associated Provincial Picture Houses Ltd vs Wednesbury Corpn40, which is frequently cited as the clearest restatement of both the constitutional basis for judicial review of government action and of the principles which a court will deploy to establish whether a government body's action is lawful, may provide the best foundation for our limited purposes.

The lawsuit actually dealt with a small substantive issue. The Sunday Entertainments Act of 1932 gave local councils in England and Wales the right to impose "such restrictions as the authorities consider appropriate to impose" on theaters within their jurisdiction that desired to operate on Sundays. A condition put in place by the Wednesbury Corporation prohibited anybody under the age of fifteen from going to the movies on Sundays. The movie theater chain claimed that the condition was illegal since it was clearly putting its earnings at risk.

According to the Wednesbury decision, there are three bases upon which a court may conclude that an executive action is "ultra vires," or "outside the bounds" of legislative power.

The first justification may be categorized as "illegality." The government could not use a law passed by Parliament, for example, authorizing the government to establish schools as grounds for developing housing. Similar to this, a government agency with the authority to hire teachers under a law could not use that authority to hire nurses or train drivers. In the Wednesbury case, the Corporation's situation was obviously not one of them.

A government entity also goes beyond its legislative authority if it makes decisions that are "unreasonable" or "irrational." Regarding discretionary powers, this foundation for assessment is especially crucial. In administrative law, the terms "unreasonableness" and "irrationality" have a unique meaning. 41 A government action is only irrational or unreasonable if its reasoning is so absurd that no sane individual could have believed that Parliament would have meant for it to take place. Consider the situation where a law permits the government to hire instructors in elementary schools "on such conditions as it considers proper." The use of such authority would only be deemed irrational if it resulted in a result that had no link to legitimate goals, such as if a government agency chose not to hire anybody with red hair.

On the other hand, rational persons may come to different conclusions about the specific amount that instructors should be paid or the degree of credentials they should possess. That variance is absolutely legal since administrative law recognizes that when a legislation employs a discretionary phrase, Parliament anticipates that there would be variety in the actual judgments made. To make sure that these deviations stay within the parameters of the political consensus that Parliament intended, the concept of irrationality is used. Even if the requirement set by the council in the Wednesbury case was more stringent than the conditions applied by other surrounding local authorities, it was not plausible to classify it as "irrational" in this sense.

The term "natural justice" is sometimes used to describe the third basis for assessment. This basis for review focuses more on the process used to arrive at a decision than it does on the actual decision itself. Government entities must follow fair processes while exercising their statutory or common law authority, according to administrative law. This basically implies that decision-makers shouldn't have a personal stake in the choice they are making, and that those who may be impacted by the choice should have a chance to present their case before a decision is made.

The jurisdiction of judicial review is supervisory rather than appellate. When a court rules that a government action is illegal, it will not override the government body's decision; rather, it will send the case back to the original decision-maker so that the decision may be made once again, this time in line with the law. In contrast, the court will enforce its resolution on the matter at hand in a trespass or contract violation proceeding.

The "ultimate political truth" of parliamentary sovereignty found in the constitution serves as the theoretical foundation for judicial oversight of government behavior. This necessitates that the government only carry out those

functions that Parliament authorizes. So, it is the constitutional responsibility of the courts to uphold the limits of legislative purpose and make sure that the government is not allowed to cross them without being held accountable.

Nonetheless, one should use caution when drawing the conclusion that the courts' function is limited to mechanical deference to legislative provisions. Here, we address this issue in further depth. Nevertheless, as the Wednesbury grounds for review are based on common law principles, the courts may change, eliminate, or add to those grounds as they see right. We shall soon come across the moral precepts that have caused the courts to be careful when creating new grounds for review or redefining old ones when we examine the idea of stare decisis. But, there is no legal impediment to substantial judicial change of any existing common law norm until Parliament enacts legislation on the subject.

This inevitably prompts us to ask: Who or what ultimately has a judge's constitutional loyalty? This has less to do with a judge's personal preferences than it does with the concepts that judges use to determine the common law's scope and the interpretation of legislation. Each of these topics are vital parts of the modern constitutional order and need at least a cursory discussion, even if a detailed discussion of them would be more suited in jurisprudence or the English legal system courses.

III. CONCLUSION

The total domination of regular law over arbitrary power, which precludes the possibility of arbitrary decision-making, prerogative, or any broad discretionary powers on the side of the government. It aids in establishing the boundaries of administrative authorities' authority and maintaining control over them. It is crucial to the development and acceptance of administrative law. It serves as a yardstick for evaluating administrative activities. The rule of law fairness under the law the prevailing spirit of law. Dicey's rule of law has been a critical component of many modern legal systems, and has served as a guiding principle for the development of fair and just legal systems around the world. However, the concept has also been subject to critique and debate, particularly in the context of its implementation in different cultural and political contexts. Despite these challenges, the rule of law remains an important concept in legal theory, and continues to play a critical role in shaping the development of fair and just legal systems around the world.

REFERENCES

[1] J. Kirby, "A. V. Dicey and English constitutionalism," Hist. Eur. Ideas, 2019, doi: 10.1080/01916599.2018.1498012.
[2] S. Swaminathan, "Dicey and the Brick Maker: An Unresolved Tension Between the Rational and the Reasonable in Common Law Pedagogy," Liverp. Law Rev., 2019, doi: 10.1007/s10991-019-09228-w.
[3] N. E. Nedzel and N. Capaldi, "A. V. Dicey," in The Anglo-American Conception of the Rule of Law, 2019. doi: 10.1007/978-3-030-26361-4_5.
[4] D. Lino, "The rule of law and the rule of empire: A.V. Dicey in imperial context," Mod. Law Rev., 2018, doi: 10.1111/1468-2230.12363.
[5] M. Loughlin, "The Apotheosis of the Rule of Law," Polit. Q., 2018, doi: 10.1111/1467-923X.12526.
[6] P. Kutner, "Recognition and Enforcement of Foreign Judgments - The Common Law's Jurisdiction Requirement," SSRN Electron. J., 2017, doi: 10.2139/ssrn.3065296.
[7] M. D. Walters, "Public law and ordinary legal method: Revisiting Dicey's approach to droit administratif," Univ. Tor. Law J., 2016, doi: 10.3138/UTLJ.2964.
[8] C. F. Forsyth, "Leading Administrative Law Cases: M v The Home Office [1994] 1 AC 377," SSRN Electron. J., 2016, doi: 10.2139/ssrn.2845454.

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Principles of Statutory Interpretation

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Abstract— The primary rule of statutory interpretation is to read a statute's terms in accordance with their overall context, grammatical structure, and common meaning, as well as with its intended purpose and legislative plan. In this chapter author discusses the golden rule. Statutory interpretation is a process by which courts and other legal authorities interpret the meaning and application of laws that have been passed by legislative bodies. The goal of statutory interpretation is to determine the intent of the lawmakers who passed the law, and to apply that intent to specific cases or situations.

Index Terms— Act, Government, Law, Legitimate, Parliament.

I. INTRODUCTION

While the British constitution has always viewed the words of a legislation as the "highest form of law," it has typically been up to the courts to give those words a precise legal interpretation. Due to the inherent ambiguity of language, even laws that are stated as hard norms may give rise to concerns about their application in certain circumstances. When Parliament uses statutory equations that provide government entities discretionary authority, this ambiguity is greatly amplified. The process of statutory interpretation is thus a fundamental component of both the rule of law and the sovereignty of Parliament since the resolution of such doubt is a judicial responsibility [1],[2]. On occasion, Parliament has passed laws directing the courts on the meaning to be given to certain terms or phrases that are often used in different statutes. As we examined the part played by Lord Brougham's Act of 1850 in Chorlton v. Lings, we saw one instance of an "interpretation act" in two. Nonetheless, such law deals with specifics as opposed to general directives or broad interpretive strategies. The last part of the constitution was traditionally left up to the judges' authority as a matter of common law by Parliament. Three methods of interpretation, known as the "literal rule," "golden rule," and "mischief rule," respectively, have historically been accepted as valid [3],[4].

A. The exact rule

While judges frequently claim that they are looking for Parliament's "intentions" when interpreting statutes, the reference to intentions is typically understood to mean that a court is considering the ordinary and natural meaning of the words that the legislators used in the text of the Act rather than what was on their minds when they voted for a particular measure. The courts have overwhelmingly used a method of legislative interpretation known as the "literal rule." The literal rule contends that, even when doing so produces obviously unfair or absurd outcomes, the court must attach the conventional, grammatical meaning to the statute's phraseology [5],[6].

In R vs Judge of the City of London Court, Lord Esher best summed up the literal rule in these terms: "If the words of the Act are unambiguous, you must obey them, even when they lead to an apparent absurdity." If the legislature has done anything foolish has nothing to do with the court.

The literal rule signals a dogmatic acknowledgement by the judiciary of the common law's fundamental inferiority to legislation. The court would be violating Parliament's authority if it attempted to ascribe a "reasonable" interpretation to legislative formulas whose literal meaning pointed in a different way since Parliament may, if it so chooses, legislate "absurdities." The answer would be for Parliament to pass a new legislation modifying the previous Act if the "absurdity" was an error rather than an intended result. It cannot be overemphasized that the British constitution, albeit mainly unwritten, is firmly established upon the separation of powers; Parliament sets the laws, and the court interprets them. This was the argument expressed in lofty theoretical terms by Lord Diplock in Duport Steel vs. Sirs. The judiciary's role is limited to determining from the words that Parliament has approved as expressing its intention what that intention was and giving effect to it when it passes legislation to address what the majority of its members at the time perceive to be a defect or a lacuna in the existing law. Since the meaning of the legislative terms is clear and unambiguous, it is not the judges' place to create fictitious ambiguities as a justification for neglecting to apply its plain meaning because they believe the results would be inconvenient, or even unfair or immoral. According to our constitution, the view of the Parliament on these issues is crucial [7],[8].

The aim of Parliament is what we must search for, and I also find it impossible to imagine that Parliament ever really meant the outcomes that result from the dispute. But, we can only infer what Parliament intended from the words they used in the Act, thus the issue is whether these phrases may be read to mean anything more specific. If not, we must adhere to them exactly as they are, regardless matter how absurd or unfair the results are or how strongly we think that this was not Parliament's true objective [9]. A law that was created to

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address what Parliament believed to be a flaw in the current legislation may, upon implementation, have unintended negative effects that Parliament did not foresee at the time the law was approved. Yet if this is the case, it is up to Parliament, not the courts, to determine whether any amendments to the law as set down in the Acts are necessary. So we shouldn't automatically assume that a concept with such clarity would also have clarity in practice. Judges may have quite diverse opinions on the "literal" meaning of certain words or phrases and, therefore, the legal significance of specific statute provisions.

The literal norm is complicated by the fact that legislative provisions are "always speaking." When we consider whether the literal interpretation the court is seeking is the one that would have prevailed when the provision was enacted or when the provision is being interpreted by the court, the potential for doubt as to the "literal" meaning of words or phrases in Acts grows. Of fact, it is very feasible that over extended—or even brief—periods of time, the common or natural meaning of words may change. Given the fluidity of language, Parliament could make appropriate legislative changes. The question then becomes whether it is acceptable for the courts to "update" the clause by giving its terms their "new" rather than "original" meaning. If it hasn't done so, then it hasn't done its job.

One might naturally assume that the courts would accept that the common law would require that, when interpreting a statutory term, the judge should lend that term the meaning it bore when it was enacted in light of Diceyan notions of the sovereignty of Parliament and the separation of powers—particularly when restated in the forceful manner used by Lord Diplock in Duport Steel. Nonetheless, it has been constitutional dogma to assume that legislation are "always speaking," according to this theory. In Bennion's seminal book Statutory Interpretation, the position is stated as follows: The interpreter is to assume that Parliament intended the original Act to be implemented at any future time in a manner that would give effect to the original purpose. As a result, the interpreter must account for any pertinent changes that have taken place since the Act's passage in the law, society, technology, the definition of terms, and other areas. The question of interpretation was whether "bodily harm" applied to both mental and non-psychiatric bodily damage. If the latter hypothesis were true, neither defendant would have broken the law.

The defendants' main defense was that the term "bodily injury" should be interpreted in accordance with how it would have been understood in 1861, the year the Act was passed. It was argued that the level of medical knowledge and opinion at the time would not have classified psychological impairment as physical hurt. In general, the House of Lords rejected such defense. The approach supporting the defendant's argument, according to Lord Steyn's leading opinion, would often be misunderstood since "statues would usually be found to be of the "always speaking" sort," he wrote. 50 The Court would thus resort to the medical understandings of 1980, not of 1861, to determine what was meant by "bodily injury." The defendants' convictions were affirmed because, in the Court's opinion, the then-dominant belief that serious psychological anguish may qualify as physical injury could not be refuted.

In Burstow, the "always speaking" method was used to respond to a recently raised issue. The method, however, may also be utilized to change previously authoritative rulings about the meaning of certain legislative provisions. The Supreme Court examined the definition of the word "violence" in the Housing Act of 1996 in Yemshaw vs. Hounslow LBC51 in 2010. In Danesh v. Kensington and Chelsea Royal London Borough Council52, which was decided five years earlier, the Court of Appeal had rejected arguments that "violence," when taken literally, may encompass conduct that did not include physical contact between the offender and the victim. In the absence of physical contact, actions that caused the victim great anxiety, anguish, or even bodily injury would not be considered violent. In Yemshaw, the conclusion was rejected. Even if Danesh had been correctly resolved in 2006, the Supreme Court said, it could not be considered as such in 2011. The Court cited a wide variety of sources to support its decision to give the concept of "violence" a considerably wider definition that might encompass psychological and emotional abuse.

The opinions of Lord Steyn in Burstow and Barones Hale in Yemshaw did not explain how to determine whether a legislation is of the "always speaking sort." That's a regrettable omission. However, the more important point is that if we assume that most laws are "always speaking," then as laws get older and as the social, cultural, and economic contexts in which they are applied change, we might credibly argue that in actuality, the moral convictions that "the law" actually puts into practice are those of the judiciary rather than the legislature. If we assume an initial implicit acknowledgment by legislators that the laws they pass are really "always speaking," this argument may be reconciled with conventional concepts of parliamentary sovereignty. With Diceyan concepts of the rule of law, which require a high degree of predictability in the substance of the law, the proposition as a principle and its practical application in Burstow are more difficult to reconcile.

II. DISCUSSION

A. The golden rule

The so-called "golden rule" gives the legislators more credit for reason than the literal rule does. It proposes that the court should review the whole legislation to see if alternative, more reasonable interpretation may be given to the relevant terms in light of the legislative context in which they occur when a literal reading of a single statutory provision would result in an absurdity.

The case of Royal College of Nursing of the United

Kingdom v. DHSS offers an intriguing contemporary illustration of the use of the golden rule. Abortion was made illegal by Section 58 of the Offenses against the Person Act of 1861. The fact that an abortion could be required to protect the pregnant woman's life or health was not an express defense provided by the law. Nevertheless, the Supreme Court determined in R v. Bourne that the phrase "illegally" in section 58 contained a defense inasmuch as a licensed medical practitioner who conducted an abortion in order to protect the pregnant woman's life or health was not acting unlawfully.

Abortion legislation changes were not made by Parliament until 1967. The previous regulation was drastically loosened by the Abortion Act of that year, which stipulated that abortions would be permitted anytime two physicians confirmed that prolonging the pregnancy would be harmful to the woman's health. The Act also placed restrictions on who may perform abortions and where they might be done. For the time being, the most important clause is s. 1, which said that it would be illegal for anybody other than a doctor to "terminate" a pregnancy.

Abortion was only a surgical technique in 1967. Yet by the late 1970s, a brand-new method for inducing abortions by intravenously administered medication had emerged. The new method might take up to thirty hours and featured several distinct phases. As long as a doctor watched the treatment and could be called upon to see the patient in person in the case of issues, the then-dominant medical view was that the new technique could be carried out very safely by nurses. The new method was preferred by the Department of Health since it required less time from physicians. Each year, many thousands of these operations are carried out. Nevertheless, many nurses were worried that because they were not physicians, if they really delivered the medications that caused the abortion, they would be breaking the law under § 1.

The interpretation of the words "where a pregnancy is terminated by a licensed medical practitioner" in Section 1 was the specific issue that the House of Lords had to decide in the Royal College of Nursing case. The government's interpretation of the text seems to be two steps away from a strict literalist interpretation. First, it was claimed that the term "terminated" truly referred to a course of therapy that ended in termination. Second, "by a registered medical practitioner" was understood to imply "under the supervision of a registered medical practitioner in line with generally recognized norms of good medical practice."

This line of reasoning was rejected by both Lord Edmund-Davies and Lord Wilberforce. But with all due respect, this is rewriting, not building, as Lord Wilberforce phrased it. Similar to Lord Edmund-Davies, he said, "My Lords, this is redrafting with a fury. |The judges who dissented believed that the administration was attempting to expand the law, and that this outcome could only be properly accomplished by new legislation. It is probable that the administration had no desire to take this road, even if it had been certain that a legislative majority would accept such a reform, given the morally contentious character of any such "relaxation" of the abortion regulations.

Yet, the bulk of the Court's ruling saved the administration that political challenge. A strict interpretation of Section 1 would result in the absurdity that a doctor would be guilty of a crime even if the operation did not result in an abortion, according to Lord Diplock. 63 The idea that a literal interpretation would imply that hundreds of nurses who had performed the treatment had already broken the law worried Lords Keith and Roskill more than anything else. These outcomes were reportedly unsatisfactory enough to warrant a deeper investigation into the meaning of s 1 than a simple word-by-word analysis.

The majority judgments emphasized the usage of the phrase "treatment" rather than "termination" in other statute clauses. As there was no evident explanation for the disparate nomenclature, it was reasonable to infer that the words could be interchanged. 64 The majority then reasoned that "therapy" would be carried out as a "team effort" including several different hospital staff members, each of whom would undertake such responsibilities as were commensurate with her training and expertise. For the purposes of s. 1, such treatment would be considered to be carried out "by" a doctor if it was "recommended by and carried out in line with his orders."

It powerfully demonstrates the simplistic nature of the constitutional homily that Parliament legislates and the courts interpret because the House of Lords was split 3/2 on both the litigation's result and the best interpretative strategy to be pursued. The reality is far more nuanced than that, if by reality we mean which constitutional actors successfully decide the moral substance of the law.

B. The rule of mischief

The third tactic, known as the "mischief rule," calls for the court to first determine which "mischief"—a flaw in the common law or a previous statute—the statutory provision at issue was meant to correct. Then, the court must interpret the Act in a way that minimizes the chance of the mischief reoccurring. The mischief rule has historical precedent. The Heydon's Case66 ruling in 1584, which dealt with the construction of laws issued by Parliament to support Henry VIII's desire to seize control of estates held by monasteries, is usually seen as the case's starting point. The Heydon's Case rule mandated that a court perform a four-step investigation: Fourth, the genuine cause for the remedy; and last, the job of every judge is to make decisions that would stop the harm and promote the solution while opposing cunning fabrications and evasions that would allow the harm to continue.

The judges' first reading of the "mischief rule" did not provide them the authority to go beyond the legislation and the applicable common law standards to determine the "mischief" that Parliament was purportedly attempting to

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eliminate. As a result, the rule could not be applied if a rational legislative aim could not be inferred from the text of the Act itself. By the middle of the 1970s, courts had started using government policy statements that outlined the principles behind specific legislation improvements as a guide for interpretation. 68 The effectiveness of the mischief rule was undoubtedly increased by such endeavor. However, the courts' assumption that their pursuit of Parliament's intentions precluded them from clarifying the meaning of statutory texts by making reference to speeches made about the legislation during its passage through the Commons and the Lords continued to severely restrict its applicability. While neither can be completely appreciated until we have examined the nature of the legislative process in somewhat more depth, we discuss the foundation and ramifications of that concept as well as the House of Lords' more recent divergence from it at a later time.

C. Meaningful interpretation

All three of the conventional approaches emphasize the separate roles of the legislative and judicial branches of government and the latter's subordination to the former. Nevertheless, not all members of the court agreed with them; some believed that occasionally a more extreme approach was preferable. Lord Denning articulated a somewhat different interpretation of the court's "interpretative" responsibility in the 1950 case of Magor and Saint Mellons RDC v. Newport Corpn: "We do not sit here to tear the language of Parliament and of Ministers to pieces and make mockery of it." We are here to ascertain and carry out the intentions of the Ministers and the Parliament, and we are better at doing this by filling in the blanks and making sense of the statute than by subjecting it to debilitating study.

One may see Lord Denning's effort as an illustration of a fourth interpretive method, now referred to as the "purposive" or "teleological" approach. This approach rejects the presumption that a judge should limit her inquiry into the meaning of a statute to the statute itself and instead seeks to ascertain what the law's authors would have done in the same situation. At that time, many continental European legal systems already shared the teleological technique, which was also frequently used in American legal systems. But, the House of Lords did not support Lord Denning's attempts to "import" it so blatantly into the English constitutional heritage. On subsequent appeal, the House of Lords vehemently rejected Lord Denning's assertions on the constitutionally proper role of the judiciary. Lord Simonds argues that the basic tenet that it is the court's responsibility to ascertain the purpose of Parliament—and not only of Parliament, but also of Ministers—cannot under any circumstances be upheld. The task of the court is to interpret the language employed by the legislator.

Lord Simonds cited basic constitutional problems to Lord Denning's idea that the court can "fill in the gaps" left by the wording of the Act. It would be "a brazen invasion of the legislative role under the thin veil of interpretation" for a court to use such methods. If a hole is discovered, an amending Act is the appropriate solution.

Lord Simonds may have exaggerated the charge of "naked usurpation." The House of Lords was theoretically very capable of abandoning the three conventional criteria and adopting Lord Denning's preferred alternative since there was no particular statute stating prohibiting "purposive" interpretation procedures. The fact that the majority in Magor declined to do so suggests that they saw the innovation as "unconstitutional" in the sense of its political acceptability, rather than the legal impossibility, of the Constitution. The case does nevertheless highlight the fact that it may be difficult to establish a boundary between "interpretation" and "legislation." We may assert with certainty that, according to constitutional theory, the legislature enacts laws and the judiciary renders interpretations. It is more difficult to determine whether that idea is consistently followed in terms of constitutional practice. The fact that the common law accepts a variety of different interpretative strategies and the frequent ambiguity in court judgments about the strategy actually being adopted only serve to exacerbate this challenge. The simplest way to understand this issue is to look at the decisions made in two important cases: Liversidge v. Anderson from 1942 and R v. IRC, ex p. Rossminster from 1980.

D. Anderson vs. Liversidge

The Defence Regulations of 1939, adopted at the outbreak of World War Two to bolster the government's authority to safeguard the nation from sabotage or treason by enemy agents, gave rise to Liversidge v. Anderson73. Specifically, Regulation 18b stated. The Home Secretary may issue an order requiring the detention of a person if there is good grounds to suspect the individual is associated with or of hostile origins. Sir John Anderson, the Home Secretary, detained 1,500 persons between May and August 1940 under reg. 18b.

Robert Liversidge was one of the people held. Anderson was sued by Liversidge for unlawful detention. Given that he had been imprisoned, Liversidge had undoubtedly been subjected to "suffer in bodily." The legality of the executive action that resulted in Liversidge's imprisonment was at issue before the court. Was there a legal or common law authority that allowed the government to imprison Mr. Liversidge? While the Defence Regulations gave the Home Secretary the authority to detain persons in certain situations, Liversidge argued that such conditions were not present in this specific instance. So, the detention was "illegal" in the Wednesbury meaning.

We must study the exact text of rule 18b in order to comprehend the foundation of Mr. Liversidge's argument. According to the law, the Home Secretary may detain a person if "he has reasonable grounds to think" the person is associated with or of hostile origin. The addition of the "reasonable grounds to believe" language seems to be in keeping with the Diceyan notion of the rule of law, which

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objects to any measure in which Parliament allows the executive broad discretionary powers. The provision seems to restrict the Home Secretary's ability to use the authority in an arbitrary manner. Unless a judge was persuaded that the Home Secretary's opinions were supported by "reasonable cause," detention would not be legal. So, it would seem that Regulation 18b tacitly requires the Home Secretary to provide the court with the proof that supports his concerns and to persuade the judges that the proof does, in fact, constitute a "just cause." The clear intent of Reg. 18b would appear to be that the authority could not be employed if there was insufficient proof to establish that a detained had hostile origins.

In the first lawsuit contesting its use, Lee's v. Anderson, the government itself had conceded that this was the right reading of the rules. The government revised its position and argued that no such proof was required in a later case, R v. Home Secretary, ex p. Budd. The government argued, in essence, that the Home Secretary's determination that a person had "hostile origins or associations" was inevitably "reasonable." The court had granted Mr. Budd's release since the Home Secretary had not shown any proof of his 'hostility,' hence the argument first failed. Then Mr. Budd had the unfortunate experience of being held once again. In this case, the court agreed with the government's arguments on the use of Reg. 18b and did not see the need to question the adequacy of the facts that prompted the Home Secretary to use his authority.

The significance of reg. 18b was therefore ambiguous when Liversidge v. Anderson made it to the House of Lords. The House of Lords' four out of five members agreed with the government's interpretation of Rule 18b. They came to the conclusion that the Home Secretary could utilize reg. 18b to jail anybody he believed to be from a hostile country. He did not have to provide any proof to the court to demonstrate the validity of his view. Anybody may be put in jail by him. He didn't need to explain. Moreover, anybody who was held was wasting her time by going to court to refute the Home Secretary's assertion. Lord Wright summed up the sentiment of the majority when he came to the following conclusion: All that the word "reasonable" means, then, is that the minister must not lightly or arbitrarily invade the subject's freedom. He must be reasonably satisfied before acting, but it is still his decision and not anyone else's. No outside judgment is referred to, and no court has jurisdiction over the matter.

A Law Lord had a different opinion. Reg. 18b, in the opinion of Lord Atkin, could only have one interpretation. In order for there to be "reasonable cause to believe," as stated by Parliament, there must be some solid supporting evidence. Legislators would have simply said "if the Home Secretary thinks" if they had wanted to provide the Home Secretary arbitrary authority. The legislative history of Regulation 18 seems to concur with Lord Atkin's opinion. The "reasonable cause" provision was absent from the regulation's first draft. Since MPs believed that leaving it out would provide the Home Secretary excessive discretion, it was included as an amendment. This means that the majority ruling essentially gave the administration permission to flout Dicey's interpretation of the rule of law as well as the idea of parliamentary sovereignty. The conventional tradition that the courts should interpret terms used in law in line with their literal meaning seems to have been preserved solely by Lord Atkin.

Nonetheless, despite the majority ruling seeming to be "unconstitutional," Lord Atkin was the target of harsh criticism from the government, other judges, and the general public. This criticism focused in part on the content of his viewpoint. In the end, the nation was at war. The threat of saboteurs, traitors, and spies was quite real. Lord Atkin was charged with attempting to restrict the government's ability to hunt out these prospective adversaries. According to Hayekian doctrine, the preservation of the nation's mere existence as an independent state was the most important political priority, hence the rule of law may lawfully be "suspended" during times of conflict. Unfortunately, Lord Atkin also offended a lot of people with his words. He said that his four fellow Lords were "more executive oriented than the executive." Just one 'authority' could be cited by Lord Atkin to support the majority's reading of reg. 18b. In a scene from the book Alice Through the Looking Glass, Humpty Dumpty and Alice talk about language use: "When I use a word, it means precisely what I select it to signify, neither more nor less," Humpty Dumpty stated in a fairly mocking manner. The issue is whether you can change the meaning of words, Alice said. The issue is which is to be master, that's all, remarked Humpty Dumpty.

III. CONCLUSION

Each country has its own legal system, which serves to provide justice for everybody. The court seeks to interpret the law in a way that ensures justice for all citizens. The idea of canons of interpretation was explained in order to secure fairness for everybody. To guarantee that each person of a country obtains fair justice, interpretation and construction are required. The law must be swiftly applied by the court to the case. Although construction helps to explain the laws, interpretation allows the court to look at the intent behind the language used in the statutes. The most noteworthy or typical categorization, however, separates it into law, tradition, and precedent. The term "precedent" refers to earlier rulings by the courts. The statutory regulations passed by the legislature are referred to as the law. In order to effectively interpret statutes, legal professionals must have a strong understanding of the principles of statutory interpretation, as well as the broader legal and social context in which the law is being applied. They must also be able to critically analyze the language and structure of the law, and to consider a range of different factors in order to arrive at a clear and consistent interpretation. With these skills and knowledge, legal

professionals can help to ensure that laws are applied fairly and justly, and that the intent of the lawmakers is respected in all legal proceedings.

REFERENCES

[1] J. Boughey and L. Burton Crawford, "Situating Statutory Interpretation in its Public Law Context," Leg. Educ. Rev., 2019, doi: 10.53300/001c.9382.
[2] K. Brooks, "Feminist Statutory Interpretation," Pittsburgh Tax Rev., 2019, doi: 10.5195/taxreview.2019.97.
[3] R. H. Fallon, "The statutory interpretation muddle," Northwest. Univ. Law Rev., 2019.
[4] J. Macleod, "Ordinary causation: A study in experimental statutory interpretation," Indiana Law J., 2019.
[5] J. J. B. & E. J. Leib, "Statutory Interpretation as 'Interbranch Dialogue'?," UCLA Law Rev., 2019.
[6] K. Perumalsamy, "The life and times of textualism in South Africa," Potchefstroom Electron. Law J., 2019, doi: 10.17159/1727-3781/2019/v22i0a7418.
[7] J. Goldsworthy, "The Real Standard Picture, and How Facts Make It Law: A Response to Mark Greenberg," Am. J. Jurisprud., 2019, doi: 10.1093/ajj/auz011
[8] D. S. Tatel, "Separation of Powers and Statutory Interpretation: A Battle Hidden in Plain Sight," Proceedings of the American Philosophical Society. 2019.
[9] R. French, "The Principle of Legality and Legislative Intention," Statut. Law Rev., 2019, doi: 10.1093/slr/hmy031.

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Stare Decisis in Government

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Abstract— : Stare decisis refers to the court's practice of upholding precedent. Literally, it means "to uphold settled affairs." Stare decisis is a contraction of the Latin phrase "stare decisis et non quiet mover." To "stand by choices and not to upset established topics" is the meaning of this expression. In this chapter author is discusses the Parliamentary sovereignty versus the rules of law. The principle of stare decisis is important for ensuring consistency and predictability in the law. It allows individuals and businesses to rely on previous court decisions when making decisions about how to act in the future. This promotes fairness and stability in the legal system, and helps to ensure that similar cases are treated in a consistent manner.

Index Terms— Act, Bill, Government, Judge, Law.

I. INTRODUCTION

The key takeaway from Lord Atkin's dissension is that, if the words that the legislature uses in statutes to express its wishes can be interpreted by the courts, it is pointless to view the relationship between citizens and the government as a "political contract" in which Parliament creates a legal framework to which the people consent. It is also pointless to assume that the constitution rests on the twin bedrocks of parliamentary sovereignty and the Diceyan rule of law. Such a result might be seen as a court infringement on Parliament's authority [1],[2]. To address this, one can argue that because Parliament did not overturn the Liversidge majority judgment, it must have been "right." That argument perhaps oversimplifies the nature of the relationship between Parliament and the courts, as we will examine in more detail later. It also fails to address the criticism that the House of Commons, House of Lords, or Monarch could try to deceive one another by passing bills intentionally in the hope that the courts would give the resulting legislation an interpretation that contradicts conventional notions of what language means [3],[4].

After Liversidge, one of Lord Atkin's colleague's judges wrote to him to complain that the majority judgment had damaged the reputation of the court. In place of "lions beneath the throne," the judges were now "mice squeaking under a chair in the Home Office." 84 The case demonstrates once again that judges must be independent of office and of thought in order for the rule of law, at least as Dicey viewed it, to work effectively [5],[6].

A. IRC vs. Rossminster

Employees of the Inland Revenue seemed to have broad search and seizure powers under the Taxes Management Act of 1970, section 20C. The Inland Revenue was given the authority to ask a circuit judge for a search warrant according to Section 20C, which was introduced to the original Act in 1976. The judge may issue a warrant authorizing a named officer to "seize and remove any things whatsoever found there which he has reasonable cause to believe may be required as evidence..." if she is satisfied that there are reasonable grounds to believe that evidence of a tax fraud may be found on specific premises. The Act does not specifically provide that the warrant had to name the specific crime under investigation or identify the individual [7],[8].

With such a warrant, Inland Revenue agents searched Rossminster's offices and took several papers without providing any information about the case they were looking into. Although the Rossminster seizure was allegedly based on a legislative authority, its legal history may be distinguished from that of the Entick case. Rossminster nonetheless asserted that the basis behind Lord Camden's interpretation of Section 20C was pertinent. According to Rossminster, the court should assume that Parliament intended s. 20C to be interpreted in accordance with the common law principles that informed Entick, i.e., that the power would only be used in a specifically targeted manner and would not be invoked by Revenue officials to enable them to embark on a speculative trawl through all of a company's or an individual's private papers. This argument was accepted by the Court of Appeal

There has been no search like it—and no seizure like it—in England since that Saturday, April 30 1763, when the Secretary of State issued a general warrant by which he authorized the King's messengers to arrest John Wilkes and seize all his books and papers. Lord Denning's leading judgment was particularly vehement in describing the Inland Revenue's behavior as inconsistent with both modern moral standards and long-established legal principle.

Denning's decision was based on the assumption that the Act's plain language had to be interpreted in light of a fundamental legal precept, namely that Parliament would always be mindful of the need to safeguard individual liberties when passing law. According to Lord Denning, it is the courts' responsibility to interpret the law in a way that ensures that it infringes as little as possible on the rights of the English people.

This effectively interpreted s. 20C in a teleological or purposeful manner. Making sure that government actions did not interfere excessively with people' common law rights was

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the "objective" being fulfilled. Following this line of reasoning, Lord Denning came to the following interpretation of the statute and, consequently, of the warrant: "As a matter of construction of the statute and, therefore, of the warrant—in pursuance of our traditional role to protect the liberty of the individual—it is with us duty to say that the warrant must particularise the specific offence which is charged as being fraud on the revenue—in accordance with the charge.

B. Warrant was unlawful

The House of Lords later overturned the Court of Appeal's decision, using a plainly literalist interpretation of s. 20C. Lord Wilberforce, who provided the leading view, didn't think it was necessary to support Rossminster's claim by citing outdated precedents like Entick. He came to the conclusion that the Inland Revenue was given permission to act in a way that was illegal under common law by the "clear terms" of Section 20C. He also saw no justification for claiming that the Act included an implicit provision requiring substantially more detail in the grounds of the warrant. After all, Parliament had intended to supersede common law principles. There is no part of the courts' duty or power to restrict or impede the working of legislation, even unpopular legislation; doing so would serve to weaken rather than advance the law. Lord Wilberforce's invocation of the literal rule was entirely orthodox and quite consistent with traditional understandings of the separation of powers.

Nonetheless, Lord Wilberforce expressed some skepticism about the political viability of the law that the Act had established, saying, "I cannot believe that this does not call for a new study by Parliament. Similar thoughts were echoed by Lord Dilhorne: "It's possible that many people believe the revenue was granted too much authority in 1976. If so, and I don't have an opinion on that, it must be up to Parliament to limit the authority it granted.

Evidently, the House of Lords believed that the judges in the Court of Appeal had overstepped the bounds of their lawful constitutional responsibility by using their moral aversion for s. 20C to drive them to undertake illegitimate interpretive tactics. Lord Wilberforce's remark that judges shouldn't "restrict or delay the operation of law" is the best example of this. Yet it is a naive viewpoint. The idea that judges shouldn't obstruct the implementation of law is one that Lord Denning would undoubtedly support. He was different from Lord Wilberforce in that he understood how the law was meant to operate. Denning believed that if it did not disregard well-established common law principles, it would function as Parliament had intended. According to Wilberforce, it was intended to have just that obtrusive, invasive impact. Neither viewpoint may be considered as being "right" legally in the strictest sense. Instead, the case serves as more evidence of how unpredictable courts' approaches to fulfilling their constitutional duty to interpret statutory provisions may be.

In all theoretical studies of the rule of law, the notion of legal certainty—that individuals be able to anticipate the boundaries the law imposes on personal and governmental behavior—is a crucial component. The British constitution only provides a tenuous legal foundation for the idea since Parliament is free to modify any legislation at any time and in any manner. Contrarily, the common law has, at least in formal terms, enjoyed an almost total level of legal certainty throughout much of the modern century.

II. DISCUSSION

A. The London Tramways judgment

In the 1898 decision of London Tramway Co v. LCC, the common law's adherence to a rigid application of the theory of stare decisis was upheld. Lord Halsbury argued for a unanimous House of Lords that the rulings of that court applied not just to the House of Lords but to all lower courts as well. As a result of the common law's inability to adapt to changing social conditions, he acknowledged that such rigidity could occasionally result in substantively unfair solutions to specific problems. However, what is that compared to the inconvenience—the disastrous inconvenience—of having each question subject to being reargued and the dealings of mankind cast in doubt as a result of different decisions, meaning that there would be no final court of appeals? 96

Lord Halsbury's thinking is undoubtedly deeply rooted in Diceyan notions of the necessity to prevent arbitrary and unpredictable legal frameworks for people to live under. It might be seen as the legal manifestation of the political ideals that underlie red light versions of the rule of law. It should be emphasized, nonetheless, that the courts' commitment to the strict stare decisis concept was a common law norm created by the House of Lords itself rather than a demand made of the courts by Parliament. It is obvious that Parliament might adopt legislation changing the substantive law in situations of intolerable unfairness if the House of Lords felt constrained by a prior ruling. Similarly, Parliament might at any moment pass legislation requiring courts to deviate from the London Tramways rule in any manner or not at all, depending on the circumstances. Nevertheless, the House of Lords itself maintained the authority to modify or reject the rule in the absence of relevant legislation, demonstrating that common law rules are just as subject to legislative action as they are to the last court of appeal. In light of this, Lord Halsbury's assertion that the House of Lords may bind itself is absurd on the basis of both abstract logic and constitutional doctrine. Binding legal norms need a higher source of law than the rules themselves in order to have any legal power. Both the Parliament of that year and the members of the House of Lords serving as the last court of appeal in 1898 were unable to 'bind' their successors. Lord Halsbury may anticipate that his successors would uphold his rule due to its inherent virtues, but he had no legal authority to do so.

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B. The Practice Declaration from 1966

It was not until 1966 that the House of Lords used its unquestionable constitutional authority to control London Tramways. The House of Lords would change its approach to star decisions and depart from its prior rulings, the Lord Chancellor announced in a Practice Statement released on July 26, 1998, in order to avoid injustice in particular cases and to encourage the development of common law principles in a way that reflected shifting social and economic conditions.

Their Lordships believe that precedent is a crucial cornerstone for determining the law and how it should be applied in certain situations. It offers a foundation for the systematic creation of legal standards and at least some degree of predictability on which people may depend in the conduct of their activities. Yet, Their Lordships are aware that a tight devotion to precedent may result in unfairness in a specific instance and may therefore unnecessarily impede the healthy evolution of the law. So, they propose to change their current procedure and, while accepting earlier judgments of this House as ordinarily binding, deviate from them when it is appropriate to do so.

They will keep in mind the risk of retroactively changing the terms of contracts, property settlements, and financial arrangements in this context, as well as the crucial necessity for legal clarity in the criminal realm. The House of Lords has very seldom used this new authority, and it has established strict requirements that must be satisfied before a prior ruling is overturned.

The initiative might be seen as a typical illustration of the "green light" approach to the rule of law, which does not completely forsake red light principles but yet significantly dilutes them. While significant in and of itself, the 1966 Practice Statement's importance shouldn't be overstated. Seldom will the House of Lords/Supreme Court encounter legal issues that cannot be somehow separated from earlier decisions on related issues. The Supreme Court's or House of Lords' response to a common law norm it finds objectionable is not the more urgent concern for constitutional lawyers,100 but what it does when a law requirement makes it unhappy.

C. Constitutional authority vs the rule of law

If the courts agree that their loyalty is to the legislature and not to the administration or the populace, then Dicey's ideas of parliamentary sovereignty and the rule of law will work as he intended. We must reiterate that, according to orthodox constitutional theory, the courts are only obligated to uphold the will of Parliament as expressed in a law, not the will of the people or a supra-legislative constitution. Yet as our understanding of constitutional law grows, we begin to realize that orthodox theory could provide a false image. According to Liversidge, there is evidence that the judiciary in fact supports the executive branch over Parliament. Liversidge recognizes parliamentary sovereignty inasmuch as the constitution delegates to the courts the responsibility of interpreting law since only the court can inform us of what Parliament intended. Yet it is a fairly formalistic understanding of "law"; if we go behind this legal façade to the political tenets that support conventional notions of the rule of law and the separation of powers, Liversidge might be credibly presented as a judgment that was clearly "unconstitutional."

However, there are instances in constitutional history where it appears that the judiciary believed that its ultimate allegiance lay not to the executive or even to Parliament, but rather to a version of the rule of law that had a higher constitutional status than the explicit language of legislation. The House of Lords' judgement in the 1969 case Anisminic Ltd v. Foreign Compensation Commission101 and the Court of Appeal's ruling in R v. Medical Appeal Tribunal, ex p. Gilmore seem to teach this lesson.

D. Ouster clauses: Anisminic and Gilmore

Throughout the 1950s and 1960s, Parliament used acts that seemed to eliminate the common law review authority of the courts more often. The shift towards "green light" interpretations of administrative law was logically entailed by these so-called "outter clauses." Since the relevant law created other fora for review, appeal, or investigation, Parliament often tried to exclude the courts. In a similar vein, it was commonly believed that a lot of government activities did not lend itself to being resolved by judicial means. 103 Such laws would go against the Diceyan vision of the rule of law, but as Parliament is allowed to create any law, there is technically nothing stopping it from introducing legislation that nullifies the common law review authority.

E. R v Medical Appeal Tribunal, ex p Gilmore

As an example, consider the welfare payment system put in place by the National Insurance Act of 1948. A government official made the first determination of a claimant's entitlement. The Act gave applicants the option to appeal to a specialized medical tribunal if they were unhappy with the first judgments. Clause 36 said that the tribunal's judgment "must be final," which seemed to take away the person's ability to ask a court to examine the tribunal's ruling. In contrast, ex p. Gilmore v. Medical Appeal Tribunal Notwithstanding § 36's very plain direction, Lord Denning came to the conclusion that judicial review "is never to be taken away by any legislation save by the most clear and explicit terms" when confronted with an evident legal mistake on the side of the tribunal. The phrase "final" is insufficient. This only denotes "without attraction." That does not imply that there is no remedy. 104

According to this, the concept of implicit repeal, which we addressed in two, has been modified. According to Clause 36, Parliament chose to "contract out" of judicial review with regard to compensation for workplace injuries. According to the court rulings in Chorlton v. Lings and Nairn v. University of St. Andrews, which held that the enfranchisement of women would represent such a fundamental change to

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society's political order that Parliament could not effect it through implied or "furtive" legislative terms, Lord Denning's judgment appears to be in line with those rulings. Denning seems to give a Diceyan premise of the rule of law—namely, that individual individuals should always be able to question governmental actions before "the regular courts"—the same high political position in Gilmore. Denning argues that the only way for Parliament to "suspend" this concept is by enacting completely clear statutory formulas.

F. Foreign Compensation Commission v. Anisminic Ltd.

It would have been reasonable to suppose that Parliament had used "the most plain and unequivocal wording" when drafting the Foreign Compensation Act of 1950's ouster provision. The Act created a Commission to disburse a certain amount of money to British citizens whose property had been confiscated by foreign governments abroad. The Commission's decisions "must not be brought in doubt in any court of law," according to Section 4. It would seem that "calling into doubt" would include both appeal and review. Nevertheless, the House of Lords asserted authority to examine the Commission's operations in Anisminic Ltd v Foreign Compensation Commission105. It did so on the justification that the Commission had committed a legal mistake throughout the course of its decision-making. As a result, what the Commission had generated was "a putative conclusion," not a judgment. The court's declaration that the Commission's activity was unconstitutional did not undermine legislative authority since the ouster provision contained no mention of "purported conclusions."

Similar to the Liversidge majority decision, such logic only supports the most formalistic constitutional analysis. Gilmore and Anisminic are more convincingly instances of judges fortifying themselves to defy conventional understandings of the legal hierarchy in order to uphold a political principle—that every government action must be subject to judicial scrutiny, regardless of what Parliament's intentions may be. The judges adopted a rather constrained interpretation of parliamentary sovereignty in each instance. But, doing so would require starting the drawn-out and very public process of adopting laws expressly rejecting the court's rulings. Parliament may indeed exclude judicial review. In order to make sure that the exclusion of judicial review really garnered the approval of the people, one might argue that the House of Lords was rejecting a formal, legalistic meaning of parliamentary sovereignty in favor of a functionalist, political one.

The decision of the House of Lords may cause us to recall the oft-quoted words of Bishop Hoadly, who said in a sermon to the King in 1717: "Whoever hath an absolute authority to interpret any written or spoken laws, it is he who, in all intents and purposes, is the lawgiver and not the one who first spoke or wrote them."

Anisminic unmistakably posed a legal challenge to the authority of the Parliament, but that attack focused on the legitimacy rather than the legality of legislative intents. Parliament might overturn Anisminic, but only at the cost of seeming to reject conventional notions of the rule of law. The administration developed a Bill with a more thorough ouster provision at first, seeming willing to take that chance. According to this clause, neither the "decisions" of the Commission nor any "purported determinations" should be challenged in a court of law. It is uncertain if the judges would have been willing to "defy" such law via another exercise in imaginative statutory "interpretation." According to a literal reading of the amended statute, Lord Reid might have come to the conclusion that the case before the court was not a "determination," not even a "purported determination," but only "purportedly a purported determination." This would mean that it was not exempt from judicial review. Due to parliamentary resistance, the idea was dropped in favor of a law giving the Court of Appeal appellate power over the Commission's decisions.

The ramifications of Anisminic were seen differently by eminent constitutional scholars. According to Professor John Griffiths, the courts were interfering "unconstitutionally" with Parliament's authority. 107 Nevertheless, Professor Wade argued that Parliament's growing propensity to utilize ouster provisions to restrict or eliminate the courts' judicial review authority poses a danger to the constitution rather than the judges' seeming assault to legislative sovereignty. Wade believed that such laws displayed an inappropriate disregard for accepted legal standards. Both points of view are clearly defendable, which supports the assumption that constitutional analysis must be applied equally to the fields of actual politics and legal theory. Yet if some constitutional doctors saw the Anisminic story as a sign that their patient was feeling a bit under the weather, the legislative reaction to the Burmah Oil ruling could have indicated that she needed a protracted period of intensive care.

G. Retrospective legislation

Diceyans would object to Parliament's rising propensity for providing executive discretionary powers in legislation on the grounds that it could be difficult for individuals to determine what actions government entities are legally permitted to do. The Wednesbury principles of administrative law, which allow citizens to forecast the outer bounds of permissible government action but not the specific point at which a particular choice may be made, only partially address this argument. However, if Parliament passed legislation with a retroactive effect, such as a 2012 law requiring a £50 "patriotism levy" from anyone who purchased a foreign vehicle since 2002, or a 2013 law making it a crime to have written anything critical of government policy at any point in the past, unpredictable behavior would be brought to an extreme. There is no legal barrier preventing Parliament from passing such laws because of its sovereign status. But, by doing so, Parliament would unquestionably be weakening all of the theories of the rule of law covered in this. The events that followed the 1964 case of Burmah Oil

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Co v. Lord Advocate109 may come as a surprise to pupils who may believe that Parliament could never accomplish such a thing.

H. Law's prospective nature—the 1965 War Damage Act

In order to prevent one of Burma Oil's refineries from coming into the hands of the invading Japanese troops, the British government ordered its soldiers in Burma to demolish it in 1942, acting under what it assumed to be a common law power110. During the conflict, the government provided £4.6 million in ex-gratia compensation to Burmah Oil. The oil business filed a lawsuit, seeking compensation of over £31 million, and claimed that the common law power utilized obliged owners to be fully compensated by the government for any losses sustained. The House of Lords had no established rules to abide by. So, the justices had to determine the scope of the government's common law right to demolish property during a conflict. We don't need to worry about the specifics of the ruling; suffice it to say that the majority backed Burmah Oil's claim.

This ruling upset the government since it may imply that not only Burmah Oil, but also several other people or businesses whose property had been damaged in like circumstances, would be entitled to significant financial compensation. Such assertions may significantly affect how much the government spends. In order to overturn the ruling, the government consequently introduced the War Damage Bill into Parliament. Constitutionally speaking, there shouldn't be any issues with Parliament enacting a legislation that modifies the common law in such a way that compensation payments in similar situations are now governed by statutory rule x rather than common law rule y. This kind of action is authorized under the parliamentary sovereignty idea and is compliant with all forms of the rule of law. The War Damage Law, however, was designed to preempt the common law not only in cases of property damage that might occur in the future but also in cases of loss that had already occurred.

According to Diceyan thought, such legislation is completely compatible with the legal doctrine of parliamentary sovereignty but completely at odds with the political concept of the rule of law. When the Bill moved through Parliament, there was a substantial amount of debate. 112 Further convincing evidence that the rule of law, insofar as it can be understood as a moral code enshrining certain political values in Britain's democratic structure, may occasionally be regarded by our sovereign legislature as an expendable rather than indispensable ingredient of Britain's constitutional recipe is the fact that it eventually became the War Damage Act 1965. But, one could also point to previous scandals where the same charge may legitimately be leveled against the judiciary.

III. CONCLUSION

Liversidge and Ross minster are also useful comparisons to make the point that a court's choice of interpretive technique does not dictate the substantive characteristics of the outcome the court achieves in a specific case. One would be tempted to believe that teleological interpretation would more effectively constrain governmental authority than literal interpretation if they just considered Rossminster. Yet, Lord Atkin's forceful defense of individual liberty against governmental intrusion in Liversidge is based on a literary interpretive strategy. In such scenario, teleological techniques were used by the majority. The effective conduct of the war was the "objective" that the majority wished to advance, which led them to take reg. 18b literally against a backdrop or context that called for a highly liberal interpretation of the government's powers. In our nation, despite the fighting, the laws are not mute. They may have undergone changes, but they communicate in both war and peace. The fact that courts have no regard for people and protect their subjects from any effort by the government to infringe on their freedom has always been one of the cornerstones of freedom and one of the values of liberty for which we are now fighting. In more general terms, instances like Burstow, Royal College of Nursing, Rossminster, and Liversidge show us that although Parliament is free to act whatever it pleases, it is the courts' constitutional duty to inform the public of what the legislature has really done. Given such, it may be considered simplistic at best and completely incorrect at worst to describe the normative relationship between Parliament and the courts as a straightforward hierarchy with the judiciary in the inferior position.

REFERENCES

[1] B. E. Butler, “Herman Oliphant, stare decisis and the primacy of pragmatics in legal reasoning (with a brief excursion into neuropragmatics),” Intercult. Pragmat., 2019, doi: 10.1515/ip-2019-0016.
[2] C. M. Cameron, L. A. Kornhauser, and G. Parameswaran, “Stare decisis and judicial log-rolls: a gains-from-trade model,” RAND J. Econ., 2019, doi: 10.1111/1756-2171.12288.
[3] R. J. Kozel, “Statutory interpretation, administrative deference, and the law of stare decisis,” Tex. Law Rev., 2019.
[4] Z. Flowers, “The Role of Precedent and Stare Decisis in the World Trade Organization’s Dispute Settlement Body,” Int. J. Leg. Inf., 2019, doi: 10.1017/jli.2019.21.
[5] S. Quattrocolo, “An introduction to AI and criminal justice in Europe,” Rev. Bras. Direito Process. Penal, 2019, doi: 10.22197/rbdpp.v5i3.290.
[6] C. Rautenbach, “Case law as an authoritative source of customary law: Piecemeal recording of (living) customary law?,” Potchefstroom Electron. Law J., 2019, doi: 10.17159/1727-3781/2019/v22i0a7591.
[7] J. M. C. Marshall, “The utility of stare decisis in american common law jurisprudence,” in Lex et Res PublicaPotential of Precedent in the Statut. Leg. Order, 2019.
[8] S. Siddiqui, “Navigating colonial power: Challenging precedents and the Limitation of Local Elites,” Islamic Law and Society. 2019. doi: 10.1163/15685195-02612A03.

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Conspiracy to Corrupt Public Morals

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***Abstract*— While contentious, the common law offense of conspiring to subvert public morality has a long history in English law. It was a charge mostly used against obscenity, arranging prostitution, maintaining an unruly home, public immorality, and mischief in public. In this chapter author is discusses the retrospective. Conspiracy to corrupt public morals is a Legal concept that refers to the act of conspiring to engage in conduct that is deemed to be immoral and harmful to the public. This offense is recognized in some legal systems, including the United Kingdom, and is often used to prosecute individuals who engage in activities that are considered to be morally corrupt, even if they do not necessarily violate specific criminal laws.**

***Index Terms*— Criminal, Conspiracy, Legal, Law, Rule.**

I. INTRODUCTION

The House of Lords 1966 practice instruction on precedent gave the need for criminal law clarity a high priority. This was not a new issue; in fact, we might say with some validity that it had long been fundamental to British conceptions of the rule of law. Nonetheless, it is simple to pinpoint common law concepts that are challenging to balance with a strong commitment to legal certainty in both the abstract and in the real world. In this sense, it is clear that using the "always speaking" approach as a guideline for legislative interpretation presents challenges. However situations involving common law difficulties may experience a similar set of complications. Strong examples of this issue may be found in the court's unanimous decision in R v. R 114 in 1991 and the majority and dissenting views in the House of Lords' 1962 decision in DPP v. Shaw113.

A. A plot to degrade public values

In the early 1960s, Mr. Shaw showed some business flair by putting out a publication he termed a "Ladies' Directory." This publication included the names, images, locations, and methods of prostitutes in certain areas [1],[2]. Later, he was accused of and found guilty of a number of statutory offenses, but he was also accused of the alleged common law offense of "conspiracy to corrupt public morals [3],[4]. Mr. Shaw's direct response to this accusation was the assertion that there was no prior evidence supporting the purported crime, hence it simply did not occur. In contrast, he argued that even if such a crime had ever been acknowledged, it should no longer be used since it was an extremely broad term, making it hard to foresee what kind of behavior may fall under it [5],[6]. These arguments for the rule of law and legal certainty are very much in the abstract. During trial, Mr. Shaw was found guilty. In the House of Lords majority's decision on the appeal, neither defense presented a barrier to sustaining the conviction [7],[8]. I entertain no doubt that there remains in the courts of law a residual power to enforce the supreme and fundamental purpose of the law, to conserve not only the safety and order but also the moral welfare of the people.

Viscount Simonds, who was so aware of the risks of the judiciary usurping the legislative function in Magor, came to the following conclusion: Lord Morris firmly dismissed the argument that the offense was objectionable due to its potential breadth and resulting uncertainty: It is claimed that the charge of conspiring to corrupt public morals is somewhat vague and that there is a risk that prosecutions will be brought in order to uphold controversial or unconventional views. My Lords, I don't worry about anything related to this. Although while generally accepted public standards may change somewhat from generation to generation, jurors are in charge of upholding them because they can be relied upon to protect the community's values and to spot attempts to undermine them [9].

Lord Reid voiced a strong dissent based on an apparent adherence to traditional conceptions of the rule of law and the separation of powers. Regarding the conflict between the two branches of government, Lord Reid came to the conclusion that the nature of the alleged crime was one that was more suited to being criminalized by Parliament than by the courts:

Even if such a power still exists, it shouldn't, in my opinion, be employed until there seems to be widespread consensus that the offense to which it is applied should constitute a crime if committed by an individual. The extent to which the law should penalize immoral activities that are not committed in front of the public is a contentious topic nowadays. Some believe the legislation already goes too far, while others believe it does not. To resolve it, Parliament is the best and, in my view, the only venue to do so. When there is enough support from the general population, Parliament will intervene. The courts should not rush into areas where Parliament hesitates to tread. He was equally worried that the majority's judgment violated the rule of law and a basic understanding of legal certainty:

Lastly, I must mention the effects of maintaining that this very widespread offense occurs. It has long been believed that it is crucial for our laws, especially our criminal laws, to be clear and that men should be able to distinguish between illegal and non-criminal behavior, especially when severe

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punishments are at stake.

One may fault the majority decision in Shaw for applying a criminal punishment to a person in order to resolve a question about the common law's substance. This constitutional principle critique may be simple to level since, given the particulars of the case, it is likely that most individuals did not find Mr. Shaw's actions to be morally repugnant. Yet, if the behavior in question would be virtually generally considered as bad and/or if the innovation at issue does not clarify a doubt but rather overturns a long-standing norm, the discussion over the validity of common law innovation becomes more problematic.

II. DISCUSSION

A. Rape within marriage: R v R

A husband cannot be guilty of a rape committed by himself against his lawful wife because by their mutual matrimonial consent and contract the wife hath given herself up in just this kind unto her husband which she cannot retract, according to Sir Matthew Hale's argument in his History of the Pleas of the Crown, which seems to modern observers to be one of the more obviously objectionable moral principles guiding social and legal affairs in the middle of the eighteenth century.

The idea that a woman had to let her husband to have sex with her whenever he wanted was based on the moral presumption that a wife was her husband's "subservient chattel"120. In R v. R. 121 in 1991, the House of Lords was asked to decide whether that presumption was still true and, if not, whether the common law should be changed to reflect new cultural or moral presumptions. Regardless of the response to the first question, the Court would have had to answer the second question with a "No" if it had believed that it was still bound by the London Tramways interpretation of stare decisis. In R v. R, however, the House of Lords agreed with the argument that the common law may be rightfully seen as a living, evolving body of laws. According to Lord Keith.

Nonetheless, the common law is open to change in response to shifting social, economic, and cultural trends. Hale's argument captured the situation in these areas at the time it was made. Since then, the standing of women, and married women in particular, has altered drastically. Every sane person nowadays must consider this to be completely unacceptable. The Court therefore came to the conclusion that it was proper for the courts to overrule the earlier common law norm. There was no need that legislation altering the law be passed by Parliament.

R v. R is a landmark decision in several ways. For the sake of this discussion, the most important point it raises is when it became illegal for a husband to rape his wife. In October 1991, the House of Lords decided the legal issue. The alleged "rape" occurred around two years ago. Thus, the law change could be viewed as retroactive in the sense that anyone who looked up legal reports or textbooks in 1989 would have understoodably concluded that—despite the morally reprehensible nature of such an action—a husband could not be convicted of raping his wife, save in very specific circumstances. In Diceyan words, such an action would seem to have constituted no violation of the law, and definitely not a noteworthy one. If the House of Lords had thought it suitable for Parliament to modify the law rather than the courts, we would have probably assumed that any legislation attaching criminal culpability to a husband's rape of his wife would only have a prospective impact. Such a measure would have undoubtedly drawn condemnation for violating the rule of law if it had been granted retroactive effect, enough to bring R within its boundaries.

Yet, creative judicial law-making, which modifies common law principles or gives new definitions to existing statute provisions, is often retroactive in character. By pointing out that the law had already changed when R tried to rape his wife, one may formalistically refute that claim. Not two years later, when the House of Lords ultimately rendered judgment on the matter, did we learn about that modification? Yet it's unclear exactly when the legislation changed. The fact that the British constitutional tradition has normalized the retroactive effects of common law innovation to the point that they are no longer seen as "truly" retrospective is somewhat strange. Given that the rule was based on such archaic and objectionable moral principles and had already been narrowed by contemporary judicial decisions, it could be argued that most sane observers in the 1980s would have predicted that the marital rape exemption might well soon be substantially amended or even abolished by the courts. However, R v. R can easily be viewed as a problematic decision in both specific and general terms if one's understanding of the rule of law incorporates a concern to establishing with certainty the substantive content of laws—or at least those laws whose violation imposes heavy costs on a defendant.

B. R v C

When one takes into account the subsequent ruling in R v. C. from the Court of Appeal, that issue becomes even more evident.

126 The defendant in case C was found guilty in 2002, among other things, of raping his wife. The alleged rape took place in 1970, which is more than 20 years before the House of Lords' ruling in R v. R. At the court of appeals, C's attorney claimed that the prosecution of the rape offense should be seen as an abuse of procedure and should be overturned. The House of Lords' finding in R v. R that by 1989 it was perfectly predictable that courts would be willing to reject Hale's presumption about the legal impossibility of a man raping his wife had been acknowledged by C's argument. Yet, the argument argued that no such conclusion could have been made in 1970. This argument can be seen as being supported by the fact that, in three key decisions given in 1974, 1976, and 1986, respectively, it was ruled that Hale's theory did not apply to couples who were going through divorce or separation procedures, weakening its broad

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application. 127 In plainer words, C argued that even if the law had changed before R v. R, it had not changed when he 'raped' his wife in 1970.

The Court of Appeal did not see the need to address the issue raised by the House of Lords in R v. R, which was when exactly raping one's spouse became a felony. Notwithstanding this, the Court had little trouble coming to the conclusion that the law had changed by 1970. The court's decision raised the issue of what a lawyer may have been required to respond to a client who asked if he might be charged with rape if he coerced his wife into having non-consensual sexual contact. According to the Court, the attorney would have begun by explaining to his client that raping his wife would be savage and that he would not support it. Then, he would have informed his client that the courts had created exceptions to the alleged rule of irrevocable consent and could be expected to do so in the future. He would also have said that if the matter had ever been brought before this court, the presumption that a husband is immune from being successfully prosecuted for raping his wife might be seen for the legal fiction that it is.

The decision provided no evidence to back up this perhaps excessive conclusion. It is undoubtedly difficult to square it with the Court of Appeal's 1986 ruling in R v. Roberts, which said that while there were an increasing number of exceptions, the overall assumption that a husband could not rape his wife remained valid. In our opinion, the law is now quite clear on this subject. The lady must have granted her husband permission to have sexual relations with her while the marriage is still in existence in order for there to be a legal marriage. She is unable to revoke it on her own. The instances demonstrate that permission may be revoked under a variety of conditions. If it has ended and the husband makes sexual contact with his wife without first getting her permission, he is guilty of rape.

The Court of Appeal did not provide any other sources to back up its assumption about the prevalent legal interpretations on this issue in 1970, which rather weakens the force of its decision. Of course, we still don't know when the legislation on this issue changed. We only know that by 1970, things had altered. Maybe by 1960, everything had changed? Or 1950? This likely indicates that many males are now potentially subject to prosecution and conviction for having committed a crime that was not defined as such at the relevant time by legislation or common law yet carries a life sentence. It is easy to agree that C's actions were completely savage. The issue concerns a larger constitutional concept, which is the aforementioned "retrospective" consequence of changing the substantive meaning of the common law. Yet, that point shouldn't be permitted to be overlooked. 130 The idea may seem difficult to reconcile with Diceyan concepts of the rule of law, which, among other things, require that government intrusions into individuals' "bodies or possessions" be justified only when permitted by "separate" laws.

C. ‘Retrospective’ or ‘prospective’ overruling

The common law's devotion to what is sometimes referred to as "retrospective overruling" was largely predicated on the idea that the courts should only "declare" what the law is. 132 In accordance with this declaratory conception of the common law, when courts promulgate new rules or principles, they never really create law; instead, they call our attention to a situation in the law that has been going on for a while but has gone unrecognized.

The ruling in Kleinwort Benson Ltd. v. Lincoln City Council by Lord Browne-Wilkinson may serve as the greatest example of the contemporary position of this declaratory doctrine.

This idea holds that when a previous ruling is reversed, the law is not altered; rather, its actual essence is revealed, having always been in that form. According to Lord Reid, this theoretical stance is a fairy tale that no one believes any more. In reality, judges create and modify the law. In a speech given in 1972, Lord Reid made the following observation: "There was a time when it was deemed almost immoral to imply that judges produce law—they just proclaim it." This is where the "fairy tale" term comes from. People who like fairy tales seem to have believed that the common law in all its majesty is buried in some Aladdin's cave and that when a judge is appointed, knowledge of the magic words Open Sesame drops upon him. When the judge messes up the password and the incorrect door unlocks, bad choices are made. But, we no longer subscribe to fairy tales.

So, we must acknowledge that judges actually create law, for better or worse, and address the topic of how they go about doing so. Clearly, Lord Reid's remarks are entirely compatible with the opinions he articulated in Shaw. Although if the age of fairy tales is long gone, the constitutional presumption that it is acceptable for common law innovation to create new laws that have a retroactive impact practically is still problematic from the standpoint of the rule of law. If the House of Lords/Supreme Court agreed that overturning past judgments or formulating totally new common law principles would only have "prospective effect," the complications associated with the practice of retroactive overruling in instances like R v. R or R v. C may be avoided. In other words, the law would only apply to factual circumstances that arose after the decision was rendered. This method of analyzing the time impact of judicially enacted law change is by no means unusual in contemporary western legal systems. 135 Parliament may at any moment impose such a requirement on the courts, either generally or specifically, as a result of its sovereign right to make laws. The House of Lords/Supreme Court might also change the norm since our constitution's attachment to retroactive judicial innovation is a common law occurrence. The issue was under constant court review starting in the late 1990s. The Chamber of Lords recognized that there was no impassable barrier impeding a change in custom in Re Spectrum Plus Ltd136. Only under "extraordinary" or

"severe" circumstances may a prospective consequence that allows for a change in the law's previously recognized interpretation be justified. But, there is now no sign of enthusiasm from the courts or Parliament to make prospective overruling a concept with even broad, much less universal, applicability.

III. CONCLUSION

The legality of the R v. R decision from will be reviewed. At this point, it would be reasonable to limit our conclusions to the observation that we should use caution when faced with the general proposition that Britain's constitutional tradition rests secure manner on the three supporting pillars of parliamentary sovereignty, the rule of law, and the separation of powers, each of which is securely rooted in the cornerstone of democracy. In addition, the theoretical analyses and historical events covered in this article have highlighted that those pillars may at times tilt in oppositional rather than complimentary directions. s one and two demonstrated that the base of our constitution is itself moving and fragile. We'll get back to the issue of whether this is a good scenario; maybe one can make the case that it is better for a constitution to bend with the times than to remain firmly in place and risk being destroyed by a political or social cyclone. Yet, we need to learn more about the constitution's historical and current composition in order to support or contradict that claim. We start that work in chapter four by looking at the royal prerogative.

REFERENCES

[1] K. M. Douglas et al., "Understanding Conspiracy Theories," Polit. Psychol., 2019, doi: 10.1111/pops.12568.
[2] A. Goreis and M. Voracek, "A systematic review and meta-analysis of psychological research on conspiracy beliefs: Field characteristics, measurement instruments, and associations with personality traits," Frontiers in Psychology. 2019. doi: 10.3389/fpsyg.2019.00205.
[3] D. Jolley, K. M. Douglas, A. C. Leite, and T. Schrader, "Belief in conspiracy theories and intentions to engage in everyday crime," Br. J. Soc. Psychol., 2019, doi: 10.1111/bjso.12311.
[4] K. Hawley, "Conspiracy theories, impostor syndrome, and distrust," Philos. Stud., 2019, doi: 10.1007/s11098-018-1222-4.
[5] E. March and Springer, "Belief in conspiracy theories: The predictive role of schizotypy, Machiavellianism, and primary psychopathy," PLoS One, 2019, doi: 10.1371/journal.pone.0225964.
[6] S. S. D. Mitchell, "Population control, deadly vaccines, and mutant mosquitoes: The construction and circulation of Zika virus conspiracy theories online," Can. J. Commun., 2019, doi: 10.22230/cjc.2019v44n2a3329.
[7] C. A. Klofstad, J. E. Uscinski, J. M. Connolly, and J. P. West, "What drives people to believe in Zika conspiracy theories?," Palgrave Commun., 2019, doi: 10.1057/s41599-019-0243-8.
[8] A. M. Enders and S. M. Smallpage, "Who Are Conspiracy Theorists? A Comprehensive Approach to Explaining Conspiracy Beliefs," Soc. Sci. Q., 2019, doi: 10.1111/ssqu.12711.
[9] J. S. Sara, Stanisavljavic, V. Tatic, and A. Pantic, "Conspiracy thinking inventory (cti)-construction and validation study," Primenjena Psihologija. 2019. doi: 10.19090/PP.2019.4.363-383.

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Royal Prerogative in Legal

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***Abstract*— The royal prerogative is a corpus of accustomed power, privilege, and immunity that is acknowledged in common law and sometimes in civil law states with a monarchy as belonging to the king and has increasingly been vested in the government. In this chapter author is discusses source of prerogative powers. Royal prerogative is a legal concept that refers to the powers and privileges that are historically and traditionally held by the monarch or head of state. These powers include both formal and informal powers, such as the power to grant pardons, appoint officials, and make treaties.**

***Index Terms*— Decision, Government, Judiciary, Rule, Prerogative.**

I. INTRODUCTION

The judiciary had little room to openly criticize the content of law since the courts accepted Diceyan conceptions of legislative sovereignty. Judges have sometimes challenged Parliament's primacy in our constitutional history, as seen by decisions like Anisminic. Yet in Anisminic, the court was careful to ground its conclusions in a theoretically sound constitutional framework. Less obvious is the discrepancy between theoretical and actual legitimacy in court behavior when it comes to reviewing statutory action performed by the government. It is obvious that judicial scrutiny of government actions is required to uphold Parliament's authority. The courts would be recognizing that government action, not law, is the most significant value in the constitutional hierarchy if they allowed the government to transgress the legal bounds that Parliament has established [1],[2].

As Anisminic and Liversidge point out, there are instances when a statute's language and the court's interpretation of it appear to be incompatible in reality. In such cases, we can credibly claim that the doctrine of parliamentary sovereignty is being undermined inasmuch as it depends on judicial deference to the precise sense of an Act's language. When we consider the range of interpretative strategies that courts may use to ascertain the meaning of legislative provisions, a more nuanced but more pervasive analytical complexity emerges. The fact that we cannot infer that an executive body has exceeded the bounds of its legislative authority until the courts, in their capacity as statutory interpreters, inform us of those bounds, is a banal argument, but one of enormous consequence. Nonetheless, the British government's legal power does not exclusively come from statutes. Moreover, the government has a number of common law authorities. These powers are grouped by constitutional attorneys under the term "royal prerogative [3],[4].

II. DISCUSSION

A. The source of prerogative powers

Prior to 1688, the monarch's personal powers were referred to as the "royal prerogative." The English monarchy was never absolute, despite what some Stuart monarchs may have wanted; medieval rulers had the financial and military means to govern without the active participation of the aristocracy. The Monarch's acceptance of certain limitations on her/his capacity to rule was a condition for that support. Both statutes and the common law set out these restrictions, neither of which the monarch was permitted to alter without the consent of Parliament or the courts [5].

Political history from the seventeenth century sometimes serves as the foundation for modern constitutional concepts. There is no exception to this provision under the prerogative legislation. The King and Parliament often disagreed over how to divide up the government's authority throughout this era of constitutional history. The King's attempt to govern via prerogative powers, or "proclamations," and Parliament's ability to limit the King's autonomy through legislation engaged in a constant conflict. And until that conflict turned into a civil war, the courts were often the scene of combat.

Prior to the Revolution of 1688, prerogative cases

Pre-revolutionary case law from the seventeenth century was ambiguous on whether and how to employ prerogative powers. The central legal question was whether the monarch's prerogative powers had more constitutional standing than legislation, both in theory and in fact. Given the period's political unpredictability, judges often produced rulings that took opposing viewpoints, which is easily comprehensible [6],[7].

The courts have sometimes fought the King's inclinations vehemently before 1688. The King argued that he believed the law was established upon reason, and that he and others possessed reason, as well as the judges. This statement was made in the 1607 Case of Prohibitions2, in which James I claimed a right to sit as a judge and expand the common law as he considered suitable. Chief Justice Coke-led by the common law judges—rejected this assertion. The judges affirmed that the King was not subject to any man, but he was still bound by the law, and he was not qualified to serve as a judge until he had acquired adequate knowledge of the various rules of the law. This competence required mastery of "an artificial reason... which demands extensive study and

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practice, before that a man may reach to the awareness of it." It was not a question of "natural reason" or "common sense [8].

This decision strengthened the court's authority while also imposing restrictions on the monarch. In Dr. Bonham's Case, the concept of "common reason" was used to overturn a legislation. If only judges could understand "common reason," one could essentially claim that the courts were the only legitimate source of law under the pre-revolutionary constitution.

Similar restrictions on the King's use of prerogative powers seemed to be made by Chief Justice Coke in the 1611 Case of Proclamations. According to him, the King was only granted the prerogative rights that the common law already recognized; he was not allowed to create any new ones. 5 The question before the court was whether the King may use his prerogative powers to put restrictions on the use of wheat and the construction of new homes in London and to impose criminal penalties for any violations of such restrictions.

Notwithstanding the antiquity of Coke's words, the constitutional foundations that underlie the ruling are clear: without Parliament, the King cannot amend any aspect of the common law or establish an offense that did not already exist.

Note that the King has no prerogative other than what the law of the land permits him to do; he cannot change any part of the common law, statute law, or the customs of the realm through proclamation or other means, nor can he create any offense through prohibition or proclamation that was not an offense previously.

Not many judges shared Coke's dedication to maintaining the King's personal authority within the bounds of the law. There are several instances of judges interpreting prerogative powers in the seventeenth century in a manner that utterly contradicted the guidelines established in the Case of Proclamations.

In 1606, the King's prerogative right to control foreign commerce and Parliament's statutory authority to charge taxes were at the center of The Case of Impositions, also known as Bate's Case. Bate had argued that the King's import tax on currants was unlawful and had refused to pay it. In response, the King said that this was a trade regulation action rather than a tax. As a result, it was perfectly legal—the money earned was really a coincidental byproduct of the regulatory authority. It is clear that the argument's objectivity is in doubt. Yet since the court approved it, it gave prerogative authorities a way to bypass legislative limitations. At the time, something was not necessarily unlawful since the supremacy of law had not yet been established. Later, the 1688 Declaration of Rights would emphasize the condemnation of this kind of monarchical behavior, and Art. 4 of the Bill of Rights clearly forbade it.

B. Ship Dollars

The Case of Ship Money 8 in 1637 presented a situation like this. During the period, it was generally believed that the Monarch had the authority to order coastal regions of the nation to provide him with ships during wartime emergencies so that he could better protect his realm. Charles I sought to prove that this authority covered the whole nation in the 1630s and that it gave him the right to impose fees rather than just demand the availability of a ship. John Hampden, a Commons member and an opponent of most of the King's policies, refused to pay the fee when Charles I imposed it in 1637. Hampden acknowledged the existence of the prerogative power and acknowledged that it may be imposed nationally in the form of a tax. He countered that it could only be used when a military emergency was about to occur.

Twelve judges from the court heard the case

The general consensus was based on the assumption that the King alone could determine if an urgent situation was present. Concerns about the King's conclusion's correctness or good faith were not addressed by the court. The ruling effectively gave the King a way around the widely held belief that formal authorization was necessary before any taxes could be levied. Several members of Parliament rejected such constricting conclusion. Ship-money, though, brought up bigger issues. Regarding the location of sovereign legal authority, a number of judges made quite general pronouncements. Judge Vernon went so far as to state that "the King may charge pro bono publico despite any Act of Parliament." He also added that "the Monarch may dispense with any legislation in the event of need." Statutes derogating from the prerogative are not binding on the King. These are invalid Acts of Parliament to bind the King not to order the people, their bodies and things, and I add their money too; because no Acts of Parliament make any difference, as Chief Justice Finch expressed it. The Ship-money tale is a vivid illustration of the conflict over who had royal authority in seventeenth-century English history. Within a few years following the ruling, Charles I assented to a Law that not only claimed to remove the ship-money authority but also maintained that such a power had never existed in response to parliamentary dissatisfaction with the judgment's limited implications. Several of the judges who had ruled in his favor in the case were fired or imprisoned. Yet, the effectiveness of any such legislation may show to be very restricted if the King really had the authority to dispense with Acts of Parliament whenever he deemed it necessary—and if need was something that only the King could determine.

Protection against illegitimate taxation was a key component of the people' property rights in pre-revolutionary England, as shown by habeas corpus and the Resolutions in the Anderson and Darnel cases. One's bodily liberty, in the sense of being able to ask the courts for protection against unjust detention, was possibly less significant than "property" in this regard. Even before Magna Carta, the writ of habeas corpus has roots in common law. To put it simply, it gave the common law courts the ability to demand that anybody holding a citizen appear before the court and provide proof of a legal reason for the detention. The prisoner would be freed if the gaoler's "return" did not include such authorization.

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In reality, the habeas corpus was constrained by restrictions. Its usefulness was particularly jeopardized during Elizabeth I's rule. Elizabeth and her Privy Councilors asserted an arbitrary right to detain anybody they chose for as long as they liked, without indictment or trial. A lot of people questioned whether such commitments were constitutional, which led to enough unease that the justices gave the Crown a view on the matter. "Her highnesses people may not be imprisoned in jail, by direction of any lord or counsellor, against the laws of the realm," the first line of the so-called Resolutions of Anderson13, looks to be a strong defense of individual rights. This shows that the judges were asserting their right to review the legality of any such detention and make a determination on its validity. The Resolutions did state that the factual foundation for the Crown's assertion that the individual in custody had committed treason could not be called into question by the courts as their conclusion. So, Privy Council members' activities would be in accordance with "the rules of the realm" as long as they followed this formality.

The Bate's Case and Ship Money tenet that only the Monarch could determine whether the factual requirements of a prerogative authority existed is amply supported by Anderson. Predictably, Charles I used the ruling as justification for imprisoning his people who refused to pay the allegedly "illegal" taxes imposed. One of the five knights who refused to repay a required debt to the King was Sir Thomas Darnel. Charles I subsequently ordered their detention. In Darnel's Case16, a statement merely saying that the knights were being imprisoned "by special order of the King" was the response to the knights' request for writs of habeas corpus. Darnel's attorney said that because it revealed no violation of any recognized laws, there was inadequate basis for committal. The justices decided not to look into the legal or factual foundation of the King's view, but instead reached the conclusion that the King's authority fell within what was deemed appropriate in the Resolutions in Anderson. The King effectively kept his arbitrary authority.

C. Hales v. Godden

After the Civil War, the Commons and Lords convinced Charles II and James II to approve a number of Habeas Corpus Acts that seemed to expand the remedy and limit the Crown's ability to avoid it. But, the effectiveness of any such law was seriously questioned by the then ambiguous standing of statute in relation to prerogative.

In the 1680s, James II was keen to make use of the judges' latitude to make decisions without legislative approval. The most glaring illustration of this pattern is Godden v. Hales17 from 1686. James was a monarch with strong Catholic sympathies who was attempting to manage a nation where Protestants controlled both chambers of Parliament. Many Acts enacted by Parliament barred Catholics from holding public office. James made the claim that Sir Edward Hales, a citizen who was Catholic, did not have to pledge allegiance to Protestantism before taking office in an effort to overturn these actions on his behalf. While there was a clear violation of a law, the court determined that the monarch had the right to disregard the law in some circumstances if it was essential. As in Ship Money, only the King could determine what was necessary. The Court summarized the constitutional stance in its judgment's conclusion:

The judges base their decisions on the following premises: (1) that the kings of England are sovereign princes; (2) that the laws of England are the king's laws; (3) that, as a result, it is an inalienable prerogative of the kings of England to dispense with penal laws in specific cases and upon specific necessary reasons; (4) that the king himself is sole judge of those reasons and those necessities; and, (5) that this is not a trust invested in or granted. The clear implication of Godden v. Hales—a conclusion that many Commons and Lords members found intolerable—was that the Monarch was the exclusive possessor of sovereign legal authority. According to this reasoning, it would be legally pointless to implement laws that the Commons, Lords, and Monarch had agreed upon and reflected a consensus opinion on certain political matters, since the King could always "dispense" with the legislation that Parliament had prepared.

Important components of the revolutionary settlement were overturning Godden v. Hales and contesting the validity of the verdict at the time it was rendered. Art. 1 of the Bill of Rights of 1689, which states that "the supposed power of suspending the laws or the execution of laws by royal authority without assent of Parliament is unconstitutional," definitely had Godden v. Hales in mind. The Bill of Rights, which stated in Art. 4 that "levying money for or to the use of the Crown by pretense of prerogative, without grant of Parliament, for longer time, or in other manner than the same is or shall be granted, is illegal," also vehemently rejected the correctness of judgments in cases like Ship Money and the Case of Impositions. The political agreement that was reached revealed two more, very important elements.

First off, the King was not permitted to assert additional prerogative rights since the range of those powers was set. In 1688, William and Mary were given the remaining authority of the former Monarch. Since then, that residue has been decreasing. As Diplock LJ noted in the BBC v. Johns case from 1965: It is now too late for the Queen's courts to extend the prerogative—350 years and a civil war later. The boundaries of what the executive government may legally impose on UK people in terms of responsibilities or constraints are now well-established and cannot be expanded.

Yet, it is important to keep in mind that although it is widely acknowledged that the 1688 settlement gave the prerogative a lasting character, the precise scope of that character remained unclear. The courts have sometimes been asked to determine the exact bounds of prerogative powers, which, even 330 years after the revolution, remain ill-defined, as we saw in Burmah Oil19. While the Crown cannot de jure20 create new prerogative powers or duties, Burmah Oil offers another illustration of the slack fit between

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the form and the reality of constitutional principles. The courts could achieve this result by holding that the Crown had rediscovered a "forgotten" part of the 1688 residue.

The 1688 settlement recognised that Parliament might change or remove prerogative powers by law, which is the second argument and the reason why the residual has been decreasing. It was acknowledged that the prerogative was a common law authority that was subject to legislation. Consequently, much as in the case of the Burmah Oil controversy, Parliament may always react to unfavorable judicial rulings about the reach of an existing prerogative authority by enacting legislation to overturn or modify the rulings.

Similar to this, Parliament may at any moment establish a legal framework that places restrictions on the exercise of prerogative powers. The legal restriction of the Monarch's authority to call and dissolve Parliament during the immediate post-revolutionary period serves as possibly the clearest example of this idea. The Bill of Rights' Art. states that "Parliaments need to be convened regularly." Parliament further defined this phrase in the Triennal Act 1694. The King was obligated by this act to call a new Parliament within three years after the dissolution of the previous one and to prevent Parliament from sitting for more than three years before the next dissolution. The Monarch had unrestricted legal authority to call or dismiss the Commons and the Lords within certain statutory time restrictions, but he or she had no legal authority to do so outside of those times. With the ability to change the time frame, Parliament decided to expand the maximum length to seven years in the Septennial Act of 1715.

Although the Bill of Rights explicitly addressed the subject of how the prerogative should be treated in relation to Acts of Parliament, it was less apparent how the courts should treat the Monarch's common law powers. Both Bate's Case and Darnel's Case may be seen as rulings in which the courts determined that the judiciary lacked the authority to contest the potential uses of a power that the King was acknowledged to possess. A clear danger to the authority of Parliament came from a common law provision that essentially exempted certain of the Monarch's personal powers from judicial control. Moreover, it would seem that the idea is incompatible with the numerous interpretations of the rule of law that have since arisen within the British constitutional tradition.

The monarch's personal political influence has considerably decreased in real terms since 1688. The Queen currently primarily serves as a ceremonial and symbolic leader under the current system of government. But, this does not imply that the prerogative powers are no longer present. Prerogative powers are, in most cases, used by the government to act on behalf of the monarch. But first, we need address a definitional issue before going through a quick summary of the remaining prerogative powers that the government still has. What did the term "personal powers of the sovereign" originally mean?

D. A disagreement about definitions

On this issue, there are two schools of opinion. Blackstone put forward the first, "limited" interpretation. Blackstone believed that the only things the King himself could accomplish were those that were "unique and idiosyncratic" to him. Hence, for instance, the authority to make agreements, lend money, and hire people shouldn't be seen as a privilege as any other citizen might do such things. Only the functions that are rightly referred to be prerogative powers, like as making war or appointing peers, were reserved for the king.

Under Dicey's broader perspective, any legal action that the government may do that is not based on a legislation but that can be upheld in court is a prerogative power. While there are still some prominent commentators who prefer the Blackstone version, Dicey's use is now widely accepted. 22 What prerogative rights does the government still have, however, if we accept the broader perspective as the more reliable version?

The management of international relations and the signing of treaties are most likely the most significant ones. This residual source of legal authority in the domestic sphere included the summoning and dissolution of Parliament, the appointment of Ministers, the granting of peerages, the appointment of judges, the pardoning of convicted criminals or the suspension of criminal proceedings, and the terms and conditions of civil servants' employment. This is not a comprehensive list, but it makes the argument that the prerogative is still a crucial source of political power clear.

The majority of these authority may be used either directly or indirectly. The prerogative may be directly exercised without any documentation being required. For instance, this is how foreign policy is normally conducted. The Order in Council, a mechanism that, in some ways, resembles a law in that it often gives Ministers the legal right to wield a variety of discretionary powers, is how the prerogative is indirectly exercised. Unhappily, this is commonly referred to as "prerogative legislation." An Order in Council would be better referred to as a "decree" given that legislation is the purview of Parliament and that the legitimacy of legislation as law is derived in part from Parliament's role as a representative body.

The continuous existence of prerogative powers, regardless of how they are exercised, poses two important constitutional challenges, one legal and one political. The fundamental legal problem is how the government and the judiciary interact; whose prerogative powers will be subject to judicial scrutiny, and under what conditions and with what standards would the courts intervene to restrain government activity? The relationship between the administration and the chambers of Parliament is the key political problem. Is it preferable for significant political choices like declaring war, ratifying agreements, or issuing pardons to be made without the express previous consent of a majority of MPs? Later in

the book, we'll come back to the political topic. This takes into account what happened to the prerogative in the courts during the 20th century.

E. Relationship between the rule of law, legislation, and prerogative

Early in the 20th century, the House of Lords issued two strong decisions that limited the use of prerogative powers. The ability to confiscate property for military purposes during times of war, provided the seizure was required to protect national security, was one of the most extensive prerogative powers utilized by monarchs. 24 Invoking the authority was common during World War I. The legality of the seizures was contested in court, despite the government's apparent belief that its actions were justified. The most contentious issue was whether or not the government had to compensate the owners for seizing their private property.

F. Right Petition

Re Petition of Right26 dealt with the army's appropriation of a private airport for armed conflict. The owners argued that the authority to seize the land without payment only applied in dire circumstances, such as an actual invasion, and not for the longer-term goal of creating an airfield. The authority was acknowledged by the High Court and Court of Appeal to exist exclusively under "invasion" circumstances. Nevertheless, the owners' claim was unsuccessful because all of the judges agreed that the word "invasion" should be understood in the context of contemporary military technology. A German aircraft or airship entering British airspace in 1915 constituted an invasion just as much as the disembarkation of hostile soldiers at Dover did in 1637. This interpretative premise is crucial because it suggests that the allegedly residual prerogative may legally expand its actual use in response to shifting social, political, or technical trends. The verdict essentially states that prerogative powers might be seen to be "always speaking" in the same manner as legislative laws.

The Petition of Right decision was important in another way as well. In Ship Money, it was ruled that the Monarch alone had the authority to determine what was "necessary" to safeguard the country's security. In Petition of Right, the courts seemed to demand that the government provide proof of a genuine "invasion" scenario and that the seizure of the relevant property was required to address the danger. A senior military officer's claim that the seizure of the airport was essential was not challenged by the courts, hence it did not seem that this was a burdensome requirement.

G. A Zamora

H. The Privy Council in The Zamora altered this strategy

A neutral nation's ship, the Zamora, was transporting copper. As the ship anchored in a British port, the authorities confiscated both the ship and its cargo. The Court acknowledged that courts lacked the necessary expertise and constitutional standing to debate with the administration whether or not the national security reason for using this prerogative authority was adequate. The court was still not allowed to assess the legality of the government's decision in situations involving national security. In this instance, the government did not provide any proof that the copper was required for grounds of national security. The House of Lords concluded that the administration had not shown the factual need for using the authority. Also, the electricity could not be used if those conditions were not met.

The Ruling represents a departure from the stance that the courts took in Ship Money. The ruling seems to make the same main argument as Lord Atkin's later dissent in Liversidge, namely that the executive must persuade the court that the circumstances for the exercise of a legal authority really exist in the absence of a clear legislative provision to the contrary. How much proof would be needed to prove that national security considerations were at play is less certain?

III. CONCLUSION

Foreign policy often makes use of the royal prerogative. The king is the one who recognizes other governments (although various acts control the privileges enjoyed by their leaders and diplomats), declares war and peace, and creates international agreements. Since the constitution is not codified, it is impossible to identify the extent of the royal prerogative. It is obvious that the common law of England governs the presence and scope of the authority, making the courts the ultimate arbiters of whether a certain sort of prerogative exists or not. Despite the limitations on the powers of the monarch in some legal systems, the concept of royal prerogative remains an important part of the legal and political landscape in many countries around the world. It is often used as a symbol of national identity and tradition, and can have significant political and cultural implications. Legal professionals must have a strong understanding of the principles of royal prerogative in order to effectively navigate the complex legal and political issues that can arise in cases that involve the powers and privileges of the monarch or head of state. They must also be able to critically analyze the historical and cultural context in which these powers have evolved, and to consider a range of different factors in order to arrive at a clear and consistent interpretation of the law.

REFERENCES

[1] H. Evans and A. Williams, “ADF Offensive Cyberspace Operations and Australian Domestic Law: Proprietary and Constitutional Implications,” Fed. Law Rev., 2019, doi: 10.1177/0067205X19875011

[2] I. Kroppenberg and N. Linder, “Gustav Hugo and the Göttingen student riots 1809/10,” Zeitschrift der Savigny-Stiftung fur Rechtsgeschichte, Germanistische Abteilung. 2019. doi: 10.1515/zrgg-2019-0006.

[3] D. S. Mitiureva, “Bodin’s Term «République» In The Translation Of Richard Knolles And In The Context Of

Political Disputes In England In The First Half Of The 17th Century," Perm Univ. Her. - Hist., 2019, doi: 10.17072/2219-3111-2019-2-132-136.

[4] N. Lupo, "Parliaments," in The Cambridge Companion to Comparative Constitutional Law, 2019. doi: 10.1017/9781316716731.014.

[5] J. D. Mortenson, "Article II vests the executive power, not the royal prerogative," Columbia Law Rev., 2019.

[6] G. Carney, "A Comment On How The Implied Freedom Of Political Communication Restricts Non-Statutory Executive Power," Univ. West. Aust. LAW Rev., 2018.

[7] D. V. Williams, "From loyal dominion to new republic: Which realm will get there first?," Round Table, 2018, doi: 10.1080/00358533.2018.1494688.

[8] R. Giurato, "The language of constitutionalism and the royal prerogative in the english parliament of 1593: James morice's speech on the ex officio proceedings and his constitutional thought," Parliam. Hist., 2018, doi: 10.1111/1750-0206.12401.

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Superiority of Statute Over Prerogative

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***Abstract*— The statutory law's primacy, the law takes precedence over prerogative in cases when they are in disagreement. The prerogative may not be used to amend statutes; it is still subject to the common law obligations of justice and reason. In this chapter author is discusses the passage of the Civil Aviation Act. The concept of the superiority of statute over prerogative refers to the principle that statutory law takes precedence over the powers and privileges that are historically and traditionally held by the monarch or head of state. This principle is an important part of the legal and political systems of many countries around the world, and is designed to ensure that the power of the state is subject to the rule of law and democratic principles.**

***Index Terms*— Law, Prerogative, Property, Rule, Superiority.**

I. INTRODUCTION

The superiority of statute over prerogative: A-G v De Keyser's Royal Hotel Ltd. Of all constitutional law decisions, A-G v. De Keyser's Royal Hotel Ltd.29 is among the most illuminating due to the rulings provided by the House of Lords. The court's application of statutory interpretation principles not only deals authoritatively with the nature of the interplay between statute and prerogative powers, but also reveals a great deal about how the concepts of parliamentary sovereignty and the rule of law interact [1],[2].

The "property" at issue in De Keyser was a hotel that the government sought to utilize to house the Royal Flying Corps' administrative headquarters. The hotel's owners accepted that the government had the right to seize it under the law. Yet, there were two important issues at hand. First off, did the prerogative or a legislation give rise to such power? Second, was the power—regardless of its source—one that mandated that the government compensate the owners of impacted property? The House of Lords addressed these issues holistically, but for our purposes, the judgement may be broken down into three sections that each address a different prerogative authority, the exact meaning of a law that applies, and the link between statutes and the prerogative as a whole [3],[4].

Two supplementary questions arose regarding the first issue: did the prerogative power mentioned in Re Petition of Right apply to these specific circumstances; and if not, did the Crown have a different prerogative power to take property without just compensation during a war that did apply in this case? The Petition of Right premise was not upheld by the court in this instance. Lord Sumner also made it very clear—in an obvious departure from the Ship Money principle—that the court would inquire if the factual circumstances amounting to an emergency actually existed; it would not simply defer to the government's view on that question. The property was not being commandeered to form an immediate defense against invasion. No one in the court also believed that the Crown ever had the right to confiscate property in non-emergency wartime conditions without making restitution. The ability to seize property in such situations was definitely one of the prerogative rights that the Crown retained after the revolution, but it was less clear whether this ability could be used without paying compensation [5],[6]. The Court looked into this matter via historical research rather than legal analysis since it was unable to locate any case law that provided clear direction. According to the Court's inquiry into the actual execution of these requests, all of them had been accompanied by the payment of compensation [7],[8]. According to Lord Atkinson, this is because there is no evidence that the Crown has ever claimed or used its authority to take property from a subject for these reasons without first paying for it, not even during the reign of the Stuart dynasty. In essence, the Attorney General was pleading with the Court to bestow a new prerogative authority onto the government. This was a request that the Court lacked the constitutional authority to grant. This result implied that if the government had the authority to seize the hotel without paying compensation, such authority must have come from a legislation.

II. DISCUSSION

The Court also decided what legislative powers the government really held, which included giving a history lesson. The conclusion it draws on this issue has little bearing on the issue of prerogative powers. It is nonetheless worth mentioning because it gives us the opportunity to further refine our knowledge of how the courts' employment of statutory interpretation procedures might resolve putative conflicts between the concepts of legislative sovereignty and the rule of law.

According to Their Lordships' judgements, the reason Parliament started to act on this subject in the eighteenth century was largely due to the restricted emergency requisition prerogative powers' inability to address the rising complexity of modern warfare. The Defence Act 1842 was the primary piece of law in this area at the start of World War I. The Act granted the government a wide range of

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requisitionary powers. In addition, it stipulated that the owners of requisitioned property should receive compensation, with the amount to be determined by a jury in the relevant region. This provision came with very strict procedural requirements for the use of those rights. The court is allowed to ask whether the requirements, based on need, which were ruled to exist in are relevant to the situation at hand where it may be determined from the nature and circumstances of the demand itself that the case cannot be one of immediate danger. AC 508 at 565. Nevertheless, The Decision made no mention of how stringent the court would be in making such enquiries. If the investigation was satisfied by a government official's simple declaration that a "imminent risk" existed, the concept would have no practical application.

According to the court's presumption, the legislation was passed to accomplish three goals that, to use the terminology of Harlow and Rawlings, reveal a combination of green light and red light concerns. Extended requisition powers, procedural requirements, and compensation provisions were all designed to spread the burden of waging war across the entire population rather than just the few individuals whose property was taken. This was done to increase the nation's ability to wage war successfully.

In 1914, the 1842 Act was not revoked. The Defence of the Realm Act of 1914's powers, however, allowed them to have a greater impact. According to Section 1 of that Act, "His Majesty in Council has the authority to issue regulations for securing the public safety and the defense of the realm." Any such rules may allow for the suspension of any limits on the purchase or use of land, as well as any other authority under the Defence Acts 1842–1875, according to Section 1 of the law. Later, in November 1914, a regulation was passed allowing authorized military officers to seize any land or building when necessary "for the purpose of securing the public safety or the defense of the realm."

In De Keyser, the government argued that the 1842 Act's requirement to pay compensation was a "restriction" on its ability to purchase land for defense purposes and as such could be suspended by regulation. It was said that the rule approved in November had this effect. De Keyser responded to this claim by stating that the idea of "restrictions" only applied to the procedural requirements set down in the 1842 Act and not to the distinct matter of compensation. The justices' handling of this matter powerfully demonstrates how hazy the lines between the teleological and literal approaches to legislative interpretation may be

The claim that having to pay for something is likely to act as a "restriction" on one's readiness to take it is not irrational; the price may serve as a deterrent to acquisition. The House of Lords, however, disagreed with such meaning of the phrase. The reasoning provided by Lord Moulton on the subject was brief, with the implication that the precise definition of "restriction" could not support that construction: The need to provide compensation cannot be seen as a constraint. They are entitled to the compensation offered by that Act because it is a result of the taking but in no way limits it. Instead of an explanation, this is an assertion. In Lord Atkinson's opinion, the best way to explain the conclusion is to provide it. One approach to explain his logic would be to say that a contextual principle developed from a careful knowledge of the rule of law aimed to safeguard the property of private persons constrained the literal sense of "restriction": The accepted guideline for interpreting statutes is that they should not be interpreted in a manner that takes a subject's property without providing them with recompense, unless the statute's wording expressly state that it does so.

One may also describe his logic as "making sense"36 of the 1914 Act and subsequent regulations by seeing them as tools to remove formal barriers to the successful conduct of the war without sacrificing the fundamental idea that the burden of its costs should fall on the whole nation. The verdict also covered a number of larger-scale concerns. Lord Atkinson vehemently disagreed with the Attorney General's assertion that the government may use whatever authority best served its objectives and that a prerogative power and a statutory power dealing with the same matter could coexist—or, as the Attorney General described it, "blend." Lord Atkinson thought the term "merger" was inappropriate. Instead, passing a law restricts the royal prerogative to the amount that it is in effect, limiting what the Crown can do to what it can do in conformity with the law's terms and suspending its prerogative authority to do so.

Not all members of the court agreed with the idea that the passing of a legislation places the relevant prerogative authority in some kind of constitutional suspended animation. The prerogative authority, according to Lord Dunedin, was still in effect, but it now held a position that was clearly inferior to that held by the new legislative provisions. This difference doesn't matter much in terms of functionality. The fundamental similarity between the two points of view relates to the hierarchy between the prerogative and the legislation. Lord Dunedin and Lord Atkinson agreed on this matter. While Lord Dunedin indicated that the prerogative still had some constitutional meaning, he also said that "it is equally evident that if the full subject of anything which the prerogative may accomplish is covered by the legislation, it is the statute that governs." Both points of view would concur that Parliament has the explicit authority to declare that prerogative powers related to a subject now covered by statutory regulations continue to exist alongside the relevant Act. Nothing in the rulings suggests that the only way for Parliament to override a prerogative is by explicitly suspending the relevant prerogative powers. Such a regulation would be in conflict with the implicit repeal aspect of the parliamentary sovereignty premise. It would make no sense if an existing prerogative power was seen as having more authority than an incongruous statute since statute is the higher form of law to prerogative and existing laws must take precedence if

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conflicting with subsequent legislation. Nonetheless, there is significant incoherence in the "abeyance" argument. In the sense that the 1910 provisions would recover their legal force if the 1920 Act were to be repealed, it would not be argued that a 1920 Act that changed a 1910 law "suspended" the previous legislation. It also wouldn't be contested that the 1910 Act still had some kind of legal standing, although a lesser one than the 1920 Act. The assumption would be that the 1910 Act was no longer in effect. It would seem odd that the common law power of prerogative could have a longer legal history than a legislative instrument addressing the same issue. The courts may properly draw the conclusion that it would always be Parliament's purpose for a "suspended" prerogative power to be reactivated whenever an Act repealed an earlier Act that had itself placed a prerogative power into abeyance. This would, perhaps, explain away the illogicality. Such logic, however, is challenging to square with conventional notions of the judiciary's interpretative function.

A. Extending Laker Airlines Ltd. v. Department of Commerce, De Keyser

By expanding the De Keyser concept, the Court of Appeal's decision in Laker Airways40 further underscored the prerogative's weaker constitutional standing in comparison to legislation. Airlines that wanted to run a service between the UK and the USA had to get two types of authorization once the Civil Aviation Act of 1971 was passed. Initially, an authorization from the Civil Aviation Authority was required for the airline. The CAA used its authority under the 1971 Act and granted licenses in accordance with the principles outlined in section 3, which mandated that the CAA promote affordable prices, good safety standards, and competition on important routes. According to section 3, the Department of Commerce might provide "advice" to the CAA about how it carried out its licensing duty. In accordance with Section 4, the DoT might offer the CAA "directions" about issues that had an impact on diplomatic ties or national security. Second, the airline needed permission to land in the States. They came from a Treaty known as the Bermuda Accord that the government had concluded with the USA utilizing its prerogative powers.

Laker Airlines submitted a license application in 1972 to run a low-cost service from London to New York. British Airways and British Caledonian were the only British airlines operating on these routes at the time. The DoT utilized its prerogative authority to arrange for Laker to be granted landing privileges in New York after the CAA gave Laker a licence under Section 3 of the Act. The newly elected Labour administration tried to revoke Laker's license to fly after the 1974 general election in order to shield British Airways and British Caledonian from Laker's competition. As there were no issues with national security or international relations, the government was unable to utilize Section 4 to "direct" the CAA to cancel Laker's license. As a result, the DoT tried to terminate Laker's Bermuda Agreement landing rights by using its prerogative powers, and it sent the CAA "guidance" under section 3 telling it to revoke Laker's license. Both behaviors, according to Laker, were supra vires.

The Court of Appeal agreed with Laker that the government's conduct lacked a legal foundation since neither a legislation nor a prerogative did so. In s3, Lord Denning first thought about the definition of "direction." He believed that the purpose of employing this phrase was to provide the government the authority to "explain," "amplify," or "supplement" the Act's policy rather than "reverse" or "contradict" it. Lord Denning, however, came to the conclusion that the new government strategy would lessen competition and hence increase costs on the London-New York route. This was completely at odds with the goals set out in Section 3—namely, to promote competition and drive down costs. The policy lacked a legislative basis since it could not be considered "advice."

The defense that the government's prerogative authority offered a legitimate rationale for rescinding Laker's landing privileges was likewise rejected by Lord Denning. He reasoned that the government was attempting to defy a legislative objective by using its prerogative powers. In contrast to De Keyser, Laker illustrated a scenario in which legislative and prerogative powers interacted rather than overlapped. The legislation was meant to be utilized in addition to the prerogative rather than as a replacement for it. Yet in this case, the statute's greater constitutional stature required that the prerogative be used solely to promote rather than to hinder the goals of the legislature. The government would need to convince Parliament to pass new legislation that altered the DoT's authority if it wanted to follow a course of action that was in opposition to the goals of the 1971 Act.

The ruling preserved Parliament's "sovereignty" in both a political and legal sense. At that time, the government only had a slim majority in the Commons and a minority in the Lords. It was obvious that certain Labour party MPs would oppose any legislation intended to restrict Laker Airlines from operating and that such legislation would not have much public support. Naturally, no such measure was implemented.

B. Extending Laker: R v Secretary of State for the Home Department, ex p Fire Brigades Union

In a 1995 ruling addressing the operation of the Criminal Injuries Compensation system, this idea was further expanded. In order to pay compensation to violent crime victims or to their dependents, the Criminal Injuries Compensation Board was founded in 1964. It was established by the prerogative rather than a legislation. The criteria that the Board would use to determine compensation were also made public by the then-Labour administration; these criteria were mostly based on the amount of money someone would get if they had had a comparable damage as a consequence of a tort. Twenty years later, in 1988, the Criminal Justice Act was passed by Parliament. The common law system was given a formal foundation by Sections 108–117. The s were

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not, however, immediately put into effect.

Instead, the Home Secretary was given the authority to enshrine the original eligibility requirements in law "on such day as he may specify" under Section 171 of the Act. The administration made the decision not to use this authority right now. The government came to the conclusion that the current plan was too costly in 1993. As a result, Michael Howard, the then-Home Secretary, decided to utilize his prerogative powers to alter the original plan and implement a less expensive system. In a strategy document, the administration declared: "The terms of the Act of 1988 will not presently be applied." As a result, they will be abolished whenever an appropriate parliamentary opportunity presents itself. The government believed that it could alter the current plan without violating the 1988 Act since ss. 108–117 were not enforceable until the Home Secretary used his s. authority to put them into effect.

The Home Secretary was trying to ignore a legal restriction on his prerogative powers, which was one of the arguments used by the Fire Brigades Union in their appeal of the ruling. Although the Home Secretary was not required to put the scheme on a statutory basis by any specific deadline, s did limit the Home Secretary's prerogative powers with regard to the scheme so that they could no longer be used in a way that went against Parliament's intentions, which was the basis for the Court of Appeal's acceptance of their argument after the High Court rejected it. The 1964 prerogative arrangement had received formal endorsement from Parliament. Therefore, it would be against Parliament's wishes for the Home Secretary to make changes to the plan. The administration would need to seek Parliament to remove ss. 108-117 in order to adopt new eligibility requirements.

The House of Lords later confirmed the Court of Appeal's ruling, but only by a three to two margin. Lords Mustill and Keith proposed that since sections 108 to 117 do not yet have legal standing, they cannot limit the Home Secretary's prerogative powers. The Home Office's Compensation for victims of violent crime: amendments to the Criminal Injuries Compensation System provides the finest explanation of the reasoning for the majority's judgment. Evidently, Mr. Howard had forgotten that it is the responsibility of the legislature, not the executive, to enact laws.

C. Lords Lloyd, Nicholls, and Browne-Wilkinson

According to Lord Lloyd, who believed it was incorrect to presume that until the s 171 power was used, ss. 108–117 had no legal status at all: "True, they do not have statutory force." This does not imply that they are written in water, though. Even though they don't establish any rights that can be enforced, they contain a statement of the Parliament's intention. The Home Secretary has the authority to postpone the statutory provisions' implementation, but he does not have the authority to veto them or repeal them outright.

Soon after, the government declared it would introduce a Bill to change the current plan. The Bill was swiftly passed into law. Thus, the incident offers us a case study of how the constitution's theoretical foundation and actual operation perfectly align. The traditional view of judicial review of constitutional prerogatives and its degradation. According to traditional constitutional thought, by enacting legislation that grants the administration new powers, Parliament essentially "contracts in" to administrative law. Parliament must expressly state in the legislation that it does not intend for certain statutory operations to be covered by the implicit rules of administrative law. If no such power has been provided, if the power has been used "unreasonably," or if judgments have been reached through "unfair methods," a government body's exercise of statutory authority will be supra vires without an explicit "contracting out." Such government actions were subject to what the courts may refer to as "full review."

Yet, historically, courts have only used the first of the Wednesbury principles when conducting judicial reviews of government actions conducted in accordance with the prerogative. As in De Keyser or BBC v. John, the justices were prepared to rule on the validity of a purported prerogative authority. The courts would not allow the government to assert new ones, which is obviously compatible with the idea that the prerogative was a collection of residual powers. In addition, a court would accept jurisdiction to investigate if the necessary factual conditions for an exercise of the power were met, as Lord Atkinson emphasized in De Keyser.

Yet until the 1980s, it would seem that the government's exercise of the prerogative was not subject to the same standards of "reasonableness" or "procedural fairness" that applied to the use of legislative authorities. As a result, although the courts were interested in determining if and to what degree a prerogative power existed, they were not interested in how that authority was used.

It would seem difficult to reconcile this distinction between prerogative and statutory powers with conventional notions of the role played by the rule of law in democratic constitutions—namely, to reduce the possibility that the government could legitimately exercise power in arbitrary, irrational, or procedurally unfair ways. A functionalist would only defend such a distinction if prerogative powers were fundamentally different from powers used in accordance with legislation. Without such a difference, the common law's disparate treatment of these two categories of governmental authority could only be defended on strictly formalist grounds—namely, that prerogative powers were not entirely subject to scrutiny merely because they were prerogative powers.

The De Keyser concept, which prohibited the coexistence of prerogative and statutory powers, therefore had a "rule of law" as well as a "parliamentary sovereignty" foundation. Permitting coexistence would enable the government to enact legislation in an area where executive powers had traditionally only come from the prerogative, so avoiding the

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judicial review principles to which it was supposed Parliament had subjected it.

Blackstone's Commentaries provide a resounding affirmation to the idea that prerogative powers should only be subject to restricted review: "In the exercise of those prerogatives, which the law has granted him, the King is irresistible and absolute, according to the forms of the constitution." Yet, if the outcome of that effort clearly causes the kingdom to suffer or be dishonored, the Parliament will hold his advisors accountable in a fair and harsh manner.

Blackstone's comment showed that he thought political pressure in the Commons or Lords, rather than legal debate before the courts, should be used to hold Ministers accountable for how prerogative powers were used. Nonetheless, it would seem that this was an orthodoxy that had some questionable underpinnings since the norm has less clear-cut judicial support. Given that the regulation seems to grant the government a broad exemption from having to uphold a broad interpretation of the rule of law, this is maybe not unexpected. In a seminal piece, Markesenis highlighted two often cited judgments as support for his claim: R v. Allen50 and China Navigation Co Ltd v. A-G.51 Both instances uphold the idea that the specific prerogative powers at issue should only be subject to restricted assessment. The rule that all prerogative powers should be subject to this distorted notion of the rule of law, however, is not supported by either party.

In re Allen

In R v. Allen, the Attorney-General used her nolle prosequi power, which gives her the authority to halt any criminal trial that is still in progress. Allan had been accused of lying. Yet when the Attorney General ordered a nolle pros-equi, his trial was suspended. The prosecuting authorities contested this intervention on the grounds that the nolle prosequi had been issued in a procedurally improper manner, insofar as the Attorney-General had deviated from his custom of allowing the prosecution to present its arguments for why the case should be continued before making his decision. Hence, the prosecution argued that the nolle prosequi should be overturned. The Attorney-decision General's was not reviewed by the court, despite the fact that the prosecution's attorneys were not consulted, as was evident52:

If the Attorney-General were to misuse his authority or behave unfairly while using it, the High Court of Parliament, our nation's most important tribunal, would be the appropriate place to bring him before.

In line with Blackstone, Cockburn CJ held that political rather than legal processes should have control over how this prerogative authority is used. But it is impossible to discern from the decisions any obvious justification for treating the nolle prosequi in this manner. The "huge inconvenience" that would ensue with a complete review of the authority was mentioned by Cockburn CJ, although he did not elaborate on how it might happen. Nonetheless, it is evident that all of the views in the case were restricted to the particular authority of nolle prosequi since none of the judges mentioned the prerogative in general.

D. China Navigation

Similar specificity might be found in the 1932 ruling in China Navigation by the Court of Appeal. Control of the military forces by the government was the prerogative authority in question. The Court of Appeal acknowledged that this prerogative authority had been constrained by legislation in several particular ways. Yet the other powers were "given to the unchecked discretion which exercises via his Ministers." It cannot be contested in court. There is no suggestion, as in R v. Allen that the Court thought this finding applied to all prerogative powers.

E. The 1960s and the 1970s saw developments

The courts' allegiance to the conventional notion that prerogative powers were only susceptible to limited scrutiny started to shift in the late 1960s. Four examples need careful consideration. The first is the ruling rendered in R v Criminal Injuries Compensation Board, ex p Lain by the High Court in 1967.55

F. Lain: a departure from convention

Mrs. Lain was a police officer's widow. She argued that the sum of money she had been given in compensation for the harm her husband had suffered and the death that followed had not been fairly evaluated in light of the established standards. She was criticizing the Board's use of its authority, to put it another way. The Board argued that the court lacked the authority to examine how the prerogative was used.

The court did rule that this specific prerogative authority should be examined as if it were a legislation, however. This was primarily due to the Board's performance of an essentially "judicial" duty. Its simple obligation was to pay out compensation in accordance with the guidelines that were made public. This was a matter that the courts were well qualified to address, unlike the complicated national security concern posed in situations like Ship Money.

Even though Lain appeared to make a clear break with conventional theory, the academic press paid it little attention. One of three interpretations of the judgment was possible. Secondly, it was an erroneous ruling that, if left in place, would only apply to the CICB and not other prerogative measures. Second, it created the framework for later rulings to reach the conclusion that all prerogative powers need to be completely reviewable. Thirdly, it may have implied that only prerogative powers creating concerns the court considered inherently suitable for judicial analysis should be subject to full review.

G. Hanratty, reiterating conventional wisdom

The Hanratty case gave rise to the possibility that the Court of Appeal would favor the third view. The family of a man who was killed in 1962 after being found guilty of murder filed a negligence lawsuit against a previous Home Secretary,

Hanratty v. Lord Butler of Saffron-Walden, in 1956. While advising the Queen whether or not to show Hanratty clemency and reduce his sentence to life in prison, the plaintiffs said that Butler had carelessly failed to take fresh information into appropriate consideration.

The High Court's decision to dismiss the plaintiff's claim was sustained on appeal. The claim that the courts could evaluate how this specific prerogative authority had been used was rejected by Lord Denning MR: On the recommendation of one of her top secretaries of state, who accepted full responsibility and gave her opinion with the utmost conscience and care, the monarch used the lofty prerogative of compassion. The way that prerogative was used was not something that the law would look at.

If the court "did not investigate into the way in which that authority was employed," one would question how Lord Denning MR could have come to the conclusion that Butler had behaved "with the greatest conscience and care." Yet, for the time being, Denning's application of the concept of limited review to this specific authority is what makes the opinion significant. He made no reference to the fact that this was a general rule.

H. Laker Airlines is an anti-orthodox airline

Denning added further support to the claim that prerogative powers in and of themselves shouldn't be subject to merely limited examination some years later in Laker Airlines. Denning also limited his analysis in that instance to a specific prerogative power—the designation of an airline under the Bermuda Agreement—but came to the different conclusion that the authority should be subject to thorough review: Given that the prerogative is a discretionary power that must be used for the benefit of the public, the courts have the authority to review how the executive is using it, just as they would with any other discretionary power.

III. CONCLUSION

The Constitution's principles of the separation of powers allow federal courts to use their "judicial prerogative," which is the authority to issue federal rules of judgment "according to discretion for the public welfare, without the prescription of the law and sometimes even against it." Ministers have the authority to enact primary legislation via an Order-in-Council and oversee the civil service thanks to their prerogative powers. This law does not need a statute to be effective, but an act of Parliament may override it, as was established in Council of Civil Service Unions v. The principle of the superiority of statute over prerogative has important implications for legal professionals, as it requires them to carefully consider the relationship between statutory law and the powers of the monarch or head of state when advising clients and making legal decisions. They must be able to navigate the complex legal and political issues that can arise in cases that involve the prerogative powers of the state, and must be able to ensure that these powers are used in a manner that is consistent with the principles of the law and the rights of individuals.

REFERENCES

[1] L. Ruhnke, “Constructing Native Homosexuality in British India,” Maneto Undergrad. Res. J., 2018, doi: 10.15367/m:turj.v1i1.80.

[2] H. Cheng, R. Chen, J. Wang, X. Liu, M. Zhang, and Y. Zhai, “Study on insulator recognition method based on simulated samples expansion,” in Proceedings of the 30th Chinese Control and Decision Conference, CCDC 2018, 2018. doi: 10.1109/CCDC.2018.8407558.

[3] 권정희, “The Aspect and Characteristic of criticism on Du Fu(杜甫)’s poetry in Korean Sihwa,” Dong-Bang Korean Chinese Liearature, 2018, doi: 10.17293/dbkcls.2018..75.133.

[4] R. W. Kolb, “National Federation of Independent Business,” in The SAGE Encyclopedia of Business Ethics and Society, 2018. doi: 10.4135/9781483381503.n819.

[5] R. V. Fabella, “The drug menace as contributor to the duterte electoral victory,” Philippine Political Science Journal. 2020. doi: 10.1163/2165025X-12340023.

[6] C. M. Holman, “Eagle Pharm., Inc. v. Azar United States Court of Appeals of the District of Columbia, 2020 952 F.3d 323,” Biotechnology Law Report. 2020. doi: 10.1089/blr.2020.29178.cmh.

[7] J. Kim, “‘Mipungyangsok’ Clauses in Multicultural Society: The Contradiction and Injustice,” Korean J. Law Soc., 2020, doi: 10.33446/kjls.64.3.

[8] J. Schroeder, “Leviathan Goes to Washington: How to Assert the Separation of Powers in Defense of Future Generations,” SSRN Electron. J., 2020, doi: 10.2139/ssrn.3707727.

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A Division of Judicial Opinion

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***Abstract*— Per curium decisions are judgments rendered by the court, not by particular judges. The majority of court decisions that are made on the merits take the form of one or more opinions that are penned and signed by each justice. Typically, more judges or justices will concur with these views. In this chapter author is discusses the foreign affairs. The division of judicial opinion refers to a situation in which judges who hear the same case or controversy hold differing opinions as to the outcome or rationale of the case. This can occur in both trial and appellate courts, and can have important implications for the parties involved, as well as for the legal and political systems as a whole.**

***Index Terms*— Constitution, Defenses, Foreign, Law, Rule.**

I. INTRODUCTION

According to Gouriet v. Union of Post Office Workers, higher courts had different interpretations of the Lain ruling. The relator procedure is one prerogative authority that the Attorney General uses on the government's behalf. In cases when an individual is either unable or unwilling to act, this authorizes the Attorney-General to launch civil procedures in defense of the public interest [1],[2]. To protest the apartheid dictatorship of the South African government, the Post Office Union made the decision to stop sending and receiving mail to and from South Africa for twenty-four hours. According to the Post Office Acts, this was a crime. Nonetheless, the government opted not to bring charges against the union due to political considerations. Mr. Gouriet belonged to an organization called the Freedom Association, which was against the actions of the union and the government's lack of legal action. As a result, Mr. Gouriet contacted the Attorney General and requested that he start a relator action for an injunction to halt the implementation of the mail embargo. Mr. Gouriet requested that the Attorney General's stance be reviewed by the courts, but the AG refused [3],[4].

Prior to Gouriet, there was no case law to back up the claim that the relator authority may be subject to judicial scrutiny. Yet, there was precedence for the opposite proposal; specifically, the Attorney-General had exclusive discretion over whether or not to initiate relator actions. Gouriet caused Lord Denning to have different views in the Court of Appeal and the House of Lords. Denning believed that it was necessary to reevaluate conventional wisdom that the relator action was wholly beyond of the purview of the courts. Yet he was careful in doing this. Denning distinguished between instances in which the Attorney-General instituted relator proceedings and those in which he declined to do so. The previous case did not provide for judicial review of the prerogative power's exercise. Denning said that if the courts did not become involved in cases like this, the criminal code would be violated with impunity [5],[6]. Nonetheless, a refusal to start proceedings might be contested.

Denning's analysis wasn't illegal in the traditional meaning of the word. Denning's novel decision may be seen as legally justifiable due to the common law nature of the prerogative and the common law's dynamic nature and openness to ongoing judicial change. He was just arguing that an outdated common law rule should be updated, not that a legislation should be overridden. Denning's choice was undoubtedly less controversial than, say, Anisminic from an orthodox theoretical standpoint [7],[8].

Yet as far as the House of Lords was concerned, both when this specific prerogative authority was being used—and when it wasn't—the courts should indeed do nothing. According to the House of Lords, the government alone has the authority to determine whether or not to file a relator action since it is a matter of public interest. That was another instance of a legal authority that could not be challenged for being unreasonable or unfairly procedural. The ruling implied that changing government policy on this matter would be against the law, both legally and politically.

Denning prioritized upholding the rule of law above everything else in his conception of constitutionality. The House of Lords' version, on the other hand, placed more emphasis on adhering to an elected government's preferred course of action. There was a notion that, notwithstanding the House of Lords' firm attitude, the judges' hesitation to intervene was more due to the extremely disputed nature of the authority in question than to its simple origin in the prerogative. Unlike Lain, Gouriet brought up a topic that had significant party political ramifications. The justices would have been accused of undermining democracy had they instructed the administration that it could not act in the manner it desired.

A. GCHQ case: full reviewability

Minister for the Civil Service vs the Council of Civil Service Unions

The key case in the evolution of judicial review of the prerogative is now Case. Because to the fact that it included staff members at the Government Communication Headquarters in Cheltenham, the lawsuit is often referred to as the GCHQ case. Radio and satellite broadcasts in other nations were monitored by GCHQ, which had an ambiguous

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connection to the security services. Many of its workers were members of one or more of the civil service unions. Civil workers at the time lacked job contracts. Orders in Council, the indirect use of the prerogative, often governed their terms and conditions of employment. One requirement that GCHQ employees had to abide by was that their terms of service couldn't be changed unless the Minister for the Civil Service had had trade union consultations on the proposed change.

Trade unions took part in industrial action during the beginning of the 1980s, which interfered with GCHQ's intelligence collecting operations. Margaret Thatcher, the then-prime minister, also served as the civil service minister. In response to the disturbance, she prohibited AC 374, 3 All ER 935, HL. Public Law 186, Lee S., "Prerogative and Public Law Principles."

See Morris G. and Fredman S. "Judicial review and government servants: contracts of employment declared to exist" for later developments. Legislation 485. Employees at GCHQ are prohibited from joining a union. Workers would be transferred to less delicate positions if they refused to leave their union. Before implementing this move, the prime minister did not consult the unions.

Trade unions contested the decision on the grounds that the Prime Minister had behaved unfairly in terms of procedure by not consulting them. In essence, the unions were requesting that statutory review criteria be applied to prerogative powers by the courts. Government put forth two defenses. Simply put, the first argument was that because this was a prerogative authority, it could not be challenged on the basis of procedural unfairness. The second argument was that even if procedural fairness rules did apply in this case since the matter involved "national security," the court shouldn't get involved. The "nature," not the "source," of power determines whether something is subject to review.

The House of Lords rejected the government's opening defense, breaking with established practice. The best way to explain it was by Lord Fraser, who said, "There is no question that the power granted to the Minister under the 1982 Order in Council would have been subject to a responsibility to behave equitably." I fail to see why the same powers should be conferred by the same words should be interpreted differently only because their source was an Order in Council issued with the prerogative.

Lord Roskill made a similar point, but he was unable to see any logical justification for why the fact that prerogative rather than statute is the source of the power should today deprive the citizen of the right to challenge the manner of its exercise that he would have if the source of the power were statutory. The contested action is an executive action in both scenarios. Speaking of that action as the sovereign's action has an antiquated air to it.

Such remarks reaffirmed that the form of governmental authorities, not their source, would determine whether judicial review would be available in the contemporary period. But, winning on this broad fundamental basis did not guarantee that the trade unions would eventually succeed. The second crucial aspect of the GCHQ judgement is brought up by the House of Lords' concern regarding the nature of governmental power. If the dispute was of the kind that does not lend itself to settlement by judicial type means, Lord Diplock proposed that government powers would not be what he called "justiciable," and hence would not be amenable to scrutiny on the grounds of irrationality or of procedural impropriety. The non-justiciable problem is more complicated than just pitting A against B. Instead, it gives a wide range of opposing viewpoints that must all be considered in order to find a comprehensive political solution. It is proper for elected lawmakers to make these judgments rather than unelected courts. A judgment of this kind is "a balancing exercise which judges by their background and experience are ill-qualified to execute," according to Lord Diplock. 65 National security, in his opinion, is a non-justiciable issue par excellence. The legal system is completely unprepared to handle the kinds of issues it implies.

In essence, the House of Lords declined to look into the Prime Minister's assertion that she had revoked trade union membership without consulting for concerns of national security, regardless of whether it was true or not. It could be more relevant to concentrate on the court's response to this national security issue if we are seeking for historical analogies to some aspects of the GCHQ ruling. The court ruled in the pre-revolutionary Ship Money case that the King did not need to provide any proof to back up his claim that the security of the realm was in risk. In contrast, the court sought at least some proof that the government had legitimate reasons to believe that the danger to national security existed in the 1916 Zamora case. The GCHQ choice seems to adhere to the Zamora rule. The government was ordered by the court to provide an affidavit attesting to the Minister's sincere consideration of the matter. Nevertheless, this does not seem to be a very challenging barrier for the government to overcome, and it indicates that we must have faith in the government to never use national security concerns for dubious or absurd reasons.

The court's finding that not only national security matters were unjusticiable was the last significant argument made in GCHQ. 'Excluded' categories, or areas of the prerogative where review would relate only to the existence of the asserted authority, not to its use, were listed by Lord Roskill. "The formation of treaties, the defense of the realm, and the prerogative of compassion, the giving of honors, the dissolution of Parliament, and the appointment of Ministers" were the powers that Lord Roskill had in mind.

This list may imply that the court's definition of non-reviewable prerogative powers closely resembles Blackstone's previous understanding of the prerogative as consisting solely of those powers which are "singular and eccentrically to the Crown," which suggests that one can always find a historical precedent for ostensibly novel

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developments in constitutional law.

II. DISCUSSION

A. Post-GCHQ developments

Decisions decided after 1985 seem to support rather than deviate from the House of Lords' rather more functionalist view in GCHQ. The case's main issue—which it may not have been able to resolve—was whether the term "justifiability" had a set definition or if it was subject to abrupt and significant change, like other common law concepts. Nevertheless, the Court of Appeal adopted an unusual stance toward the questions of the reality of asserted prerogative powers and the ability of such powers to coexist with legislative measures addressing the same concerns before the courts provided solutions to that question.

B. R v. Secretary of State for the Interior, ex p Police Service of Northumbria

While the legislative framework governing the nation's police forces is complicated, to put it simply, some authority is vested in the federal government, some in local police authorities, and some in the Chief Constable of each force. The North Umbria case69 resulted from the central government's decision to create a central supply stockpile with CS gas and plastic bullets that Chief Constables may use when needed. In order to prove that the central government lacked the legal authority to pursue this strategy, North Umbria Police Authority started judicial review procedures. This was done because the authority did not want its Chief Constable to deploy these weapons without first getting its consent. According to the government, one of two sources—or both—were responsible for this electricity. Perhaps the Police Act of 1964 or the antecedent prerogative right "to preserve the peace" gave rise to it.

In the end, the Court of Appeal ruled that the 1964 Act did indeed provide the authority to establish a central weapons store. We don't need to go into great detail about that contentious conclusion right now. We must take into account the court's response to the issues of whether there was a prerogative authority to maintain the peace and, if so, what actions were within its purview in the middle of the 1980s.

The Police Authority's argument was based on two key claims. The first defense was that a prerogative right to maintain peace was not mentioned in case law or nineteenth-century textbooks. This would appear to be a compelling case in favor of the Police Authority. While deciding whether the Crown had the legal authority to confiscate Mr. Entick's documents, Lord Camden was quite explicit in his ruling in the Entick v. Carrington case, saying, "If it is law, it will be found in our books." If it's not there, it's not legal, according to this saying. In essence, the Police Authority argued that the Crown's residual prerogative rights after 1688 never included the ability to equip a police force.

This claim was rejected by the Court of Appeal. Nourse LJ's description of its rather creative approach may be the best: The fact that the prerogative of maintaining the realm's peace receives little attention in the texts does not show its existence. Instead, it can suggest that it is assumed to be the case.

It is simple to concur with the first of those statements, but we should exercise caution in believing that the legal texts and reports of the eighteenth century provided an exhaustive picture of the time's legal climate. But, the second sentence's meaning looks strange. Nourse LJ seems to be arguing that because no court or textbook author has ever acknowledged a legal authority, we should presume it exists. Such rationale seems to be difficult to square with conceptions of the rule of law, which call for predictability and clarity in the boundaries of the government's legal authority. Yet, as we have previously emphasized, the Burmah Oil instance is a helpful reminder that although the prerogative is undeniably still there, it is still very questionable that all of that residue's components have been thus far identified. Hence, Nourse LJ's analysis in Northumbria may be justified on the grounds that he was astute enough to identify a "lost" authority that no other judge had before able to recognize.

De Keyser and Laker were brought into the second debate by the Police Authority. Early in the nineteenth century, a legislation established the first police force. Hence, Northumbria argued that any overlapping statute requirements would have prevailed over any prerogative powers to maintain the peace that may have existed between 1688 and 1800. Police authorities were given the authority to outfit and equip the police under Section 4 of the Police Act of 1964. According to Northumbria, if the De Keyser principle were applied to section 4, one could only get the conclusion that whatever authority the Home Secretary may have had to provide equipment prior to 1964 has been abolished.

Nevertheless, the Court of Appeal likewise disregarded this claim. It was decided that section 4 did not "expressly confer a monopoly" to the Police Authority over the supply of equipment, but rather established a scenario in which the Police Authority's statutory authority coexisted with the Home Secretary's prerogative authority. Yet, unlike the circumstance in Laker, the coexistence seemed to be in conflict rather than overlapping. This argument, which appears to argue that the idea of implied repeal does not apply to prerogative powers, is much unexpected. The court seems to be arguing that the prerogative may only be abolished or limited by clear legislative measures.

This seems to lead us at first into an apparently unreasonable line of reasoning. First of all, we acknowledge that statutes have more legal standing than prerogatives. Second, we recognize that later, impliedly incompatible laws may implicitly abrogate earlier statutes. Lastly, we acknowledge that later, impliedly incongruous legislation cannot imply the removal of prerogative powers. Clearly, the third argument is in opposition to the first and second. The Court of Appeal's ruling on the prerogative's status is difficult

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to square with traditional constitutional theory, which may lead us to believe that our constitution often contains exceptions to even the most obviously clear-cut laws if we dig deep enough.

Nonetheless, after more consideration, it is conceivable that North Umbria's acceptance of the coexistence of statutory and prerogative powers is now acceptable in light of GCHQ. Any manner the government chose to implement its chosen policies would be subject to the same level of court scrutiny since the essence of the Crown's prerogative authority to maintain the peace and the powers granted to the Home Secretary under the Police Act 1964 are the same. So, from the standpoint of the rule of law, there is no longer any functionalist argument for supposing the grant of legislative powers implicitly suspends equivalent prerogative authority.

C. Foreign policy

On the application of the justiciability principle, the courts have also provided further advice. Three examples need consideration; the first two ostensibly come under the exclusive heading of "foreign policy," which Lord Roskill mentioned in GCHQ; the third relates to the granting of pardons for criminal acts, which would likewise seem to be a non-justiciable authority according to GCHQ. The Accord provided a meeting place for an Inter-Governmental Conference to attempt to create solutions to the issues plaguing Northern Ireland. Some Protestant politicians from Northern Ireland rejected the Agreement, including Molyneaux. On the basis that the Agreement established objectives that could only be accomplished via legislation, he requested judicial review of the Agreement. The Court rejected this argument out of hand because it was so hypothetical. The Agreement was a treaty with a foreign state; it was obvious that the government had the authority to negotiate treaties; it was also obvious that the use of that authority was not subject to legal review.

In R v. Secretary of State for Foreign and Commonwealth Affairs, ex p. Everett, the Court came at a different judgment.

Mr. Everett was an accused felon who had relocated to Spain, a nation with which Britain did not at the time have an extradition arrangement covering Mr. Everett's claimed offense. Mr. Everett's passport was not renewed by the Foreign Office when it ran out of validity. When a person was the target of an arrest warrant, the government maintained a policy of not renewing passports. Passport issue is not governed by statute, hence it has always been a prerogative of the government. Because of the Foreign Office's denial, Mr. Everett was unable to depart from Spain. The Foreign Office did give him a one-way ticket back to Britain, but Mr. Everett chose to decline it since he would have been detained upon arrival.

Thereafter, Mr. Everett requested a review of the Foreign Office's judgment. The government's main justification was that the issue of passports fell within Lord Roskill's "excluded categories" since it involved foreign affairs. This argument was dismissed by the Court of Appeal. According to O'Connor L. J., passport issuance falls under a completely other category. In the case of the exercise of the prerogative, it would seem plain to me that the court should have the right to investigate if a passport is wrongfully rejected for a poor cause.

A precise legal instrument is not "common sense." The logic of Taylor L J is more beneficial. He suggested that only 'high policy' topics were exempt from the rule against justiciability in matters of international affairs. He did not specify this specifically, but it seems that he meant issues that directly harmed foreign relations or national security in Britain. Passport issuance was only an administrative choice and not a subject of high policy. It should thus be submitted to a thorough evaluation.

D. Categories not included a decreasing list

Mercy was a significant prerogative on Lord Roskill's list of GCHQ's non-justiciable prerogative powers. Nevertheless, the court expanded its power of review to include this portion of the prerogative only 10 years later in R v. Secretary of State for the Home Department, ex p Bentley. Derek Bentley, a nineteen-year-old boy with an extremely low IQ, was found guilty of murder in 1952 and executed by hanging the following year. The real killer, a sixteen-year-old who was too young to be put to death, had Bentley as an accomplice. The jury had recommended against Bentley being put to death, but the trial judge still gave Bentley the death penalty. Bentley was not shown clemency by the then-Home Secretary.

Iris Bentley, the accused's sister, had campaigned for forty years to prove either that her brother was innocent or, at the least, that he shouldn't have been given the death penalty. The Bentley case was the culmination of that effort. Iris Bentley, who had by the early 1990s persuaded many people that her brother had been unfairly handled, requested her brother's posthumous pardon from the Home Secretary in 1992. The Home Secretary steadfastly refused. Mr. Clarke said that while he personally thought Bentley should not have been executed, he was unable to pardon him because he had not been shown any proof that Bentley was not responsible for the crime.

Iris Bentley argued before the High Court that the Home Secretary had erred in law by failing to recognize that "a pardon" might take numerous forms and not all of them required a presumption of innocence. The Court based its analysis on a seemingly logical extension of the GCHQ principle that: "the powers of the court cannot be ousted merely by invoking the word "prerogative"". The Court rejected the Home Secretary's assertion that this particular prerogative power was per se unreviewable, concluding that Lord Roskill's apparent assertion to that effect in GCHQ was simply obiter. The question before the Court in Bentley was not how the Home Secretary should have balanced the various moral and political considerations involved in deciding whether a pardon should be granted in this case, which is essentially a non-justiciable issue. Rather, the

question before the Court in Bentley was whether the Home Secretary should be required to make a new decision when his initial response was based on a fundamental misunderstanding of the scope of his authority. In these situations, the Court did not see any constitutional impediment to thorough scrutiny.

The Court therefore refused to utilize its presumed authority to find Mr. Clarke's judgment to be illegal. The Home Secretary was instead "asked" by Watkins LJ to reconsider the issue and "conceive any formula which would amount to a clear acknowledgment that an injustice was done." In these circumstances, it is possible that the distinction between a "invitation" and a "order" is merely semantic. The Court's ruling had the practical effect of bringing a previously legally unregulated aspect of the government process into line with a recognizable Diceyan conception of the rule of law.

III. CONCLUSION

But would it be against parliamentary sovereignty for the courts to alter common law in order to treat reviewing a prerogative in the same manner as reviewing a statutory action? Any such change to the common law that went against a statute's express provisions would be obviously invalid. But, even in the absence of a legislation that openly contradicts itself, it is possible to dispute whether such a legal change is constitutional. One may argue that Parliament had two options if it wasn't happy with the courts' customary unwillingness to fully evaluate prerogative powers. Alternatively it could enact a law declaring that all prerogative powers moving forward would be subject to the same judicial examination as statutory powers. Alternatively, in a less extreme manner, it may legislate some prerogative powers, making them subject to full Wednesbury scrutiny. It would appear reasonable to presume that Parliament approved of the current restricted review position if the legislature did none of these actions. Hence, if the courts altered common law, they may be 'usurping the legislative role' in practice, if not in principle. Nonetheless, the notion that the courts should reject the conventional view that all prerogative activities are outside judicial control was being put forward in the early 1980s. If the courts could declare that certain executive actions performed in accordance with statutes were illegal, then it stands to reason that the same justification might be made for the less partisan uses of prerogative authority. Prerogative use may have just as severe an effect on people as statutory action. There was no logical or practical reason to discriminate between the two governmental power sources. So, the stage was prepared for the courts to challenge the conventional constitutional doctrine. The case Council of Civil Service Unions v. Minister for the Civil Service gave rise to the opportunity to do so

REFERENCES

[1] M. V. Konovalchuk, “Justice In Criminal Law: Material Or Ideal Category?,” Juridical J. Samara Univ., 2020, doi: 10.18287/2542-047x-2020-6-4-43-46.
[2] P. A. Gusenova and N. G. Stoyko, “The comparative historical and comparative legal characteristics of the Islamic criminal procedure,” Issues Theol., 2020, doi: 10.21638/spbu28.2020.402.
[3] K. Letjon, “Active or Passive: The National Judges’ Expression of Opinions in the Preliminary Reference Procedure,” Eur. Pap. - A J. Law Integr., 2020, doi: 10.15166/2499-8249/416.
[4] Beurau of Democracy Human Rights and Labor, “2020 Country Reports on Human Rights Practices: Philippines,” United States Department of State. 2020.
[5] P. T. Arkuszewski, E. Meissner, M. Zielińska, and M. Domżalski, “Medical immobilization as impairment of bodily organ functions within the meaning of the Polish Penal Code – consultative problems and a proposal for a method of judicial and medical evaluation,” Arch. Forensic Med. Criminol., 2018, doi: 10.5114/amsik.2018.77924.
[6] F. Kerche, “Ministério Público, Lava Jato E Mãos Limpas: Uma Abordagem Institucional,” Lua Nov. Rev. Cult. e Política, 2018, doi: 10.1590/0102-255286/105.
[7] F. Kerche, “Brazilian prosecutor’s office, Car Wash and Clean Hands: An institutional approach,” Lua Nov., 2018, doi: 10.1590/0102-255286/105.
[8] E. A. Delgado-Veliz, “Gestión de calidad de servicio en instituciones del poder judicial ecuatoriano,” Rev. Científica FIPCAEC (Fomento la Investig. y publicación en Ciencias Adm. Económicas y Contab. ISSN 2588-090X . Polo Capacit. Investig. y Publicación, 2018, doi: 10.23857/fipcaec.v3i9.53.

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‘Justifiability’ Revisited—are all Statutory Powers Subject

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Abstract— A statutory body or authority is a non-constitutional organization that a parliament has established. Legislative bodies have the power to make decisions and adopt laws on a state or national level. A statutory body has the authority to authorize legislation, or the process of enacting laws. In this chapter author is discusses the house of common. The concept of "justiciability" refers to the extent to which a particular matter or issue can be subject to judicial review and adjudication. This principle is an important part of many legal systems, and is designed to ensure that the power of the state is subject to the rule of law and democratic principles.

Index Terms— House of Lords, Judge, Prohibited, Statutory, Security.

I. INTRODUCTION

The idea of justiciability has pros and cons. It would seem reasonable to conclude that there are certain legislative powers whose character renders them unfit for review if, in the wake of GCHQ, the courts are now more concerned with the nature of a government authority than its source. So, once again, we are compelled to understand constitutional principle in a functionalist rather than a formalist manner. An example of the use of this idea is Chandler v. DPP79. Anybody entering a restricted area "for any reason injurious to the safety... of the state" was outlawed under Section 1 of the Official Secrets Act of 1911. It goes without saying that this is a matter of national security, but it is handled by legislation rather than by prerogative. Chandler approached a military airport, an area that was off limits, as part of a political campaign against nuclear weapons, and attempted to ground aircraft by sitting on the runway. He was then charged with violating Section 1.

In order to defend himself, he claimed that his publicity campaigns for disarmament had really improved national security. The House of Lords, however, chose not to participate in this debate. The court determined that it was not justiciable to debate the issue of assessing risks to national security. Only the government of the time had the authority to assess the seriousness of any alleged danger to national security [1],[2]. This wasn't exactly a legal retreat to the Ship Money incident. Technically speaking, the Court seemed to follow the Zamora case's precedent by requesting proof that the protesters' actions had jeopardized national security. The Court was satisfied with an affidavit from an Air Commodore stating that the air strip was an essential defense installation and that any intrusion into it was "prejudicial to the safety of the state," which did not seem to be a very demanding requirement [3],[4].

This outcome is definitely comparable to that attained in GCHQ twenty years later. The burden of evidence rests with the government to show that its actions were, in fact, motivated by concerns for national security. But, in reality, this need is only a formality that may be satisfied with the flimsiest of proof. So, one must be careful not to fall into the trap of believing that just codifying prerogative powers would submit them to the full force of judicial examination. Whether invoked by a legislation or through the prerogative, national security seems to always be a non-justiciable matter [5],[6].

There may come a day when there doesn't appear to be any basis for asserting that there are concerns of national security. One might imagine, for instance, how the Court of Appeal would have reacted in the case of Laker Airways to a DoT assertion that it had the authority to issue "directions" under Section 4—a power that only applied to matters of national security or international relations—because the Minister had reason to believe that Laker's service had negative implications for national security. Unfortunately, this hypothesis has not yet been tested [7],[8].

The Labour government's 2007 suggestions that some prerogative powers, specifically the authority to sign treaties and to deploy military forces, might be put on a statutory basis or subject to statutory restrictions that would require the government to obtain the express approval of the House of Commons before using such powers, should also not be given much weight in light of the post-GCHQ focus on the nature rather than source of governmental power.

Early in 2008, a draft "Constitutional Renewal" paper with such recommendations was released.

The 2002 ruling in R v. Secretary of State for Foreign and Commonwealth Affairs by the Court of Appeal indicated the boundaries of the courts' readiness to broaden the concept of justiciability. British citizen Abbasi was detained in the Guantanamo Bay detention camp on suspicion of being a Taliban combatant by the US government. In an effort to prove that the Foreign Secretary was required to exercise his power of foreign policy to pressure the US government to treat Mr. Abassi more favorably, his mother filed a judicial review petition on his behalf. The Court of Appeal found

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limited room for intervention since the Secretary of State had complete discretion over whether to make any comments in a given matter and, if so, how. Foreign policy factors, which are not justiciable, must be given due weight by the Secretary of State.

The case surrounding the Chagos Islands between 2000 and 2009 dramatically illustrated both the extent of judicial authority to restrict the prerogative and the extent of judicial hesitancy to exercise that power. A tiny group of islands in the Indian Ocean known as the Chagos Islands were nominally a part of Mauritius, a British colony at the time, until the middle of the 1960s. Some 1500 people lived on the islands, many of whose families had done so for many generations. They earned a very meager livelihood via farming. The US administration made the decision to develop a sizable military installation on Diego Garcia, the biggest of the islands, in the middle of the 1960s. To address this, the British government issued an Order in Council84 that created the British Indian Ocean Territory, a distinct colony made up of the islands. The Order appointed a "Commissioner" to oversee the islands and gave her the authority to enact laws to ensure their "peace, order, and good administration." The Commissioner—who was really the Foreign Secretary—then supposedly acting under the authority of Section 11 issued an immigration order that called for the forceful removal of all the residents and their resettlement to Mauritius. After that, a lease was given to the Americans so they could construct their base on Diego Garcia.

The evicted islanders finally succeeded in getting some recompense for their departure after years of struggle. Nonetheless, some of them want to have a right to go back to their own country. In R v. Secretary of State for Foreign and Commonwealth Affairs85, the claimant raised a number of arguments against the legitimacy of the government's activities. The Supreme Court's decision exposed the government's87 history of deceit and casual bigotry against islanders in the 1960s. More crucially, the Court decided that the immigration order was illegal per se since it was not possible for a legislation to be created for the "peace, order, and good governance" of a region that would deprive the area in question of any potential subjects for rule.

In response to the verdict, the government agreed that its forebears had treated the islanders in an unconscionable manner and pledged to let their repatriation in 2000. Yet, the pledge was not kept. The government's apparent change of heart was driven by political pressure from the then-American administration, which did not want any native population close to its military post. The claimed justification for this was that it would not be economically possible for the inhabitants to return.

An Order in Council that the government issued in 2004 that was intended to establish a new "constitution" for the islands was an attempt by the administration to put this strategy into practice. No one would have the right to reside in the colony other than in accordance with the restrictions set out by the government, according to Section 9 of the Order. The islanders themselves would not be allowed to return, according to an Immigration Ordinance that was later issued.

Mr. Bancoult's later attempts to prove that Section 9 of the Order in Council was invalid were successful in the High Court and the Court of Appeal89, mostly on the grounds that the Crown lacked a common law right to completely depopulate a specific colony. Only Parliament, as the sovereign legislator, could accomplish such a radical political goal.

In the House of Lords, Lord Mance91 and Lord Bingham90 both agreed with that justification. Unfortunately for Mr. Bancoult, the majority had a different opinion. The best way to put the argument was by Lord Rodger: So long as Her Majesty's constituent power can be accurately defined as the ability to enact "laws for the peace, order, and good governance of the territory," it is equivalent to the legislative authority of Parliament in terms of its reach. It is not permissible for the courts to rule that legislation passed using a power defined in such words does not really contribute to the territory's peace, order, and good governance. Moreover, as there was no natural disaster or serious military emergency, the judges could not replace the Secretary of State's advice to Her Majesty with their own judgment. This is because no such situation arose. The Queen may have passed legislation to the effect of 9 in Parliament, but only after a democratic vote and public discussion in that body. ’

People who live in a territory and have ties to a parent state make up a colony in the first place. The "constituent" authority of the Crown to establish a constitution for a surrendered area is a power created to facilitate the appropriate administration of the territory, at least in part for the benefit of the inhabitants. A constitution that banishes the people of a region is incoherent. The fact that the royal prerogative has never been used to expel colony residents from their homes is noteworthy, though in my opinion quite expected. No one could have imagined using its practice for such a purpose before to the current instance.

About what can be expressed in a way that will contribute to the BIOT's peace, order, and good governance? This is due to the fact that such issues are not justifiable. These are up to the competent ministers, not the courts, to decide; the law cannot settle them. The laws passed for the colonies are equivalent to the laws passed by Parliament for this nation in this regard. In both situations, the penalty for improper use of the legislative authority is a political one rather than a judicial one. This conclusion might be seen as being quite troublesome. In terms of legal doctrine, it effectively equalizes the government and Parliament, implying that there are two sovereign law-makers in reality. More practically, the majority's argument implies that the citizen should convince Parliament to stop the government from denying her of even the most fundamental right—the ability to reside in her country—rather than the government should convince Parliament to consent to doing so. We may speculate that it is

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an instance of the courts holding the government to the political rule of law as opposed to the rule of law.

Yet, Lord Rodger's stance reminds us that using the courts is not the only way to control how the government exercises its statutory or prerogative powers. We must evaluate political means of control in addition to the legal process of judicial review; these approaches are mentioned in Blackstone's Commentaries and Cockburn CJ's decision in Allen. Political controls on governmental behavior may take many different forms, as the sentences that follow illustrate, both in terms of how such authority is utilized and in terms of establishing procedures for accountability in regards to the use of such power "improperly." Two of those forms—the House of Commons and the House of Lords—are taken into consideration in ss.

II. DISCUSSION

A. The house of common

This does not provide a complete overview of the House of Commons' historical evolution and current function. 1 Instead, it provides a sketch of the relationship between the executive and the legislative branches in order to create justifications for the con- temporal constitution's concepts of parliamentary sovereignty and the division of powers.

The initial purpose of the Crown and Commons and the later emergence of "party" politics

It is hard to say with absolute certainty when a body that might be considered the forerunner of the Commons initially appeared in mediaeval England due to the few historical documents of the period. In order to help find answers to political problems, various national conferences that included both "commoners" and aristocracy gathered under the King's authority by the year 1270. 3 By 1300, the Commons, Lords, and King were united as the three "Estates of the Realm." The King personally summoned members of the Lords; members of the Commons were chosen from each county and borough. 4 We won't go into great detail about the Commons' early history. Yet, if we take 1688 as the founding year of the modern constitution, it is useful to concentrate briefly on then-dominant views of the Commons' proper constitutional duties and, in connection with that, the moral foundation of its power within the legislative and political processes.

At first, the Commons served in two different legislative capacities. The first was to protect the interests of non-aristocratic elite groups in society against potential invasions of the Lords and/or the Crown, which was inherent in its standing as one Estate of the Realm. 5 As a result, it offered a shaky foundation for representative governance. The term "the people," from whom the Commons was formed until 1832, had a very specific definition, as is stated in section seven.

Nonetheless, it was then a recognized tenet of constitutional morality that legitimate governance required the permission of "the people" rather than just their obedience. Local interest representation in the federal legislature was the Commons' second legislative duty. The Commons was as much an amalgamation of locales as it was a "national" forum. Members were "elected" on a geo-geographic basis as representatives of specific regions called as "constituencies" and were expected to function as champions for those regions.

B. The MP: a delegate or a representative

The 'national' component of the Commons' job was starting to take center stage by 1688. It should be the happiness and glory of a representative to live in the strictest union, the closest correspondence, and the most unreserved communication with his constituents, according to later accepted perceptions of the relationship that exists between an MP and his electors, a perception famously articulated by Edmund Burke in his 1774 Address to the Electors of Bristol. In all circumstances, he must put their needs ahead of his own and sacrifice his own comfort, enjoyment, and satisfaction. Yet he shouldn't sacrifice his impartial perspective, his mature judgment, or his enlightened conscience to any group of live men. Your representative owes you not only his expertise in the field, but also his judgment; if he cedes it to your viewpoint, he betrays you rather than acting in your best interests.

C. Madison's view of representative government echoes Burke's concept

Lawmakers weren't only their electors' delegates, either. In accordance with Burke's justification, Madison's words would make perfect sense; as representatives, MPs' legislative duties would be to "refine and enlarge the public view," "discern the true interest of their country," and "resist pressure from their electors to sacrifice that interest to temporary or partial considerations." Voters may later choose a new MP if they believe their representative gave in to such influences or, alternatively, if they believe their representative supported "temporary and partial factors" that they did not. Yet up until now, Parliament has never passed legislation allowing dissatisfied voters to oust a member of parliament (MP) who disobeyed their orders.

Burke paints an idealized view of the Commons as a place where MPs with independent minds may debate every issue without being constrained by party or local loyalties and do it in an informed and impartial way. Under such cases, it is reasonable to infer that the judgments made by the house would really be in the "national interest." Whatever the case, it is clear that the realities of political life in the Parliaments that met from 1750 forward included the seeds of a countervailing tendency that by 1900 had become a rigorous orthodoxy. Whether such a governing paradise actually existed inside the British constitution is debatable. The Burkean position is still valid in formal, legal terms today. MPs are not required by law to arrange their voting behavior or conduct themselves in the Commons in accordance with the preferences of others. But, in reality, a modern MP might credibly be described as a delegate—not of her constituency,

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but rather of her party.

The blending of powers, the development of the party system, and the supremacy of the cabinet in the Commons. The notion of an "independent" MP is in line with idealized conceptions of the separation of powers, in which the legislative and executive branches were completely independent of one another. However under the English constitution, a true division of powers has always been a fantasy. An excessive division of powers was not impacted by the 1688 constitutional arrangement. The Monarch was a member of the legislature as well as the formal and functional center of the executive branch at the time. Several of his or her ministers and advisors were also Lords members since having a ministerial position did not prevent actively participating in either parliament. The Privy Council, a group of up to 50 members, many of whom were members of the Lords or Commons, served as the Monarch's advisory body. At the beginning of the post-revolutionary period, two of the three branches of government were "fused" rather than divided.

Nonetheless, it would be oversimplified to believe that a personnel overlap necessarily prevented a real separation of powers between the administration and the Commons in the early post-revolutionary era. Although if the Monarch's legal authority was now subordinate to that of Parliament, it is obvious that many Commons members would view him or her with distrust given the political turmoil of the seventeenth century.

Contemporary constitutional understandings underwent a significant reinterpretation as a result of the parliamentary sovereignty doctrine's birth. Nonetheless, as was said when talking about the royal prerogative, certain pre-revolutionary ideas remained to influence how judges saw the interactions between the two other departments of government. Such continuations had both a political and a legal component.

When Charles II elected to deliberate government policy with a so-called "Cabal" of just five Ministers in 1671—effectively marginalizing the Privy Council—he created the first clearly modern "Cabinet" inside the executive. Charles' plan was heavily criticized since the Cabal was seen as a partisan vehicle rather than a source of varied and impartial advice like the broader Privy Council. Nonetheless, the more centralized "Cabinet" rather than the Privy Council constituted the heart of the executive in the immediately post-revolutionary period, despite the revolution's apparent mistrust of factional leadership. The Monarch's relationship with his or her Ministers inside the core also started to change in character. George I and George II showed little interest in politics. By 1740, the holder of the newly created position of "Prime Minister" had effective power over the Cabinet. While Sir Robert Walpole is often cited as having held the office initially, the title did not become widely used until 1800 since his position lacked a legal foundation. 10 George III had strong supervision over government affairs, but he had little success in stopping the government's trend toward primacy because of his recurrent spells of insanity.

The decline of the monarchies in the eighteenth century and/or their incapacity to govern "their" Cabinets occurred at the same time as a sophisticated system of party political organization. Outside of the Commons, technological advancements aided in the establishment of the federal political party. For the first time, like-minded folks from throughout the nation could continually prepare and act in concert on political matters because to improved transportation infrastructure and less expensive printing.

The idea that there is "a government" and "an opposition" in the two chambers is also linked to Walpole, who from 1717 headed a group of MPs who for the first time regarded their purpose as being to "oppose" the government. But, it wasn't until the 1820s that the term "The Opposition" became widely used. By that time, the prominent members of the party with a majority in the lower house often made up the Cabinet, which was composed virtually entirely of Commons and/or Lords members.

As sections six and seven imply, by the 1830s, the Commons had effectively taken over as Parliament's preeminent chamber. At this point, the Cabinet and the Prime Minister had a significant amount of power over the Commons, which was starting to be ruled by a majority party following a logical set of policy goals. The Commons are seen by many contemporary observers as nothing more than a chamber where the Labour and Conservative Parties alternately form the government and the opposition. The physical configuration of the Commons' main chamber lends it a lot of weight. Members of the government and opposition sit side by side on many rows of seats on the "floor of the house." On either side, the front benches are occupied by government ministers and their opposition "shadows," with the remainder of their party's members seated behind them. It cannot be seriously argued that party divisions are now clearly defined in the lower chamber and continually vie for advantage. Clearly, the Commons' original function under the post-revolutionary constitution has nothing to do with the modern reality. Members have never been required by law to support their party in the house. Instead, party discipline in the Commons is enforced via the employment of whips and ministerial appointments. Parties are essentially volunteer organizations where sustaining cooperation among members is solely a domestic concern. The main parties in the Commons have created a somewhat complex control structure known as the "whipping system." Each party has a number of MPs that function as whips. They serve as the party's personnel managers, making sure that their MPs are placed to maximize the accomplishment of party goals.

'The weekly schedule of Commons business provided by each party is referred to as "the whip." This informs lawmakers of the importance that their party's leadership places on certain topics. One, two, and three line whips will be used to designate specific items of business; the larger the

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number, the more significant it is assumed that MPs would engage in and vote on the matter at hand. Not all household affairs are handled in this manner. A party's leadership may provide a "free vote" on matters on which it has no specific position, allowing its MPs to take whatever action they see fit.

The function of party whips is sometimes depicted as being solely coercive, requiring them to threaten or cajole MPs into supporting party policies. They typically play that function, but they also work as a conduit for information to flow between the front and back benches, and they may focus more on persuading the Cabinet that its plans won't win enough support from the back bench than on getting backbenchers to endorse party preferences. Party whips are also in charge of overseeing "pairing" agreements, which are agreements between two MPs from rival parties to abstain from voting on certain dates so that they may engage in other activities. Pairing is not a notion that can be enforced by the law, like other parts of Commons proceedings, hence pairings have sometimes been broken in tight votes.

The whip may be taken away from MPs who persistently disregard party rules. His may have negative long-term effects. Losing the party whip has no effect on an MP's appearance in the Commons since she is constitutionally the representative of her constituency, not her party. Yet as we will see in number seven, a candidate's party affiliation is now the main factor in whether they are elected to the Commons. A member's chances of keeping her seat are slim if she is not chosen by her party to run as their candidate in the next general election.

Granting governmental or shadow office may be seen as the carrot if the whipping system is in some ways the punishment used by parties to discipline their MPs. The Queen has the formal authority to appoint persons to ministerial positions via her prerogative rights. Technically, the administration is known as "Her Majesty's Government." In actuality, the Prime Minister is in charge of the appointment, promotion, transfer, demotion, and removal of Ministries. An MP's ascent up what is derisively referred to as "the greasy pole" depends on a variety of variables related to both the characteristics of the individual and the broader political environment. Yet, Parliamentarians who consistently go against party policy are unlikely to become ministers or shadow ministers, much less advance within them. Not every MP aspires to be a minister; some will have left the administration and come back to the opposition benches. The appeal of office has little effect on these members' commitment to their party. But, for the careerist MP, the chance of advancement is a strong motivator for fitting her personal political style to the guidelines established by the party leadership.

While there is no official hierarchy inside the Cabinet, there is an informal one. Typically, cabinet members serve as the department's "Secretaries of State." The Home Secretary, Foreign Secretary, and Chancellor of the Exchequer are the three most crucial positions. The number of Ministers who may serve in the Cabinet is not set in stone. From less than a dozen in the 1870s to as many as two dozen now, the number has increased during the previous 150 years. While it is increasingly unheard of for a Minister to not be a Member of Parliament, there is no legislative necessity that Cabinet Ministers be members of either chamber.

'Ministers of State,' of whom many are appointed for each department, are often not members of the Cabinet and are at the bottom of the ministerial food chain. Even yet, they may have significant executive authority, and if their specific Secretary of State is a Lord, they will be in charge of speaking on behalf of their department in the Commons. Lower-level ministers are referred to as "Parliamentary under Secretaries." Parliamentary Private Secretaries, sometimes known as ministerial "bag bearers," are at the bottom of the ministerial food chain.

More than 95 ministers cannot now be chosen by the government according to the House of Commons Disqualification Act of 1975. Periodically more people were added over the 20th century. This may be partly ascribed to the post-war era's increasing adoption of conceptions of the state that provide the go-ahead; given that governments in the twenty first century have taken on more duties than their predecessors, it is not surprise that they need more Ministers. The growth might, however, also be attributed to succeeding administrations' desire to exert greater control over party members. 17 The presence of roughly 100 members in the government indicates a considerable fusion of the executive and legislative branches, since just 340 MPs are required for a party to have a comfortable majority in the Commons. By evaluating the Commons' duties as a contributor to the legislative process and as a vehicle to scrutinize government behavior, sections two and three below examine whether this merger might legitimately be depicted as an executive takeover of the lower chamber.

III. CONCLUSION

It is clear that courts today carefully monitor how the government uses its prerogative powers compared to before the American Revolution. Nevertheless, it is evident that since the Lain decision in 1967, the theoretical scope of the courts' review authority has grown somewhat. We might thus draw the conclusion that administrative law now seems to respect legislative and prerogative powers equally. Choosing whether the definition of non-justiciability is too broad is the harder decision to make. Do the courts let too much government activity to be carried out without judicial oversight? Judges have a lot of authority because the courts have control over the common law idea of judicial review. The courts may tighten the limits on the power of the government to act in ways that seem contradictory with conventional notions of the rule of law by expanding the scope of justiciability. The understanding of the judicial role clearly falls under the "red light" category, which is a desired

outcome if one has suspicions about the government and worries that its powers could be misused. On the other hand, if one supports a "green light" judicial role and thinks it is crucial for the government to have great latitude to pursue policies that it believes advance the public interest, one might prefer that the courts rule that more categories of governmental action are not subject to legal challenge. There is presently no clear indication of when, if ever, the common law's ability to extend review to already unjustifiable questions will be applied.

REFERENCES

[1] G. Barn, "Can Medical Interventions Serve as 'Criminal Rehabilitation'?," Neuroethics, 2019, doi: 10.1007/s12152-016-9264-9.
[2] H. Han, "The VIA inventory of strengths, positive youth development, and moral education," J. Posit. Psychol., 2019, doi: 10.1080/17439760.2018.1528378.
[3] X. Li and C. K. Hsee, "Beyond preference reversal: Distinguishing justifiability from evaluability in joint versus single evaluations," Organ. Behav. Hum. Decis. Process., 2019, doi: 10.1016/j.obhdp.2019.04.007.
[4] K. Matheson, N. Branscombe, Y. Klar, and H. Anisman, "Observer perceptions of the justifiability of the actions of nations in conflict: The relative importance of conveying national vulnerability versus strength," PLoS One, 2019, doi: 10.1371/journal.pone.0220303.
[5] R. L. Walker, "Virtue Ethics and Laboratory Animal Research," ILAR J., 2019, doi: 10.1093/ilar/ilaa015.
[6] R. Dehghan Simakani, "Ethical challenges of kidney sale: A review of three major assumptions based on the theories of Ṭabāṭabā'ī," J. Forensic Leg. Med., 2019, doi: 10.1016/j.jflm.2018.10.009.
[7] J. A. Kamińska, "A random forest partition model for predicting NO2 concentrations from traffic flow and meteorological conditions," Sci. Total Environ., 2019, doi: 10.1016/j.scitotenv.2018.09.196.
[8] C. C. Tisdell, "An accessible, justifiable and transferable pedagogical approach for the differential equations of simple harmonic motion," International Journal of Mathematical Education in Science and Technology. 2019. doi: 10.1080/0020739X.2018.1516826.

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Function of Speaker in Constitution

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***Abstract*— In accordance with the regulations, they also allow the moving of a variety of motions and resolutions, including motions of no confidence, adjournment, censure, and calling attention notice. The agenda that will be covered at the meeting is chosen by the Speaker. In this chapter author is discusses the passage of legislation. The speaker of a legislative assembly plays an important role in the functioning of a democratic system of government. In many countries, the speaker is a constitutional office holder who is responsible for presiding over the proceedings of the legislature and ensuring that the rules of the house are followed.**

***Index Terms*— Constitution, Committee, Procedural, Rule, Speaker.**

I. INTRODUCTION

This focuses on three aspects of the constitutional character of the Commons. The first covers the origins of its procedural norms, the second the function of "the Speaker," and the third the resources MPs have at their disposal to do their tasks [1],[2].

A. The origins of the procedural laws of the Commons

There is hardly much law governing Commons procedures that has been approved by Parliament. Nevertheless, the common law has not been significantly used by judges to intervene in this matter. These inquiries have mostly been directed at the home itself. Its present norms are mostly derived from three sources: "old usage," numerous "Standing Orders" adopted by the house, and Speakers' decisions. The house may alter any of its rules by a simple majority vote if there is no law governing the relevant subject. Seldom are significant changes made with such force. Generally speaking, MPs have a strong moral conviction that the rules of the house should be based on reciprocal consent. Substantial changes are often implemented on the Commons Procedure Committee's advice [3],[4].

Erskine May's Treatise on the Law, Privileges, Procedures, and Usage of Parliament is the best guide of Commons procedure. Therefore, it would be false to refer to such instructions or even the processes themselves as "laws." The phenomena known as "the usual channels"—the many informal agreements struck between the government and opposition parties as to how the Commons' time should be allocated—is the most significant aspect of the house's working procedures. The Leader of the House, the government chief whip, and their opposition equivalents are tasked for overseeing the regular channels [5],[6].

The house's procedural rules can be seen as presumptions to which members voluntarily consent, in part because they believe the rules to be inherently correct, in part because they believe the wishes of a majority of members should be respected, and in part because they hope that if they ever become a majority in the Commons, the minority will cooperate in a similar manner. But, the assumptions are not unchallengeable [7],[8].

The prevailing assumption is that throughout each legislative session, business of the government takes precedence. A standing order that now gives effect to this assumption does not really grant the government the capacity to control the proceedings of the house; rather, it just reflects that ability. The willingness of the Commons' members to uphold traditional procedures and, should that respect lapse, the government's ability to garner majority support for its preferences, serve as crucial indicators of how the Commons conducts business [9].

The Commons typically meets for 150 to 200 days every session, which lasts for 11 months and normally starts in the fall. Each starts with "The Queen's Address," in which the monarch outlines the intended legislative agenda of the administration. How exactly time will be split between the Commons' many functions is not subject to any strict rules. In recent years, the government has used 30%–35% of the time spent on the house floor for bills; 15%–17% for motions and ministerial statements on topics of the government's choosing; 7%–8% for opposition motions; 8%–10% for bills and motions from backbenchers; and similar amounts have been used for questions to ministers and passing delegated legislation.

There is a lot of room for inter-party dispute over the appropriateness of government attempts to control the operation of the house. A different adjudicator must settle conflicts since the Commons' procedural norms are not legal occurrences and are thus not subject to judicial control. The Speaker is responsible for a variety of tasks.

B. The Presenter

The Speaker, a position that has existed since 1376, is very important. She is responsible for interpreting and applying the different traditions and rules that structure the house's business. When disagreements over how parliamentary business should be conducted arise, such as when the customary channels fail to result in agreement or backbenchers believe the government and opposition front benches are not giving enough attention to their concerns, her role can be characterized as that of a judge to some extent.

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Her scope of authority is broad and varied. It covers a wide range of topics, including selecting which amendments will be discussed during the report and third reading phases of a bill's passage, determining which members may speak, and penalizing members whose conduct violates acceptable norms.

Prior to 1688, the Speaker often served as the Crown's principal representative. The Speaker did not start to stand up for the Commons' interests in opposition to those of the government until 1750.

Members of the house elect the Speaker. The position is currently recognized as a non-party political one. After being elected, the Speaker leaves her political party. She still represents her constituency as a member of parliament, nevertheless. Moreover, she is required to run as "the Speaker" in future elections to the Commons. Except in cases of ties, she abstains from voting in the house and must instead vote to maintain the status quo. Speakers have often come from the dominant party in the contemporary period. Betty Boothroyd, a current incumbent, was a Labour MP before taking office in 1992, despite the fact that the Commons at the time had a Conservative majority. Without the support of numerous Tory members, Ms. Boothroyd would not have been able to win the election. This shows how highly the Speaker is now regarded in both formal and practical terms as being beyond party politics. 24 Nevertheless, the majority of the Labour Party, which was in charge of the Commons following the 1997 general election, rejected Sir George Young, a prominent Tory candidate and former Cabinet minister, in favor of Michael Martin, a somewhat unnoticed Labour backbencher. When Conservative MP John Bercow was chosen Speaker of the House by a parliament with a sizable Labour majority in June 2009, the spirit of cooperation between the parties was once again present. 25

To say that the Speaker is using coercive authority would be wrong. Members freely adhere to her authority even when it would seem like their immediate party political goals would be better served by defying her, which is how a Speaker successfully controls the chamber. As a result, the Speaker plays an essential role in highlighting the fact that the Commons should serve as more than just a platform for the fanatical pursuit of momentary factional benefit.

C. Resources

Compared to their legislative counterparts in other contemporary democracies, MPs are underfunded. Members of Congress in the USA have large administrative and research staffs at their disposal. The idea of informed consent to government serves as the foundation for such broad provisions. If legislators are unable to acquire professional analysis of pertinent data, they will be unable to properly contribute to the legislative process or objectively assess the merits of government behavior.

Nonetheless, the Commons only provided 350 offices to its 650 members in the middle of the 1980s. As a result, several MPs were had to share offices. Many offices were quite tiny, and very few could fit the MP as well as secretarial and research staff. MPs do not have a lot of support personnel at their disposal. Members now get an allocation for these purposes of around £100,000 annually, which is inadequate to pay for a sizable administrative and research staff. The Commons features what seems to be a sizable library. Over 150 people work at the library, many of whom are completely devoted to answering MPs' questions. In contrast to the US Library of Congress, The Commons library is a small operation. Less than 700 people worked for the Commons in the 1990s to support its 650 MPs; by comparison, the US Congress, which had a few more members, employed around 20,000 people.

It is impossible to believe that successive administrations' reluctance to provide MPs with more significant logistical assistance is due to cost concerns; after all, facilities comparable to those in the USA would only increase public spending by a very little amount. A government would incur a "cost" for enough resources, but the cost would be political as opposed to financial. A sarcastic assessment of the present state of affairs is provided in a statement from The Economist:

Giving Parliaments access to their own source of expertise and counsel serves no purpose for the current administration. A majority of Parliament would need to endorse any significant rise in spending, which is unlikely to happen without government permission. By the middle of the 1990s, repeated complaints from the backbenches about the working conditions in the Commons had reportedly had some success; the government had agreed that enough funding should be made available to guarantee that each MP had at least her own office inside or close to the Palace of Westminster.

The pay for Parliamentarians is also not especially high. Currently, they are about £60,000 per year, which clearly prevents the member from funding the research and secretarial support she would deem necessary. 30 MPs have historically been allowed to deduct a variety of costs, including those related to travel and, for those who represent outside seats, London, up to £22,000 for upkeep expenses of a second residence in the London region. Notwithstanding this increase above the base pay, an MP's compensation may not be competitive with that of senior members of their professions. Until the early 20th century, Parliamentarians did not get any compensation. Members may be financially motivated to pursue ministerial post because of the current fairly low level of remuneration since such positions come with a sizable extra income. Nevertheless, being a backbencher MP need not be a "full-time job" since many backbencher MPs earn money from other occupations including journalism, law, corporate directorships, or "consultancies" for for-profit businesses.

The argument for providing Lawmakers with more extensive financial assistance was severely weakened by a little incident in 2008. The house has long had extraordinarily liberal standards regarding the payment of administrative and

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personal costs. In 2008, it came to light that Tory MP Derek Conway had claimed significant costs for the employment of his son, a research assistant, who was enrolled at a northern institution throughout the alleged time of work. Conway said he will resign as an MP in the next election amid claims that little work had been accomplished. Incredulity was sparked by reports that MPs do not even need to show receipts for claimed expenses, which significantly increased press and public interest in MPs' expenses as a result of the incident. When the then-Speaker, Michael Martin, filed a lawsuit to stop the publishing of information about how MPs had really spent their allowances, the house did nothing to improve its image. Such measure was later abandoned in the wake of severe press criticism.

As a result of the incident, Parliamentarians' usage of the public funds that supported their expense accounts came under heavy journalistic scrutiny. Numerous Politicians seemed to have filed claims for rather unsuitable products, although doing so honestly and out in the open. The costs for maintaining the moat at the country home of Conservative MP Douglas Hogg, the cost of an ornamental duck house for the home of Conservative MP Peter Viggers, and the cost of a pornographic television package for the then-Labour Home Secretary Jacqui Smith were among the more notable of these. More than a dozen MPs involved in the incident later came to the conclusion that their chances of being re-elected had been badly harmed, leading them to decide not to run in the general election of 2010.

Maybe more gravely, several Lawmakers made false assertions that went beyond the bounds of bad judgment. For falsely claiming £14,000, Labour MP Eric Ilsley received a four-month prison sentence; for a £20,000 fraud, David Chaytor received an eighteen-month sentence; and in April 2011, former Labour Minister Elliot Morley entered a guilty plea and was sentenced to 20 months in prison after admitting to the crime. The incident caused a complete redesign of the expenditures system, resulting in both limitations on what could be claimed for and how much could be claimed, as well as much improved openness on claims filed. The Parliamentary Standards Act 2009, which was championed by the Blair administration, was passed. The Independent Parliamentary Standards Authority was established under the Act with the mandate to oversee expenditure claims and, in the long run, to provide advice on MPs' wages and other compensation.

The fact that many MPs participate in compensated extra-parliamentary activities also has an impact on the Commons' customarily odd working schedule. Up until recently, the house's floor was rarely active until 2.30 p.m. and frequently didn't end until the wee hours of the morning. Thus, the mornings would be free for other pursuits. This is very practical for MPs who work as directors or consultants for business ventures or who practice law at the bar. In 1994, modest schedule reforms were made. A few morning sessions were added to the chamber's schedule, some Friday sessions were eliminated, and an earlier Thursday business end time was proposed. At the very least, the adjustment represented a modest first step toward a more extensive normalization of MPs' working hours. In 2002, additional actions were taken in this direction.

Some MPs do view their work in the Commons as a full-time job. They will attend to issues in their respective constituencies or take part in the work of the Commons' various committees when they are not in the chamber. However, it seems that these back- benchers are a minority. This may be due to the fact that some members now view Commons election as a means, rather than an end in and of itself, to other professional or financial goals. However, it may also be because realistic backbenchers doubt that their presence in the house will frequently have a significant impact, either on the content of legislation or the behavior of the government.

II. DISCUSSION

A. Financial support for the opposition

The opposition parties are now given some financial assistance to help them carry out their operations in addition to the salaries granted to the Leader of the Opposition, the opposition chief whip, and the shadow Leader of the House. After Edward Short, the Leader of the House in the Labour administration in power in 1975 when the program was implemented, this is known as "Short money." The money is a valuable supplement to the major opposition party's resources, but it is not enough to support considerable political activity. The Labour administration created a Committee of Investigation in the middle of the 1970s to investigate whether much more significant financial aid, on a statutory basis, could be given to all major political parties. Lord Houghton served as the committee's chairman. The Committee issued suggestions in this regard, which were disregarded by all succeeding administrations.

The information presented so far could imply that the government has a significant advantage in the power equation between itself and the Commons. Given the fusion of the Commons and the administration, this is not surprising: in that setting, the idea of a real division between the house and the executive is a false dichotomy. The following sections examine the dichotomy's present validity.

B. Adoption of laws

The majority of commentators today appear to concur that the current House of Commons seldom ever acts as a real legislative body. While some authors still cite "legislation" as one of the responsibilities of the House of Commons, Norton argues that the chamber has essentially not carried out this duty in the twentieth century.

C. The execution and conclusion

Any time throughout a Bill's passage, a government with a majority of votes may impose a "allocation of time order,"

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often known as the "guillotine." The guillotine predetermines exactly how much time will be allotted to discussing a bill's contents. No matter how much of a Bill remains undiscussed after that period of time, discussion concludes.

Orders for time allocation bring up delicate concerns. From a certain angle, they may be seen as placing political expediency ahead of the rule that new legislation must go through a thorough Commons review. Alternately, they may be seen as a valid way for the government to get beyond the obstructionism of the minority parties. Governments were very hesitant to use the guillotine before to 1980, perhaps out of concern for the negative publicity such a move may bring about. 48 Recent Conservative regimes, however, were less concerned about the constitutionality of doing so. 49 In 1994, feelings in the house over this subject were so heated that the Labour party withdrew from the established channels and vowed to impede government activity to the fullest extent feasible.

The closure is a less oppressive but more common time-management tool. According to the standing rules, any member may request that "the question now be presented" at any moment. The discussion on the matter is concluded and the house goes on to its next item of business if a majority of the sitting MPs support the motion. If the Speaker feels that the plan "abuses the rules of the House," she has the right to reject it. The use of this discretion is not subject to any legal restrictions. It appears doubtful that the Speaker would allow closure on a substantial subject before two or three hours of discussion had been held. Griffith and Ryle indicate that the Speaker would consider factors such how many members have previously spoken and its substantive relevance.

D. Following reading

Government Bill second reading discussions begin and end with remarks by the sponsoring Ministers, who are each followed by their opposition counterparts. The Speaker determines the sequence in which MPs are asked to speak during the main section of the discussion, although custom dictates that she alternately chooses lawmakers from the ruling and opposition parties. Demand for speaking during significant discussions is high. Since 1988, when a standing order was enacted that allowed the Speaker to restrict individual statements to a maximum of 10 minutes, this desire has been partially realized. 51 This makes it possible for the house to be exposed to a variety of opinions on the merits of the proposed policy by the administration.

It is rare that a single MP's speech, or even a succession of similar ones, would convince members to vote against their party's lines. It is quite deceptive to refer to the second reading stage as a "discussion." Seldom are proceedings marked by a cut-and-thrust of assault and rapid defense. Many members just read from prepared remarks that detail a certain aspect of party doctrine. This is not to imply that discussions at second reading are pointless, but rather that they have little direct influence on a bill's substance.

A member's speaking performance on the house floor has a big impact on how quickly she rises to the ranks of ministerial or shadow ministerial office. Backbenchers who put up strong performances will be recognized as potential ministers. On the other hand, ministers whose ability to command respect in a discussion will result in their political careers coming to an end or deteriorating.

Second readings are beneficial simply because they are seen by a larger audience. Press coverage of debates on significant legislation is extensive, and radio and television broadcasts often include extracts. Although such coverage does not inform voters of the specifics of the government's and opposition's arguments, the spotlight may encourage both parties to make sure that their positions do not materially differ from those of the wider public.

E. A permanent committee

The Commons' ability to adopt bills would be significantly diminished if both their principles and specific provisions were to be discussed on the house floor. As a result, although bills with significant constitutional implications54 may go through their committee stage on the floor, the majority of bills are sent "upstairs" to be reviewed by a standing committee made up of 16–50 MPs.

Standing committee membership represents the proportion of each party in the whole parliament. An administration that has a sizable majority is thus certain to have an advantage at the committee level. The sponsoring Minister and her shadow are always present in standing committees for government bills. The house's own Committee of Selection, which is obligated to consider a member's areas of expertise when making its decision, is responsible for choosing the other members in a formal manner. Yet, the party whips really control the selection process, therefore it is doubtful that the whips would accept the admission of an MP whose knowledge may lead her to disagree with party policy. But, in committee rather than on the floor, ministers are subjected to more demanding questioning. This is partly because of the nature of the committee's work, which requires competence and intellectual accuracy rather than the rhetorical abilities that could be sufficient on the floor for successful analysis of detail. Also, media coverage of committee hearings is often lower than that of discussions during second reading. When MPs speak to a group of people in committee, it is usually their fellow members who are most likely to be impressed by their sharp analysis of the Bill's provisions.

The Chairperson decides how much time should be allotted to certain provisions at the committee stage. Also, the Chairman determines which amendments may be offered. The essential principles of the Bill as authorized at second reading may not be modified, but amendments must address specific issues. In actuality, it seems that the government introduces the majority of committee changes, either to fix overlooked mistakes or to address what the government deems to be legitimate concerns raised by MPs or other interest groups.

But, when dealing with a government that is dogmatically

committed to the specifics as well as the guiding principles of its legislative agenda, there must be some skepticism about the effectiveness of even the more thorough and knowledgeable discussions of the standing committee. Adonis' assessment of the Thatcher government's Proposals to privatize the water and power utilities effectively drives home this argument. the electrical Almost 100 hours were spent on Bill by the committee. It underwent 114 revisions. The government proposed 113 modifications. A Tory backbencher relocated the other one. No one supported any of the 227 opposing amendments.

F. Report and third reading

Government Bills' report stages have taken up around 10% of floor time since the middle of the 1960s. This suggests that it could be significant in the legislative process. The house may evaluate a bill in its entirety, as well as any committee amendments, during the report stage. Also, it provides the chance for additional adjustments to be moved. Bills that are contentious may take up many days of the house's time. The third reading is only a formality for the majority of bills that make it through the report stage. Six members are required for a discussion to take place. A government bill may be rejected during the third reading discussion, but it's hard to imagine a situation where this would happen.

III. CONCLUSION

The cliche that the Commons' function in regard to government Bills is now "legitimation rather than legislation" has been overused. The implication appears to be that because the Commons is an elected body, its choices must be supported by the majority of its members' preferences in order to be considered "democratic." That presumption is flawed, as number seven shall show. As was said in number one, legitimacy and democracy may call for more than just majoritarianism. Nevertheless, strangely, there also seems to be an agreement among academics that since 1970, backbencher MPs have been more forceful in their opposition to government initiatives they disapprove of the effectiveness of an MP in doing this is influenced by a variety of factors, including the size of the government's majority and the number of sympathetic colleagues. The first Wilson administration, which only had a three-vote majority, discovered that two Labour MPs' unwillingness to support the government prevented it from implementing its intentions to nationalize the steel sector. 61 However, there were a number of occasions in the middle of the 1980s when the Thatcher administration, which had large Commons majorities, erred by misreading the sentiment of its backbenchers and was forced to renounce Legislation. The Shops Bill of 1986, a proposal to liberalize Sunday commerce rules, presented the most striking illustration. The opposition from Labour MPs to the proposal due to its effects on shop employees was something the administration had accurately predicted. The administration had not anticipated that so many Tory backbenchers would back a campaign to "Keep Sunday Special," which was organized by religious organizations. Due to this unexpected coalition, the Bill was unsuccessful on the second reading.

REFERENCES

[1] M. Taylor, “Brexit and the British Constitution: a Long View,” Polit. Q., 2019, doi: 10.1111/1467-923X.12774.
[2] J. Hook, F. Noroozi, O. Toygar, and G. Anbarjafari, “Automatic speech based emotion recognition using paralinguistics features,” Bull. Polish Acad. Sci. Tech. Sci., 2019, doi: 10.24425/bpasts.2019.129647.
[3] A.-R. Mahmoud-Mukadam and A. A. Adebisi, “Language Borrowing between Arabic and Yoruba Language,” Izdihar J. Arab. Lang. Teaching, Linguist. Lit., 2019, doi: 10.22219/jiz.v2i1.7386.
[4] Z. Wan, J. Li, W. Duan, Y. Chen, and N. Xiong, “Lightweight and universal intelligent service platform in indoor environment,” Cluster Comput., 2019, doi: 10.1007/s10586-018-2099-x.
[5] G. Damele, “Argumentative Hypocrisy And Constituent Debates: The Italian Case,” Ethics, Polit. Soc., 2019, doi: 10.21814/eps.2.1.92.
[6] A. Mnguni, “Financial Translation In South Africa: Challenges And Prospects For The Indigenous African Languages,” IJASOS- Int. E-journal Adv. Soc. Sci., 2019, doi: 10.18769/ijasos.592118.
[7] E. Kotzé, “The story of Afrikaans – out of Europe and from Africa, Part 2 by WAM Carstens and RH Raidt,” Tydskr. vir Geesteswetenskappe, 2019, doi: 10.17159/2224-7912/2019/v59n4a9.
[8] L. Noah, “Giving personal injury attorneys who run misleading drug ads a dose of their own medicine,” University of Illinois Law Review. 2019.
[9] J. Pujolar, “Linguistic mudes: An exploration over the linguistic constitution of subjects,” Int. J. Soc. Lang., 2019, doi: 10.1515/ijsl-2019-2024.

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Private Members Bills

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***Abstract*— A government bill is one that the government of a nation proposes, introduces, or supports in the legislature. The Westminster system, where the government introduces the majority of laws, is where it is most important. In this chapter author is discusses the delegated legislation. Member's bills, also known as private member's bills, are legislative proposals introduced by individual members of a legislative body, rather than by the government. These bills can cover a wide range of issues, from social and environmental policies to criminal justice and economic regulations.**

***Index Terms*— Bill, Backbencher, Government, Private, Rule.**

I. INTRODUCTION

Every session, a few bills are introduced by backbenchers. There are presently twelve Friday sittings every session set aside for discussing such proposals. The number of bills that a member of parliament may propose is theoretically unlimited. Several Bills are introduced to the house just for the purpose of bringing attention to the sponsoring MP or to a specific subject. Yet, one of two processes must be used to start the Bill if it is to have a chance of being passed [1],[2]. The yearly SO ballot is the most crucial. The ballot may be cast by any backbencher. There are drawn twenty "winners." On a certain Friday, the first six are given priority in the order of business for the second reading. These six then take precedence over the second readings of the other fourteen Bills on subsequent Fridays for their report and third reading. A Bill must finish its second reading on the first day in order to pass. In order to prevent a Bill from being talked out, its sponsor must be able to compel a closure if it is opposed. This may not be simple; after all, many members may want to return to their districts on Friday afternoon, when the required 100 friendly members must be present [3],[4].

A comprehensive second reading discussion may give the procedure's sponsor a lot of attention, which contributes to its popularity. Yet the appeal is not only a result of publicity. Between 1974 and 1989, about 200 Bills that were presented using this technique were passed into law. So, it presents certain MPs with a great chance to leave their stamp on legislation [5],[6].

These bills have sometimes brought about significant changes to the law in areas that are very contentious morally but do not split opinion along typical party lines. The Abortion Act of 1967 is the most prominent example of this kind of law. The procedure is also commonly used to establish a regulatory framework around newly emerging social or legal issues or to justify outdated laws. Backbenchers initiating ideas that the administration opposes have little immediate use. Just because a bill comes from a backbencher doesn't mean that the Prime Minister and the whips' methods of internal party discipline immediately vanish. While there may be some moral pressure to provide free votes on certain Legislation, the government is not required to. A government's objectives, however, may sometimes be extremely effectively served by permitting a free vote. One clear advantage of doing this is to promote the idea that the administration respects the autonomy of MPs as individuals and of the Parliament as a whole. Such approach is a substantively painless method to refute claims that the administration exerts an undue amount of power over the legislative process on matters when the government has no strong policy preferences. In addition, a government may decide that assisting in the passage of a private member's bill in support of a policy that it favors but that may not be popular with its lawmakers or the general public is a useful way to achieve desired results without having to accept responsibility for having done so [7],[8].

There is another, more commonplace aspect to the backbencher's need for government assistance. If the administration does not set aside some of its own time for their passage, it is doubtful that Bills other than the first three or four on the ballot will be carried due to pressures on the Commons' legislative timeline. Making a little amount of funding available to backbench projects is an easy method for a government with extra time to gain favor with the house. Almost twenty backbench Bills were granted time by the Labour administrations from 1964 to 1970. The Thatcher administrations were particularly reticent to dedicate government attention to private members' Bills, in contrast, and subsequent Conservative governments in the 1980s did not seem keen to promote such expression of backbench views. On the other hand, the private member's bill may provide administrations with overloaded legislative agendas a way to wrest even more time from the Commons. A backbencher advocating a Bill that the government supports could find herself being asked to alter her proposal in line with ministerial preferences in exchange for aid in securing the Commons time needed to pass the legislation [9].

Backbenchers may also attempt to introduce legislation under SO 19's "ten-minute rule Bill" procedure. On every Tuesday and Wednesday, one of these bills may be presented. An equal amount of time is provided to a member who wants

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to oppose the bill after the sponsoring member's short presentation to the house outlining the measure's goals. The practice gives Lawmakers a public platform in an often crowded room. Ten Minute Rule Bills, however, are not an important part of the legislative process. Even if the house has officially given the majority of them permission to go forward, there is little possibility that they will be implemented since there is so little time left for them. There may go months or even years without a single ten-minute regulation being added to the law book. Their purpose could be better understood as providing an MP with a prominent public platform from which to address a pressing problem in the hopes that a government agency or another MP who wins the private member's vote would present a similar motion. The general norm is always subject to exceptions. The ten-minute rule gave rise to the Sexual Offences Act of 1967, which revoked laws that made homosexual conduct between consenting adults illegal. Nonetheless, it is obvious that the government's ability to find time for its passage was a major factor in its success.

Government bills are quantitatively more important than private member bills. Also, a lot of them deal with little difficulties. Yet, they do sometimes make significant adjustments to issues with a lot of substance. They do not, however, provide a means of effectively and systematically promoting the "independence" of the Commons above and beyond partisan allegiances.

A. Private Charges

Private members' bills, which are officially "public" legislation much like government bills, are not the same thing as "private" bills. Private Bills authorize certain works or activities in a specified region or bestow specific benefits or liabilities on a narrowly defined set of people or businesses.

The interested parties individually bring bills to the Commons, not a government agency or an MP. Parties are represented in the house by attorneys posing as "parliamentary agents." The house's standing rules oblige the promoters to inform any impacted third parties of the Bill's objectives, as two recommended while talking about the Wauchope lawsuit. A private bill is assigned to a special committee of four members for a thorough review after second reading. At this point, it becomes clear how important it is to inform the parties impacted. It goes without saying that if impacted parties have not been informed of the Bill's passing, they are unable to share their perspective with the Committee, which will continue with inadequate knowledge.

Lord Denning's remark in Pickin that the courts should reevaluate their customary unwillingness to judge the procedural appropriateness of the legislative process may have more weight given the very different procedure employed to create private legislation and the usually all interests they serve. A combined Lords/Commons select committee conducted a thorough review of the procedure in the late 1980s, but no meaningful modifications have yet been implemented.

B. Blended Bills

A hybrid bill, which resembles a private bill in some ways, is a government legislation that impacts a specific person or organization differently from other people or businesses in the same class. A House of Commons official known as the "Examiners of petitions for Private Bills" is charged with making the determination of whether a Bill is hybrid; there are no set criteria for doing so. The unexpected promotion of a private proposal by a government might have serious ramifications for the timing of its legislative agenda.

In general, hybrid bills adhere to the public bill process. Nevertheless, before they go to the standing committee level, they must first go through a different step before a select committee in both the Commons and the Lords. These select committees consider petitions from Bill opponents, which has the potential to prevent legislation from passing. But, if a government can assemble a majority in the Commons, it may forego this further stage.

II. DISCUSSION

A. Delegated legislation

It would be false to imply that the majority of legislation that the British people now live by had undergone thorough Parliamentary review. This is partly a result of the logistical and political party restrictions that affect how the house examines bills. Its primary reason is the government's growing propensity to support bills that give Ministers secondary law-making authority via the use of "regulations" or "statutory instruments." 74 Under this system of legislating, the "parent" Act only outlines the general parameters of the authority granted to the government; the Minister must fill in the specifics through SIs. In terms of procedure, the mechanism serves as a kind of middle ground between completely legislative and totally executive lawmaking.

The time-consuming and sometimes contentious chore of incorporating their policy views into a Bill and attempting to navigate it through the Commons is spared Ministers by SIs. Governments of all parties have favored SIs in the modern age, partly because the house would not have time to address all issues via primary legislation because to the expanding extent of government participation in social and economic life. Since 1980, the use of SIs by the government has increased significantly; on average, more than 1,000 have been enacted annually. Some are very pointless, with the Baking and Sausage Making Rules of 1985 being a favorite example. 75 Others have favorable constitutional implications; Mr. Liversidge was imprisoned under a SI legislation. Delegated legislation may provide Ministers broad authority in crucial areas of governmental function.

So, one should be skeptical of any objections made by political parties against SIs since it appears probable that any underlying "principles" would be discreetly abandoned when such parties next established a government. The

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considerations of principle, however, have greater weight for constitutional lawyers since they directly affect the sovereignty of "Parliament" and the division of powers, as well as indirectly on the subject of what kind of "democracy" the constitution now preserves. Would it be more accurate to refer to statutory instruments as "lawmaking by the executive" or are they a component of the legislative process?

B. Current practices and concepts

Once Lord Chief Justice Hewart's book The New Despotism was published in the late 1920s, the use of delegated legislation gained significant importance. Hewart criticized Parliament for giving Ministers what he saw as arbitrary bureaucratic powers in a Diceyan spirit. Although being exaggerated, the criticism draws attention to the difference between substantive and procedural notions of the rule of law. Theoretically, a parent Act does not provide an unrestricted power to a Minister; she does not so transform into a "sovereign legislative"; rather, the 'parent' legislation's provisions limit her authority. As a result, statutory instruments' provisions are subject to judicial scrutiny to make sure they do not go beyond the authority conferred by Parliament. 77 But, the procedure does not mandate that the Commons give careful consideration to every aspect of any "enacted" SI.

Hewart is primarily concerned with procedural issues; the issue is not with what the government does, but with how it does it. If only it had subjected its proposals to the rigorous review required for the enactment of primary law, its interference would be legitimate. A straightforward rejoinder to such a claim would be to emphasize the Commons' minimal influence even with regard to the majority of legislation.

This dichotomy may be a little deceptive. Process and content issues are inextricably connected. A highly interventionist unitary state cannot be ruled by primary law alone. 78 Hence, to completely reject the delegated legislative process is to reject the core principles of social democratic democracy. The government created the Donoughmore Committee in response to Hewart's criticism, much how Harry Jones subsequently criticized Hayek's simplistic view of the rule of law. 80 In today's world, delegated legislation was necessary. So, the question arose as to how to best guarantee that this inevitable reality of political life deviated as little as possible from traditional constitutional interpretations of the legislative/executive relationship.

Donoughmore suggested that the Lords and Commons establish Standing Committees on delegated legislation. These Committees would assess the technicalities and legal implications of proposed SIs. Their goal would be to "provide the private member with information which he lacks at now and so allow him to make an educated judgment as to whether to oppose or critique himself," rather than to dispute the merits of government policy per se.

C. Legislative Instruments Act of 1946

Neither the Commons nor the whole Parliament responded to the Donoughmore report in a timely or comprehensive manner. In 1944, a Commons Committee on Statutory Instruments was created, and the Statutory Instruments Act of 1946 standardized the processes through which SIs were to be approved. The Act lays out general guidelines for the procedures to be used; if the enacting Parliament so desires, later parent Acts may opt out of the 1946 Act, and Sections 8 and 9 permit the law's scope to be changed by subsequent delegated legislation. A Joint Commons/Lords Committee on Statutory Instruments was created in 1972, ostensibly as another attempt to improve MPs' knowledge of and control over the substance of SIs.

Some SIs are completely ignored in the home. Nonetheless, the majority are resolved using one of the "affirmative" or "negative" resolution procedures outlined in the 1946 Act. An SI cannot become legislation under the affirmative process unless it has the support of the majority of the house members. So, it is the government's responsibility to promote the initiative during discussion and to make sure there are enough supporters present for a vote to pass. There are hardly many and they are usually brief floor debates on positive motions. The Standing Committee on Statutory Instruments conducts the majority of its deliberations "upstairs," but the backing of 20 members is necessary to persuade the Minister to schedule a floor discussion. Seldom do committee discussions go more than 90 minutes each SI. The Committee's function is limited to consideration. It cannot change the SI, nor can it utilize its delegated authority to adopt the item; the whole house must still cast a vote to approve the legislation. While this is not a legally binding regulation and there is obviously room for discussion between the government and opposition on how to judge a SI's relevance, it is acknowledged that the more significant SIs should be submitted to the affirmative procedure. 20% of SIs were the subject of positive resolutions in the 1980s.

The "negative resolution" mechanism gives the initiative to the opposing parties, who may then request that the house vote once again within forty days to reject the instrument's passage into law. Discussion may be held in standing committees or on the floor of the house. Once again, the government regulates access to both forums. For example, Silk argues that the 9,500 SIs subject to the negative resolution method between 1974 and 1985 only garnered around 200 hours of discussion, which is a little amount of time given for debate before the whole house. 83 So, one might be excused for assuming that the procedure accomplishes nothing more than giving a determined opposition the opportunity to annoy a government with a slim majority by interfering with its legislative schedule. In terms of importance, the Joint Committee on Statutory Instruments has a greater impact. It usually has an opposition MP as its chair, giving it a sense of independence. Its members are expected to avoid party political debates and to abstain from

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challenging a specific SI's policy in favor of concentrating on the more specific legal problem of the SI's conformity with its parent Act. The Committee will bring the SI to the House's notice in the case of apparent inconsistency, and the House will then be free to take whatever further action it sees fit. The views of the Committee are not required to be accepted by the government or the parliament. The Committee's conclusion that the contents of a SI were within the Minister's authority would not prohibit a court from declaring it to be extra vires.

The enormous number of SIs that are passed by the house each year and the clear constraints that apply to MPs' review of such measures serve as a powerful illustration of how efficiently the government regulates the legislative process. They do not, however, represent the most extreme example of how the constitution seems to be able to balance the de facto dominance of the executive with the de jure sovereignty of "Parliament."

D. The "Henry VIII clauses"

The Donoughmore Committee voiced strong opposition to the legislative practice of including "Henry VIII" provisions in primary legislation, which is becoming more common. With the use of such provisions, a government minister is able to change or even abolish current Acts of Parliament. The term comes from the Statute of Proclamations, which was passed in 1539 after Henry VIII persuaded a reluctant Commons and Lords to approve a Bill confirming that the Monarch's proclamations had the same legal effect as Acts. Henry VIII is thought to have had concerns about the constitutional status of his prerogative powers in relation to legislation and other common law rules. By virtue of the lex posterior rule, this legislation would, once passed, allow the King to abolish or amend current laws without further consultation with Parliament, or, as Plucknett phrased it, "play the dictator by the cooperation of Parliament."

The regrettable tendency is to downplay the constitutional relevance of modern versions of this behavior by using the Henry VIII name. In the sixteenth century, it was not established that statutes were preferable to prerogatives; hence, it is conceivable that the King might have accomplished the same outcome by directly using his proclamation authority. However, the Law of Proclamations was heavily constrained by regulations, which significantly reduced its usefulness. Most crucially, neither Henry VIII nor the Tudor Parliaments needed to defend their actions using "democratic" ideals. There is no specific legal barrier preventing Parliament from giving a subordinate Minister a "circumscribed part of legislative power. Whatever "legislative" action that the designated Minister has completed may be undone by later Parliaments and the authority may be revoked at any moment. If one questions whether the behavior is politically acceptable in contemporary culture, several problems come into play.

Up until recently, it seems that Parliament only sometimes passed Henry VIII provisions due to their uncertain moral foundation. The authors of the 1985 edition of deSmith's Constitutional and Administrative Law came to the following conclusion: this formulation is not frequently used, and it is typically innocent if the grant of power is restricted to a short time for the purpose of enabling draftsmen to make consequential adjustments to unrelated laws that may have been overlooked when the main Act was passed. Therefore, it is decreed that the king for the time being may always issue proclamations through the authority of this act with the advice of his honorable council, whose names are listed below, or with the advice of the majority of them, subject to any penalties and pains that his highness and his said honourable council, or the majority of them, shall deem necessary and requisite; and that the same shall be obeyed, observed, and kept as prescribed.

According to this interpretation of Henry VIII clauses, they serve primarily as time-saving tools for fixing unintentional mistakes in original legislation. As so, they would be hardly unacceptable inasmuch as they save the government from suffering the effects of its own incompetence. Yet in recent years, it seems as if governments have accepted Henry VIII provisions as a legitimate way to carry out comprehensive policy initiatives. With the introduction of the Deregulation and Contracting Out Act 1994 by the Major administration, this movement reached unprecedented heights of executive lawmaking. 90 The Act gave the Secretary of State for Trade and Industry the authority to issue regulations suspending any existing laws that the Secretary of State for Trade and Industry believed placed a burden on any economic activity and to transfer many statutory responsibilities for government to any private sector organization.

The Act gave the impression that the Major administration saw the parliamentary process as an undesirable impediment that it was free to avoid whenever it was expedient. Whether that is interpreted as a positive development depends presumably on the observer's party affiliation, which is perhaps a telling indication of the degree to which the Commons is prone to function merely as a vehicle for promoting the wishes of whichever faction currently constitutes a majority of its members, even on important issues.

E. Controlling the executive

While a government's legislative agenda is sometimes seen as its main purpose, many of its activities do not need legislative action. Under the prerogative, ministers still have significant legal authority to make crucial policy choices. Similar to this, ministers may use already-existing legislative authorities, which, if sufficiently broadly construed, may allow the administration to pursue goals that are significantly at odds with those of its predecessors. In neither scenario is the government's ability to use its power legally reliant on retaining a majority in the Commons. But, the house may fulfill a crucial constitutional duty by keeping an eye on how the government is carrying out its chosen policies.

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F. Movements on the home's floor

General discussions on subjects selected by the opposing parties take up around twenty days of each session. On these instances, certain elements of government policy are targeted for criticism. Such motions are easily defeated by governments with a stable majority, but the result is unimportant. The major goal of "Opposition days" is to provide a public platform for displaying the commercial nature of the British political system. Ministers and top opposition frontbenchers provide keynote addresses. If a backbencher wants to speak, they must "catch the Speaker's attention." One can question if the term "debate" fits these procedures properly. Instead of a deeply participatory dispute, the presentation of opposing viewpoints to observers occurs more often. Yet, the procedure has several crucial benefits. Outstanding speeches may improve an MP's chances of being elected to the government or to the shadow front bench. Moreover, the high profile these discussions draw gives the general people a chance to establish judgments on the merits of both the government's and the opposition's plans.

G. Discussions on urgent matters and adjournments

Every member has the right to seek an "emergency adjournment debate" on a subject of current relevance from Monday through Thursday at the beginning of proceedings. Whether to allow such a discussion is entirely up to the Speaker. The request's proposer needs the backing of forty coworkers if any other MPs are against it. There aren't many emergency discussions allowed since they would seriously upset the Commons' schedule.

If the proposal is approved, the discussion will take place at 3 PM the next business day or at 7 PM the same day. Speakers get a lot of press since emergency discussions are plainly focused on topics of hotly contested public policy. They thus provide the Opposition with a handy instrument for embarrassing the administration. Contrarily, "adjournment discussions" take place often and last for 30 minutes at the end of each working day. Voting determines who gets to speak on Monday through Thursday; the Speaker selects the member for Friday. In most adjournment discussions, a backbencher will speak for fifteen minutes, followed by a minister's response. They often relate to parts of government policy that have a particularly strong influence on the constituency of a member. Seldom do adjournment discussions get a large in-house audience or receive a lot of media attention. They do, however, provide a chance for the government to discuss the specifics of its programs and for a member to show her constituency party her tenacity in defending local interests.

III. CONCLUSION

So, from a legislative standpoint, a House of Commons that is "independent" of the administration is only likely to happen when the government lacks a solid majority. It would seem, however, that under such conditions, paralysis rather than unanimity would be encouraged in the house. It is not until we later examine the relationships between the Commons and the Lords and between the Commons and the people that the implications of the Commons' fundamentally factional, antagonistic approach to the legislative process have for the democratic basis of the constitution can be fully understood. We discuss another aspect of the Commons' relationship with the government in the remaining section. Member's bills are an important mechanism for legislators to bring attention to issues that may not be a priority for the government, and to introduce legislation that reflects the interests of their constituents. The process of introducing and passing a member's bill can be complex and challenging, requiring the support of other members of the legislature and navigating various procedural rules and hurdles.

REFERENCES

[1] C. Nikolenyi and C. Friedberg, "Vehicles of opposition influence or agents of the governing majority? Legislative committees and private members' bills in the Hungarian Országgyűlés and the Israeli Knesset," J. Legis. Stud., 2019, doi: 10.1080/13572334.2019.1662607.

[2] R. B. Taylor and A. L. M. Wilson, "UK abortion law: Reform proposals, private members' bills, devolution and the role of the courts," Mod. Law Rev., 2019, doi: 10.1111/1468-2230.12389.

[3] T. M. Yildirim, G. Kocapınar, and Y. A. Ecevit, "Staying active and focused? The effect of parliamentary performance on candidate renomination and promotion," Party Polit., 2019, doi: 10.1177/1354068817740338.

[4] A. A. Gillespie, "Tackling Voyeurism: Is The Voyeurism (Offences) Act 2019 A Wasted Opportunity?," Mod. Law Rev., 2019, doi: 10.1111/1468-2230.12441.

[5] J. Rinella, K. F. Clune, and T. Blasdel, "Controversial 'Conversations': Analyzing a Museum Director's Strategic Alternatives When a Famous Donor Becomes Tainted," J. Nonprofit Educ. Leadersh., 2019, doi: 10.18666/jnel-2019-v9-i1-8390.

[6] L. De Winter, "Government coalitions as a reflection of national politics: The complex case of Belgium," in Coalition Government as a Reflection of a Nation's Politics and Society: A Comparative Study of Parliamentary Parties and Cabinets in 12 Countries, 2019. doi: 10.4324/9780429422379-5.

[7] A. Strode, S. Bhamjee, S. Soni, and C. Badul, "Proposed legislation on enduring powers of attorney for healthcare decisions and living wills: A legal lifeboat in a sea of uncertainty?," South African J. Bioeth. Law, 2019, doi: 10.7196/sajbl.2019.v12i2.687.

[8] C. Carr, "Proposals to introduce a tribunal for assisted suicide in the UK," in Exploring Ethnographic and Non-Ethnographic Approaches of Suicide and Self-Harm, 2019. doi: 10.1163/9781848884229_005.

[9] E. Lucas, "The Spycraft Revolution," Foreign Policy, 2019.

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Departmental Select Committee System

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Abstract— Select committees for certain departments are tasked with monitoring and evaluating the activities of such departments as well as any associated bodies and organizations. Topical select committees investigate important current topics. In this chapter author discusses prime ministerial accountability. The departmental select committee system is a key feature of the parliamentary system in many countries, including the United Kingdom. It is a system of committees that are responsible for scrutinizing the work of government departments, agencies, and other public bodies.

Index Terms— Committee, Departmental, Government, Member, Reform.

I. INTRODUCTION

Oral questions from backbenchers and shadow ministers to ministers serve as a good illustration of the combative nature of party politics in contemporary Britain. By the middle of the nineteenth century, the process had become a staple of the Commons' working procedures, and by 1900, the administration was answering some 5,000 questions on the floor of the house annually. The first order of business was to accept questions, and 'question time' proceeded until all were resolved. As a result, it was common for other business to not be completed until late afternoon. Although emphasizing the idea that the administration should respond to the Commons, this practice provided excellent chances for opposition MPs to disrupt the government's schedule [1],[2].

Arthur Balfour, the Leader of the House during the 1901 Conservative administration, put forth reform proposals. Balfour's intentions caused a great deal of debate in the house, which ultimately agreed that question time would now only last for a short period of time—between 45 and 55 minutes—prior to the start of public business. Questions that were not addressed on the floor will promptly get a written response. Lawmakers may only ask a total of eight questions each day.

Nowadays, questions are answered for around 45 minutes each Monday through Thursday at the start of business. The behavior of each government agency is reviewed every three to four weeks since ministers respond in a rotating fashion. Now, 150 questions per day may be submitted for discussion. More than two dozen won't likely be handled in the limited time given. The written responses to any questions not covered on the floor. Both Parliamentarians and the media pay close attention to oral proceedings. Members are thus quite anxious to make sure that their specific issue is asked and addressed on the floor. Members must submit questions to the "Office," which assigns numbers at random, ten days in advance if they want to have any chance of achieving this goal. So, Ministers have the chance to make arrangements for their employees to offer them in-depth responses to the particular issues posed and to prepare for any follow-up queries that could be asked after the Minister responds [3],[4].

There are complex regulations governing the format and substance of questions for Ministers, which are within the Speaker's control. The amount of supplemental questions that may be asked, both by the question's mover and other MPs, is largely up to the Speaker's discretion. Members who want to speak are also chosen by the Speaker. The strategies of the successive Speakers on this matter have been fairly disparate, with some favoring a more in-depth examination of a select few questions and others wanting to maximize the number of members called upon to speak [5],[6].

The goal of a question, according to Erskine May, is to elicit knowledge or compel action. One can question if these feelings really underlie many of the questions being raised, however. According to Griffith and Ryle, queries have been far less detailed during the last forty years. Contemporary questions and the corresponding supplemental are more likely to be framed at a broad level than to ask a Minister to comment on a specific detailed topic, which often affects the member's constituency. 100 One may now be excused for assuming that the main goal of questions put forward by opposition MPs is to utilize a supplemental to highlight a Minister's lack of problem-solving skills, while government backbenchers give Ministers the chance to take pride in themselves [7],[8].

It would be oversimplified to suggest that party loyalty creates an absolute rule, rather than merely a strong presumption, of deference between a government's backbench MPs and its Ministers during questions, despite the clearly rising frequency of sycophantic questions from government backbenchers. A Minister's reputation in the house and in Cabinet may be seriously harmed by a small group of MPs using question time's high public exposure to defend the interests of each of their specific constituencies. The uproar that followed the announcement by the then-Health Secretary in April 1995 that many London hospitals would be shuttered in order to reduce growing public expenditures serves as a potent recent example. Tory

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MPs with such facilities in their districts found the strategy to be fundamentally objectionable. Nevertheless, the methods employed for the announcement—a written response in Hansard as opposed to an oral one in the house—further enraged the MPs. She was accused of "lacking moral bravery" by Peter Brooke MP in the parliament for refraining from making a personal declaration. Because of the insult, the incident received a lot of attention, to the point that there were rumors that the prime minister would fire Bottomley. While no such repercussions were seen right away, it was generally believed that Bottomley's prospects of obtaining a better position had been severely harmed by her humiliation in the home [9].

Backbench behavior has traditionally been characterized by tenacious defense of particular constituency interests. This behavior serves as a continual reminder that the demands of party politics have not completely supplanted the loyalist foundations of the Commons' representative system. In order to seem to support the concerns of their voters, government whips may take a sympathetic view of specific members who disobey party rules, particularly when such a "rebellion" poses little threat to the government's survival. For this component of the MP's job to pose a major danger to even one Minister, much less the government as a whole, it would need an exceptional set of circumstances. The Bottomley episode was significant because the government, which at the time had a slim Commons majority of twelve, had announced the closure of hospitals in the districts of some of its backbench Members.

Questions about private notice

Through this mechanism, members can ask the appropriate Minister an urgent or important question for an oral response. Whether the question warrants an oral response is left up to the Speaker. An average of 30 to 40 PNQs were allowed in the 1980s. The average length of the exchanges was twenty minutes, which is far longer than the Commons allots for each topic posed during question period. Since 1980, the opposition front bench has submitted 30–40% of the PNQs that the Speaker has accepted, with the majority of the remaining submissions coming from opposition rather than government backbenchers.

II. DISCUSSION

A. Prime Ministerial accountability on the floor of the house

During Tuesday and Thursday afternoons between 1960 and 1999, the prime minister fielded questions from the audience for fifteen minutes at a time. After a recommendation from the Select Committee on Process, this practice was implemented. Until that time, the Prime Minister was seldom called upon to provide oral responses since questions for him did not have a particular priority over queries for other Ministries.

A ritualized confrontation between the Prime Minister and the Leader of the Opposition now frequently rules proceedings. Typically, the Prime Minister can answer up to three questions from the Leader of the Opposition in a row. The chance for immediate argument presented by this may be the closest the house will ever come to witnessing a debate in the traditional sense of the word. The influence the discussions have on MPs' opinions of the leadership skills of their respective parties may be what makes them so important. A Prime Minister who consistently outperforms the Leader of the Opposition is unlikely to see her ascendancy in her party threatened in the factionalized environment provided by the house, but opposition MPs might be tempted to think that their chances of future electoral success are significantly hampered by their Leader's obvious shortcomings on the floor. All recent prime ministers spent a lot of time and energy getting ready for this quick appearance before the house.

For opposition MPs, the chance to speak amounts to nothing more than a chance to get considerable media attention by using hysterical language to prove their ideological purity to either their party leaders or local constituency activists. Contrarily, government backbenchers are more likely to propose inquiries that allow the prime minister to laud specific facets of government strategy.

Immediately following the 1997 general election, Prime Minister Blair proposed that the previous two fifteen-minute periods be replaced with a single half-hour session, ostensibly to enable issues to be examined in more detail. This move seemed to support a more thoughtful approach to Prime Minister's Question Time. That admirable goal seems to have been overlooked in reality. In the early years of the Blair administration, Labour MPs increasingly used question time to indulge the government's apparent love of receiving meaningless compliments couched in inane language. Many of these comments were evidently taken from lists of prepared questions created by the government by the backbenchers in question. 105 The following questions from Labour backbenchers were among the most egregiously sycophantic ones. These displayed academic rigor and in-depth investigation. Barry Sheerman, a member of parliament, sent the following query to the prime minister in December 1997:

B. Daytime movements

"Early day motions" provide what is essentially a noticeboard for MPs to express their concerns about certain subjects. A member may submit a motion using this process, and MPs who favor it can sign it. There are no restrictions on the number of these motions that a single MP may put up or the nature of their substance. Since 1945, the number of motions introduced has sharply increased, from less than 100 each year to more than 1,500 by the late 1980s.

The house seldom ever debates EDMs. They frequently serve as the first step in a campaign to gain attention within the chamber in the hopes that the issue will then be taken up by the administration, the opposition, or a private member

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who has been allocated time for an adjournment debate or private member's Bill, and receive relatively in-depth discussion. The tool is a particularly useful means for government backbenchers to express their strong opinions on specific issues and sometimes 'persuade' Ministers to change important policy choices. 108 questions with a written response. The "question for written response" may prove to be a more useful tool for MPs who are more interested in getting information from the government than just confronting a Minister.

109 The number of such inquiries that MPs may submit is unrestricted. In a single session, as many as 40,000 have been raised. Questions that need a written response are often less political than floor debates. Compared to spoken communications, they are often more focused and comprehensive. As a result, they serve as an important resource for backbenchers since they effectively compel the government to do research that neither the member nor the Commons library may be able to do.

C. Informal Methods

The informal procedures of individual members' consultation and lobbying of Ministers on issues of local or general interest may be the most significant means by which the backbench influences the actions of the government. Such influence is often preemptive, meaning that it modifies government policies in advance of any first emergence of possible problems between frontbencher policy and backbencher opinion. Party whips are crucial to this process because they provide as a channel for backbencher sentiment to reach the Cabinet and specific Ministers.

One can only make educated guesses as to how successfully such pressure is conducted via covert channels. Moreover, there is no reliable method to determine if administrations suppress any of their desired policy goals because they don't think their plans would pass muster in the house.

This has so far focused on the role MPs play in their individual capacities or as participants in temporary coalitions over certain policy matters. Yet via the processes of "select committees," the Commons also expresses its attempts to monitor and affect executive behavior in a more formal, collective way.

Select committees, a method used by departments, have a murky legislative past. Its contemporary beginnings may be traced back to an ad hoc Commission formed in 1855 to look at how the government handled the Crimean War, during which the Army regularly ran out of essential supplies. The government fiercely opposed the plan, which was the brainchild of radical MP John Roebuck and was seen as being at odds with conventional notions of the separation of powers. Gladstone denounced the Committee as an unprecedented and unlawful incursion into the purview of the executive branch in his attempt to urge the house not to create it. The administration resigned after being soundly beaten in the ensuing vote, believing that the Committee's investigation would point out serious mistakes in its policies.

The Crimea Committee was a short-lived group that dealt with a particular subject. Contrarily, the Public Accounts Committee, established in 1861, has remained an integral part of the Commons' organizational structure. The PAC examines how the government's spending policies are carried out. It is presided by by an opposition member of parliament, typically a former Treasury Minister. It has a wide range of investigative abilities and the funding to do its work. Its findings are always followed up on quickly and thoughtfully by the Treasury, and many of its suggestions have affected later government policy. As a result, the PAC has steadily built up a strong reputation and is largely considered as a useful vehicle for the Commons to express concerns about government spending. Yet, as we'll see below, it may legitimately be seen as a bit of an exception to the overall tendency.

D. The Crossman reforms

To claim that select committees didn't exist until the 1960s would be untrue. Prior to then, the majority of these committees were created for brief periods of time to address certain issues. Harold Wilson, the Labour Party's leader at the time, backed recommendations put up by Richard Crossman, one of his ministers, that the house establish two permanent select committees to examine government initiatives in the fields of science and agriculture. Crossman described his proposal as a way to improve government performance in part. He envisioned committees made up of perhaps a dozen backbenchers who would develop some competence in certain subject areas. The committees may theoretically find themselves looking at the actions of many Ministries since their mandate would be functional rather than departmental. It was anticipated that their members would set aside their political allegiances and serve the general interest of the Commons, even if their membership would reflect the balance of parties in the parliament. By examining previously unexplored areas and bringing to light concerns, the Committees "may give an astringent impetus to... our Departments" in their current form. Crossman was interested in addressing what he saw as an unfavorable power imbalance between the Commons and the Cabinet: Ministers aren't worried by Parliament, in fact, they almost ever go; they spend a very tiny amount of time on the front bench. In Britain, the Executive has sway over the Legislature with little resistance.

Several Ministers had vehemently opposed the proposal. Others opposed the idea that the inner workings of their Departments should be constantly scrutinized by the Commons out of principle, while the Treasury worried that Committees would serve as advocates for more departmental spending. It is unclear whether Crossman and Wilson really intended to strengthen the Commons' position in relation to the Cabinet. They saw the Committees as "a method for keeping bored backbenchers out of trouble, rather than as a rod for their own backs," according to Wilson's biographer.

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There were now four more committees. Yet, the administration swiftly showed little patience for Committee operations that directly questioned its policies. The Agricultural Committee, which was abolished after demonstrating significant investigative independence on the topic of the effect that British entrance to the EEC would have on the domestic farming sector, was the main victim of Wilson's disillusionment.

This episode also shows how the assumption that the government should rule the Commons has become commonplace in our constitutional culture. Theoretically, the administration was unable to establish or dissolve a Parliamentary committee. The home itself should handle that. But, it appears fairly obvious that the Labour majority, in voting to do so, was reacting more to pressure from government whips than to a careful examination of the merits of the argument when the house did vote to eliminate the Agricultural Committee.

E. The changes of 1979

The fact that the Crossman reforms were supported by a government with a very slim Commons majority may not have been a coincidence. Similar shaky backing existed for the Labour administration from 1974 to 1979, which adopted significantly more methodical recommendations from the Parliamentary Procedure Committee. This would imply that when they can't always rely on a functioning majority, administrations are more inclined to respect the Commons' alleged independence. Nonetheless, the ideas were taken by the next Conservative administration and put into practice under the guidance of Norman St. John Stevas, the leader of the House at the time.

The Procedure Committee had argued in 1978 that: "the day-to-day working of the Constitution is also now weighted in favour of the government to a degree which arouses widespread anxiety." The reform's stated goal was to change the perception that the Commons was becoming increasingly powerless in the face of government majorities in the house.

The solution chosen was to establish twelve select committees, each with eleven to thirteen members, to carefully examine the performance of certain departments. Throughout the duration of a Parliament, the membership would be set, allowing MPs to gain specialized knowledge on certain topics. Instead of party whips, members were to be picked by a special Committee of Selection. Yet, a rule that said that a government with a majority in the house would keep a majority on each committee developed. Also, it seems that the nomination process has been effectively taken over by both the government and the opposition whips. Ministers were prohibited from serving on committees, and it was expected—if not hoped—that members would approach their work with objectivity and fairness. A Liaison Committee made up of the chairs of each committee was to supervise and coordinate their work.

By noting several issues of general applicability and concentrating on some of the more significant events in their thus far brief history, the new select committees have been in operation for long enough for us to form an impression about their impact on the relationship between the government and the Commons.

The quantity and variety of reports that the committees have generated reflects their prodigious output. Others are meant to either filter over time into the overall process of governmental policy-making or are simply meant to bring attention to problems whose complexity has up to now gone underappreciated. In a few cases, these reports seem to have directly contributed to changes in government policy. Maybe the most fruitful aspect of committee work to far has been the incremental collection of expert information on a broad range of topics. Their influence has been far more modest in other areas.

The departmental select committees lack resources, in contrast to the PAC. The House of Commons Commission decides how much money the committees spend; they have no direct authority over any resources. They perform terribly compared to the US Congress' legislative committee system, which has considerable authority and reputation inside the American government structure. The American constitution adheres to a stricter division of powers than Britain's, and often finds itself tolerating a national government and legislature controlled by different political parties, therefore the two systems are obviously not directly comparable. The select committees' limited funding, however, impairs their ability to be fully informed about pertinent parts of government policy.

The committees' limited ability to get information from recalcitrant government agencies is a major additional hindrance to their effectiveness. In 1979, St. John Stevas made the following statement to the house: "I give the House the pledge on behalf of the government that every Minister, from the most senior Cabinet Minister to the most junior Under-Secretary, will do everything in his or her power to co-operate with the new system of Committees and make it a success." It is impossible to determine if a promise was made in good faith. Moreover, it is impossible to determine if committee members blatantly violate the sensitivities of the Minister by using their authority to "send for individuals, documents, and records." Nonetheless, it is clear that a Minister may just choose not to participate in a committee investigation. She might also choose not to respond to queries on certain topics. A Minister acting in this manner might be politically damaging and subject to public and legislative censure. Yet it is obvious that she is unwilling to talk, since a direct exchange would probably turn up something much more humiliating or destructive.

Senior public workers are regularly denied permission by ministers to participate in committee investigations. The government's unwillingness to let the Director of GCHQ to testify was a major impediment to the Employment Committee's investigation into the GCHQ scandal. The so-called Westland Affair incident also triggered probes by

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the Defence Committee and the Treasury and Civil Service Committee, although both were impeded by the government's decision to exclude some civil workers from testifying. A 1980 Memorandum of Guidance that said certain sorts of documentary evidence would not be accessible was another example of the government's fairly narrow concept of "full co-operation." The Memorandum's language was widely open to interpretation. For instance, "questions in the sphere of political dispute," "advice offered to Ministers by their departments," "discussions of Cabinet committees," and "inter-departmental interactions on policy matters" were all considered to be prohibited ground. The list demonstrates that the Thatcher government was just as eager as earlier ones to subject its operations to thorough Parliamentary investigation. The house has the legal authority to demand that witnesses appear at committee hearings or that papers be provided. Disobeying a command would be considered disrespect, which, as we'll see in number eight, is still punishable by jail. But, it is impossible to imagine any situations where a government would be unable to convince its MPs to vote against such such move. Hence, although the authority may be substantial in regard to private people, it is mostly fictitious in the context of interactions between the government and the commons.

The majority of commentators seem to believe that while committees are now recognized as legitimate components of the parliamentary system, it is only the PAC that consistently exerts a significant influence over how the government behaves; therefore, the reform does not merit the moniker of a "revolution" in how the government operates that St. John Stevas first applied to it. After the 1992 general election, the idea that governments would only accept certain committees so long as they did not prove to be a continuous thorn in the side of the executive was strengthened. Prior to the election, independent-minded Conservative Nicholas Winterton served as the head of the Health Committee and regularly criticized government health policies. The administration seemed to want to fire him from this position, but they didn't want to be open about it. In order to prevent Tory MPs from spending more than twelve years on the same Committee, Conservative whips created a rule. It turned out that Winterton fit into this group, thus it is unlikely that this happened by chance. What we now have is administration by whips' dictat, he said indignantly at first, couching his words in language of constitutional irregularity.

Yet Mr. Winterton did not feel forced to leave the Conservative Party as a display of his dedication to "free speech and independence." However, not enough of his other colleagues shared his fury, leading the Tory whips to question if a majority of the Commons would back their new stance. The incident may have indeed been "a serious interference with the business of Parliament," as one unidentified Tory Member claimed. 131 Yet, legally speaking, the house must decide on the rules governing Committee membership rather than the government. The fact that the whips' ploy was successful exposes the real importance of the Winterton "sacking," namely the fact that so few Tory members saw upholding the independence of their house as requiring a greater level of devotion than serving their party's convenience.

Curiously, the importance of select committees inside the house appeared to increase following the 1997 election given the magnitude of the New Labour government's Commons major-ity. This was due in part to the decision to test the feasibility of using select committees to examine the merits of proposed legislation before it was introduced to the house; this experiment, however, proved to be somewhat embarrassing for Ministers in the case of the government's proposed freedom of information legislation. Nonetheless, other committees also seemed to be acting more assiduously in their customary capacity. In its efforts to keep an eye on the workings of the government's economic policy, the Treasury Committee grew noticeably more forceful. Most importantly, the Foreign Affairs Committee aggressively questioned the Foreign Secretary and his staff over the government's participation in the transfer of arms to the government of Sierra Leone in violation of a United Nations embargo. The Transport Select Committee harshly criticized the government's transportation policies the next year, which enough alarmed the Deputy Prime Minister, John Prescott, to cause him to begin an irrational assault on the Committee's members. The Commerce and Industry Committee further said that by encouraging the sale of weaponry to oppressive foreign governments, the government has consistently disregarded concerns about human rights.

Yet, there were other areas where the committee system's efficacy may be questioned. Backbench Labour MPs repeatedly attempted to willfully undermine the independence of the committees on which they served, and the first Blair administration looked to be complicit in numerous of these instances. By leaking material to the Foreign Office, Labour MP Ernie Ross attempted to purposefully obstruct the Foreign Affairs Committee's probe into the "Arms to Sierra Leone" affair. Ross was forced to leave the Committee once his deceit was discovered. Following in his footsteps, another Labour MP, Kali Mountford, leaked a Social Security Select Committee report on welfare payments to Don Touhig, the parliamentary private secretary for the Chancellor of the Exchequer. During a following committee probe, Mountford dishonestly denied having any role with the leak. 136 Events like these may indicate that the modern Conservative Party is not the only organization whose ministers refuse to acknowledge that the immense authority they have justifies subjecting their actions to a thorough, uncomfortable investigation by a knowledgeable and largely independent Parliament.

In truth, the Commons' de facto subordination to the government did not alter much as a result of the Labour Party's resounding win in the 1997 general election. A bipartisan committee was set up by the Blair administration

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to look at how to modernize the Commons' internal processes. It made modest suggestions. More Commons activity was scheduled for the mornings, and the Parliament was briefly closed during half-term breaks in recognition of Members' obligations to their families. A decision to utilize Friday sittings less often would help MPs whose seats were distant from London and would allow them to leave for their districts on Thursday nights. The committee also recommended that the Speaker be given additional authority to impose tougher time limitations on the length of each speech, allowing more MPs to participate in discussions. It remains to be seen if that suggestion would genuinely improve the level of discussion as opposed to just allowing more inane input from unqualified speakers. Press coverage of the cross-party committee's recommendations provided some insight into how absurdly antiquated the Commons' procedures are; the recommendation that garnered the most attention was the elimination of the requirement that an MP could only raise a point of order during a division if she was wearing a top hat.

In June 1998, when forty Labour MPs voted against the government's proposal to end student assistance, no such harsh repercussions materialized.

139 Backbench pressure failed once again to convince the administration to change its course. In contrast, the Home Secretary was convinced to change the provisions of his highly illiberal Bill to deter migrants from applying for asylum in Britain by the possibility of perhaps fifty Labour MPs voting against the government. 140 Blair's government faced further challenges in the latter part of 1999 due to planned reductions in welfare payments, this time for the handicapped. Some concessions were made by the government to the insurgents, but fundamental changes were not allowed. During third reading, 54 Labour MPs ultimately voted against the Bill, cutting the government's majority to 60. A subsequent large insurrection was prompted in May 2000 by the government’s decision to privatise the air traffic control system, a program which it had regarded as entirely unacceptable while in opposition.

Notwithstanding these incidents, which received a lot of journalistic attention, the first Blair administration was able to complete its tenure without ever being defeated on a whipped vote. No previous post-war administration has ever accomplished such a feat.

Also, the first Blair administration didn't seem eager to strengthen the authority of the Commons select committees. In its report from 2000, the Liaison Committee recommended, among other things, that party whips no longer have any influence in selecting committee members and that committee membership be organized to provide an alternate career path to the industrial greasy pole. The recommendations were rejected by the government. The administration was able to withstand calls for the report to be put to a vote in the house thanks to the quiet behavior of Labour backbenchers.

In the days after the 2001 general election, the Commons seemed to grow more adamant in defending its committees. The government tried to oust Donald Anderson and Gwyneth Dunwoody from their positions as chairs of the Foreign Affairs and Transport Select Committees in a tactic similar of how the Major administration handled Nicholas Winterton. The ridiculous defense for the plan was that Anderson and Dunwoody had spent too much time on the committees. Ms. Dunwoody recently claimed that the administration was orchestrating a smear campaign among MPs and in the media to damage her credibility because they were so enraged by her Committee's actions. After both MPs were elected back into their seats, the administration later experienced the humiliation of a large loss on the house floor. The election of committee heads is, at least in theory, an issue up for a free vote, but it should possibly be emphasized. One can only speculate as to whether Labour MPs would have defended the sovereignty of the Commons with similar vigor in the face of a whip.

When Robin Cook, a former foreign secretary, was chosen to serve as Leader of the House during the second Blair administration, there were hopes that more sweeping changes may win government backing. In a brief interview after being appointed, Cook claimed to be very concerned with boosting the legitimacy and efficiency of the house in relation to the executive branch. 144 Soon after, he said that the government supported the kind of reform that the Liaison Committee had advocated for two years. The press eagerly embraced the proposals. Nonetheless, it was clear that Mr. Cook had failed to persuade the Prime Minister and his Cabinet members of the advantages of his proposals. Government whips were successful in getting Labour backbenchers to vote against the measures in May 2002. 145 The Prime Minister agreed to have a regular, televised question-and-answer session with the Liaison Committee on all aspects of government policy, which was the only change of any significance made in the first year of the second Blair administration.

III. CONCLUSION

The lower house is unlikely to significantly impede the legislative timetable of a government with a majority in the Commons. There were not many significant backbench rebellions during the first Blair administration. All of them originated from the left of the party in opposition to what the rebels saw were too severe social policy objectives. The most severe issue included a Bill intended to reduce welfare payments to single parent households that surfaced in the latter part of 1997. Labour MPs openly disagreed with the measures. Just people ultimately abstained, leaving only opposing the second reading. Malcolm Chisholm, a junior minister, opted to leave his position rather than back the administration. The government did not give the rebels any meaningful concessions, but the incident was so humiliating that the prime minister felt compelled to fire Harriet Harman,

the then-secretary of state for social security, soon after. Despite its many benefits, the departmental select committee system can also face challenges. Committees may struggle to secure access to the information they need to carry out their work effectively, and may face political pressure from the government or other stakeholders. Overall, the departmental select committee system is an important component of the parliamentary system, providing an important mechanism for scrutiny and accountability of government departments and agencies.

REFERENCES

[1] H. Midgley, "The National Audit Office and the Select Committee System 1979-2019," Parliam. Aff., 2019, doi: 10.1093/pa/gsz034.
[2] M. Y. Simargolang and H. S. Tamba, "Sistem Pendukung Keputusan Menggunakan Metode Fuzzy Sugeno Untuk Menentukan Calon Presiden Mahasiswa Di Universitas Asahan," J. Teknol. Inf., 2019, doi: 10.36294/jurti.v2i2.426.
[3] A. R. Hernández, C. Gracia-Lázaro, E. Brigatti, and Y. Moreno, "Analyzing a networked social algorithm for collective selection of representative committees," PLoS One, 2019, doi: 10.1371/journal.pone.0222945.
[4] S. Bevan, W. Jennings, and M. Pickup, "Problem detection in legislative oversight: an analysis of legislative committee agendas in the UK and US," J. Eur. Public Policy, 2019, doi: 10.1080/13501763.2018.1531910.
[5] S. Chen et al., "A new application of multimodality radiomics improves diagnostic accuracy of nonpalpable breast lesions in patients with microcalcifications-only in mammography," Med. Sci. Monit., 2019, doi: 10.12659/MSM.918721.
[6] Y. Babichenko, O. Dean, and M. Tennenholtz, "Sequential voting with confirmation network," in Electronic Proceedings in Theoretical Computer Science, EPTCS, 2019. doi: 10.4204/EPTCS.297.2.
[7] M. Russell and P. Cowley, "Modes of UK executive-legislative relations revisited," Polit. Q., 2018, doi: 10.1111/1467-923X.12463.
[8] L. C. Man et al., "A learning community approach to identifying interventions in health systems to reduce colorectal cancer screening disparities," Preventive Medicine Reports. 2018. doi: 10.1016/j.pmedr.2018.10.009.
[9] C. McCabe, "'The going out of the voluntary and the coming in of the compulsory': The impact of the 1838 irish poor law on voluntary charitable societies in Dublin city," Irish Econ. Soc. Hist., 2018, doi: 10.1177/0332489318790981.

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The House of Lords

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***Abstract*— The House of Lords is the UK Parliament's second chamber. It is separate from the elected House of Commons' activity and enhances it. The Lords are responsible for drafting legislation, as well as for scrutinizing and questioning government actions. In this chapter author discusses the bicameral legislatures. The House of Lords has a number of functions, including the ability to scrutinize and amend legislation passed by the House of Commons, to initiate debates on important policy issues, and to hold the government to account through the questioning of ministers.**

***Index Terms*— Authorize, Bicameral, Government, Law, Legislatures.**

I. INTRODUCTION

Philip Cowley, however, has made a compelling case that since 2001, Labour backbenchers have shown a great deal of independence from the Blair administration. The choice of Labour MPs in March 2003 to vote against the government's motion in the House of Commons requesting permission of its planned invasion of Iraq is blatant proof of the argument [1],[2]. Only because the opposition Conservatives backed the government did the motion finally pass. The government's first loss in the Commons on a whipped vote in November 2005 over its desire to pass legislation authorizing the detention of terrorism suspects for up to 90 days without accusation or trial serves as a potentially more dramatic example. Labour backbenchers voted against the government's plan together with the opposition parties [3],[4].

According to Cowley's research, Labour backbenchers influenced government policy in more subtle ways. He names a number of significant legislation that were supported by the government during the 2001–2005 legislative session but were significantly altered during their passage due to official worries that backbench Labour support may not be forthcoming [5],[6]. The government's majority in the Commons was reduced to after the 2005 general election, a situation that indicated Prime Minister Blair's third administration could need to be far more receptive to the demands of its backbenchers than its predecessors had been. This hypothesis was amply shown in the spring of 2008, when a sizable portion of Labour backbenchers declared their opposition to a budget plan that would have eliminated the lowest rate of income tax. The idea would have increased many low-income individuals' tax obligations dramatically. The administration took the prospect of mutiny seriously enough to provide a package of measures to make up for the individuals who would be harmed, so preventing the chance of defeat in the Commons [7],[8].

After the 2010 general election, a coalition government between the Conservatives and Liberals was formed since no party won a majority in the parliament. While the parties drafted a "Coalition Agreement" describing their planned legislative agenda, there was still much dispute on the merits of several legislative measures by the middle of 2011 between the minister and backbenchers of both parties. The government said there would be a "pause" in the passage of a Bill that had already passed most of its Parliamentary stages so that more consultation could take place on its contents. These conflicts were especially intense over planned changes to the National Health Service. The incident undoubtedly increased the likelihood that the Commons may play a larger legislative and oversight role than it has for the most of the modern period [9].

Notwithstanding this recent tendency, it is evident that party politics have dominated the Commons throughout the majority of the modern period, determining both the legislative process and executive responsibility. For the majority of purposes, the house is clearly no longer a national legislature. Nonetheless, it would be premature to draw the conclusion that factional interests are consequently allowed to influence both the substance of legislation and the parliamentary accountability of government behavior. Our study requires take a look at a few more factors in order to respond to that query. The second branch of our tripartite Parliament, the House of Lords, has an important constitutional responsibility to fulfill. The second is how factional Commons majorities interact with "the people." Thirdly, how factional governments employ the resources they have at their disposal. The most crucial of all the questions is perhaps the final one. So even if one thinks that a factional constitution is undesirable in a contemporary democracy, it does not necessarily follow that such a constitution would produce factional laws or, if it does, that the laws in question do not win the support of the governed.

The House of Lords Five started to investigate whether Parliament's current role accurately reflects the 1688 settlement's intentions, which were to guarantee that elite groups monopolized law-making power and to make sure that no one or two factions within that elite could usurp legislative authority to further majoritarian or majoritarian

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goals. Five argued that since 1688, the Commons' function has significantly changed from that of a legislature representing the voice of a single distinct group of society, in opposition to the Lords and the Monarch, to that of a venue for the expression of the many political ideologies of the whole populace. The threat of a majoritarian lower chamber, where pursuing factional party advantage rather than defending national interests could be the main occupation of legislators, arises from the rise of national party politics and the fusion rather than separation of powers between the legislature and the government. Seven examines how this pattern has changed as a result of the evolution of the parliamentary election system. This concerns the effectiveness of the upper chamber's anti-majoritarian legislative function.

II. DISCUSSION

A. Bicameral legislatures: a functionalist justification

There are typically two chambers in the central legislature of contemporary democracies. Countries with just one legislative assembly have unicameral Parliaments, which are referred to as having a bicameral parliament. The House of Representatives and the Senate make up the national legislative of the United States. The separation of powers concept was carried on by the Americans' split of their national legislature. Madison and Jefferson wanted to further minimize the probability that Congress might pass oppressive laws by mandating that legislation be approved by more than one body. The two chambers of Congress each perform distinct representational roles. Regardless of the size of the State's population, the Senate has two senators from each state. Senators emphasize the federal character of the Constitution by representing State concerns in the national legislature. Members of the House of Representatives, on the other hand, are elected based on population; the number from each State corresponds to that State's proportion of the total population. This emphasizes that the Federal Legislature of the United States was accountable to both the States and to each individual citizen. Bicameralism aims to increase the likelihood that Congress will develop laws that strike a reasonable balance between the interests of the States and of individual individuals while working within the legislative authority allowed by the Constitution. The majority of nations with bicameral legislatures regard the makeup and authority of both chambers to be basic laws. The language of the US Constitution outlines the composition of Congress. Similar to Trethowan, the New South Wales constitution employed procedural entrenchment to protect the legitimacy of the Legislative Council. A "higher" law under such constitutional arrangement was bicameralism.

The House of Lords and the Commons are the two branches of the British parliament, respectively. The Monarch, in principle, is a third component of Parliament. The Monarch still has the authority to reject new laws by refusing to give them the Royal Assent, according to legal doctrine. Unfortunately, this authority is no longer employed due to realistic political considerations.

Understanding the difference between theory and practice—also known as what is sometimes referred to as law and convention—is crucial to comprehending the constitutional position and role of the House of Lords. By focusing on this "gap" between theory and practice, we raise concepts that will be crucial to comprehending how and why the constitution operates the way it does in the future. For the time being, we may make the following straightforward distinction between law and convention. Both are platforms for the lawful and efficient use of political power. Conventions, on the other hand, lack a legally enforceable foundation, while laws may be enforced by a court action. Instead, they impose restrictions on the use of political power because those who wield it either think that following the rules is ethically right or they are afraid of the political repercussions of doing otherwise.

B. The historical context

The "Great Council," an organization that took on a recognizable contemporary form in the fifteenth century, is where the House of Lords had its start. The Lords was seen as a "fundamental" part of the English constitution in the pre-revolutionary period. 4 The Lords and Commons were equal participants in the legislative process in 1688 in terms of their legal authority. The 1688 revolution established Parliament's—not the Commons'—juridical primacy. A Commons Bill could not advance if the House of Lords rejected it.

Co-equality included the ability to establish governments and pass laws. Up until the late nineteenth century, the majority of the Cabinet's members might come from either the Lords or the Commons. For example, just one member of Lord Grey's 1830 Cabinet came from the Commons. Gladstone put together a Cabinet of twelve members in 1880; one was a duke, one a marquess, and five were earls; none of them were peers or the sons of peers. 5 The custom that the Prime Minister must be a Commons member didn't start to take hold until the 20th century.

The peers in the Lords in 1688 were either bishops or hereditary peers. The Lords was not a democratic body in the modern sense; it was a fusion of the church and the land-owning nobility. Yet the Commons, whose representatives were later "elected" by a minuscule percentage of the populace, wasn't either. 6 Co-equality was a status quo among elites, not among the general populace. Such elitism was simple to see from a functionalist viewpoint. The aristocratic veto in the legislative process served to protect the existing structures of political and economic power, according to the constitutional morality of the time. As mentioned in chapter seven, the industrial revolution had a profound effect on the nature and distribution of wealth and significantly realigned the bases of political power. Land ownership, however, continued to be the primary source of economic power up to the year 1800,

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with members of the House of Lords making up the majority of the landowner class. Just 500 peers held about half of the thirty million acres in the nation in 1876, and many of them made significant profits from industrial, commercial, and residential development in addition to the more traditional source of revenue, agriculture.

C. From complementarity to co-equality: a traditional shift

Legally, the two chambers remained to have equal standing throughout the legislative process and the creation of the government up to the 20th century. But everything started to alter politically pretty rapidly. Both chambers seemed to agree that the Lords shouldn't have a veto over legislation dealing with increasing government income from the commencement of the post-revolutionary era. A 1678 Commons resolution stated that all bills for granting such aids and supplies should start with the Commons and that it is the Commons' undeniable and exclusive right to direct limit and appoint in such bills the Ends, Purposes, Considerations, Conditions, Limitations, and Qualifications of such Grants, which ought not to be changed or altered by the House of Lords. The original sources of this conventional understanding are unknown, but its scope was clearly defined therein.

D. The Utrecht Convention

Early in the eighteenth century, there was a significant dispute between the Lords and Commons of the post-revolutionary era. A dispute over the conditions of the Treaty of Utrecht between the administration, which had a majority in the Commons, and the majority of peers in the Lords was the immediate reason. The impasse was broken when the administration requested that Queen Anne use her prerogative powers to appoint enough additional peers to the government's support in order to give it a dependable majority in the House of Lords. The Queen acknowledged that she should heed the counsel of her ministers and appointed twelve additional lords. The Utrecht incident showed how the Monarch's backing for a government with a majority of Commons support may jeopardize the Lords' putative coequality. The incident is important from a constitutional perspective because it exposes a pro-majoritarian legal flaw woven into the fabric of the 1688 agreement. The anti-majoritarian mentality that informed the original idea of parliamentary sovereignty would be undermined if a government and monarch colluded in this fashion, but it would not be unlawful.

The Great Reform Act of 1832 gave constitutional reform a more significant focal point. In seven, the process of this legislation's passage is thoroughly addressed. Here, it would enough to say that many Conservative Lords vehemently opposed the Act because they believed it endangered the distribution of economic power, which they believed to be the foundation for the country's security. Seven also discusses the factors that led to the Lords' final assent to the Bill. This acceptance, however, meant that starting in 1832, there was a democratic rationale for considering the Lords to be the Commons' constitutional superiors. The Commons was becoming a body that could more credibly claim that the agreement of the governed gave it power. To imply that the Commons in 1833 was a really representative body would be deceptive. Nonetheless, the legislative tendency continued to go in that manner after 1832.

E. The doctrine of the mandate

The more "democratic" foundation of the Commons after the Reform Act had important implications for the authority that a non-elected Lords might anticipate having. While the two houses were still considered equal partners by the 1880s, their relationship had significantly altered in reality. By 1900, it had become customary for the Lords to back Commons-passed legislation unless it seemed that the House was pushing unpopular policies. Lord Lyndhurst stated in 1858 that there are legitimate boundaries to the Lords' intransigence: "I never understood, nor could such a principle be carried out, that we were to make a firm, determined and persevering stand against the opinion of the other House of Parliament when that opinion is backed by the opinion of the people." According to Lord Lyndhurst, the Lords' ability to obstruct legislation is a tool that it may use if it believes that the Commons is pursuing ideas that lack popular support.

In contrast, Lord Salisbury, the Conservative peers' leader at the time, said in 1872 that the right to veto was a requirement under the Constitution. Until "the judgment of the country has been contested at the polls and decisively declared," the upper chamber was required to disobey the Commons on significant topics. 12 The Lords' rejection of a government Bill to restructure the Irish Church led to the development of the so-called "doctrine of the mandate" or "referendum theory" in the late 1860s. Lord Salisbury said that the idea was not included in the planned legislative program on which the Liberal administration had run for office in the last general election and that a new election was about to be conducted to support the Lords' stance.

The argument for this stance was substantially supported by the countries and the Commons' at that point hardened party allegiances. In the Lords, party affiliation was widespread in 1880: According to E A Smith, "280 peers identified as Conservative and 203 as Liberal, as opposed to just thirteen of no party. Although while party discipline in the Lords was not as strictly enforced as it was in the Commons, it was nevertheless typically successful enough to guarantee the Tories a majority whenever it was needed. It should come as no surprise that Conservative administrations had less difficulty guiding bills through the Lords than their Liberal colleagues. Even though even Sir Robert Peel sometimes had his proposals rejected, the administrations of Lord Darby and Disraeli in the 1860s and 1870s and Sir Robert Peel in the 1840s often gained Lords majorities for moderate programs of social, economic, and political transformation.

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The mandate concept creates a contradiction since a body made up mostly of landed gentry17 viewed enforcing 'democratic' values against the elected chamber as one of its important constitutional tasks. The Lords positioned itself as the "watchdog of the constitution," with the authority to "overreach" the House of Commons and seek the opinions of the populace by demanding that a government with extreme ideas gauge public support in a general election. Cynical onlookers could ask whether the upper chamber would only vigorously defend popular opinion when it agreed with the majority of Conservative Lords. Salisbury was willing to make changes to his formula if the first version didn't work for him. The Irish Home Rule Bill was rejected by the Lords on the grounds that it had received support from Irish MPs exclusively during its passage through the Commons. Salisbury believed that the opposition from the majority of English MPs, who made up the "predominant part- ner" in Parliament, was sufficient justification to compel the Liberals to bring the matter before voters once again. 18 This "predominant partner" approach emphasizes the overarching idea that parties to a convention who have believed themselves to be bound by it may unilaterally change the convention's terms.

Throughout the late Victorian period, the Lords and Commons disagreed on a number of topics, most notably Ireland policy, although disagreements were usually resolved before turning into constitutional crises. But, the Lords' respect was a result of political self-control. The Lords decided against upsetting the Commons. This decision may have been motivated by the worry that if the Lords rejected a Commons Bill, the administration may ask the monarch to fill the upper house with additional peers. But, there was no legal barrier preventing the Lords from just opposing government policy.

The traditional authority of the Lords and the scope of the parliamentary franchise may have been inversely correlated; as more people gained the opportunity to vote for Commons representatives, it became more difficult for the Lords to establish a "democratic" rationale for impeding the lower chamber. Almost all adult males had the right to vote in parliamentary elections by 1900, and the Lords' political function was changing from co-equality to complementarity at the same time.

The Lords complimented the Commons by serving as a bill examiner, a venue for discussion of matters of broad interest, and a means of bringing significant questions to the public's notice. The Lords' political position was shifting toward one in which it may convince, but not force, the government, as The Times had prophesied in 1831. Nonetheless, between 1909 and 1911, it seemed that the Lords preferred their historic legal position of co-equality above their new conventional duty of complementarity.

F. On the "people's budget," Lloyd George

A convention cannot be compelled by law. It only works as long as the parties to it are willing to be bound. The Lords' explicit legal authority to reject Bills approved in the Commons was no longer subject to traditional restrictions by 1909. The long-term root of this difficulty was the strengthening of the party system in national politics, where sizable swaths of thought had formed around a number of significant problems that could not be reconciled. A major political rift over social and economic policy issues emerged, which, to put it crudely, provides an early factual illustration of the conflict between social democratic and liberal market conceptions of the state. The House of Commons had 671 members in 1906. The Liberals and the minor parties that supported them gained 514 seats in the parliamentary election of 1906. There were 157 seats held by the opposing Conservative and Unionist parties. The administration now had a 357 vote effective majority. Nevertheless, the party split in the Lords was considerably different: the Tories had a 391% majority.

The Liberal administration pursued a number of innovative social policy initiatives between 1906 and 1909. Arthur Balfour, the party's leader, successfully used the Tory majority in the Lords to either obstruct or significantly change government Legislation despite the Conservative majority being in a distinct minority in the Commons.

The Finance Bill of 1909, often known as Lloyd George's "People's Budget," was the catalyst for the resolution of the situation. The Bill would significantly increase taxes to pay for a larger welfare state and a larger navy. From a contemporary perspective, Lloyd George's proposed tax policies seem to be fairly reasonable; income tax would only be charged at nine pence per pound. Roy Jenkins notes that the ideas nonetheless sparked vehement Tory opposition:

According to Sir Edward Carson, it "marks the beginning of the end of all rights of property." Lord Lansdowne described it as "a monument of irresponsible and imprudent finance." It is authoritarian, inquisitorial, and socialist, according to Lord Roseberry. 24

The divergent opinions on the budget for 1906 succinctly capture one challenge in adapting Jeffersonian constitutional ideas to contemporary governance. One may argue that Carson supports the 'inalienable right' of the affluent to avoid having their property seized by taxes. Contrarily, Lloyd George may have credibly stated that the Liberals' sizable Commons majority demonstrated that "the people" had now agreed to choose a more equal path in their "pursuit of pleasure."

One may have assumed that given the strength of the Liberal majority, tradition would require that the Lords refrain from blocking the Finance Bill. The Conservative majority in the Lords, however, steadfastly opposed passing the Bill, arguing that the mandate doctrine required the government to call a general election to determine whether the populace supported the policy because the Bill's provisions had not been made clear to the electorate in 1906. In order to get the Bill through the Lords, the Liberal administration asked the King to appoint enough Liberal

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peers. As the head of the Conservative Party in the Commons, Arthur Balfour, understood Edward VII's reluctance to do this. Balfour had pleaded with the majority of the Conservative Lords to oppose the government's Bill. This prompted Lloyd George to claim that the Lords was "Mr. Balfour's poodle," rather than the "watchdog of the constitution." It goes out and gets things for him. For him, it barks. Anybody he lays it on will be bitten by it. The Conservatives' majority in the upper chamber was almost as large as the Liberals' in the Commons. Less than 100 peers were Liberal, whereas 350 accepted the Tory whip, and just 43 said they had no loyalty to any party.

At this point, one may stop to wonder whether party was behaving "unconstitutionally." Given that the Liberals had won the 1906 general election, we might easily charge the Tories in the present. Yet it is false to imply that the majority of people support the Liberal administration and its small-party partners. The restricted franchise at the time has previously been mentioned; in 1906, more than half of the adult population was not allowed to vote. Moreover, as seen in table 6.2, 45% of voters chose an opposition party to the Liberal bloc, receiving just 55% of the vote. So, the Liberal position was only democratic in the limited sense that it garnered support from a "people" that was in and of itself a small portion of the population.

One may argue that the Conservative peers were the ones who upheld the old constitution. Legislation supported by different factions cannot be passed because of the tripartite, sovereign Parliament. The People's Budget was undoubtedly a factionalist project. The Lords likely upheld the spirit of the 1688 agreement by vetoing a Bill that a sizable proportion of "the people" seemed to disapprove of. The Liberal administration believed that the Commons' majoritarianism was the "ultimate political truth" of the constitution. Prime Minister Asquith asked for the dissolution of Parliament in December 1909, alleging that the Lords had violated the Constitution by opposing the Finance Bill.

The People's Budget was the main topic in the general election of January 1910. The Liberals won a large effective majority and proposed a bill in the House of Commons that significantly curtailed the Lords' veto authority. The Lords later approved the Finance Bill, but they rejected a Measure that would have limited their own legal authority. Moreover, King Edward VII gave off the impression that he opposed the latter Bill and was undecided as to whether he would appoint the hundreds of additional peers required to defeat the Tory majority. George V, his heir apparent, too seemed unwilling to uphold the precedent set by the Treaty of Utrecht.

Another general election was called by Asquith for December 1910, and it was focused entirely on constitutional change to limit the authority of the Lords. This election was also "won" by the Liberals. After this, it seemed that the King had consented to appoint enough additional peers to ensure that the Bill passed both chambers. A moderate group of conservative peers had suggested changing the makeup of the upper chamber rather than its authority. 28 In May 1911, the Bill was presented by Lord Lansdowne, the Conservative leader in the Lords. A 350-member upper house with a third elected by MPs, a third appointed by the government based on the strength of the parties in the Commons, and a third made up of so-called "Lords of Parliament"—hereditary peers who have previously held significant public office—was the upper house that was proposed by the bill. The Lords' authority was not to be diminished according to the Bill. The goal of Lansdowne's proposal was to increase the knowledge and political neutrality of the Lords while simultaneously minimizing their blatant lack of representation in order to strengthen the Lords' status as a house equivalent to the Commons. The Lords would change from being an aristocratic to a meritocratic parliament, with the purpose of restraining the potentially impulsive wants of a factional Commons majority by representing a national interest that is more based on wisdom and public service than money and ancestry.

The administration rejected the reform proposal, stating that its intentions to curtail the Lords' authority would stand regardless of the make-up of the upper chamber. Asquith understood that a Tory majority would still be present in Lansdowne's new house. If the Cabinet had backed the bill, it would have produced a parliament that is no less formidable or capable of impeding Liberal policy than the current house, but better positioned to counter any such impediment by citing its altered makeup. At this time, a sizable number of moderate lords realized that continuing to oppose government policy was pointless, and the Parliament Bill 1911 was eventually approved by the upper house, although with a narrow majority of just seventeen.

III. CONCLUSION

The House of Lords is the UK Parliament's second chamber. It is separate from the elected House of Commons' activity and enhances it. The Lords are responsible for drafting legislation, as well as for scrutinizing and questioning government actions. In carrying out its duties, the House of Lords would continue to be subordinate to the House of Commons; its major duties should be to evaluate and amend legislation, examine the executive, and discuss and report on public concerns. However, the House of Lords has faced criticism over its lack of democratic legitimacy and calls for reform have been made. Some have called for the chamber to be entirely elected, while others have suggested that it should be replaced with a more representative body. Overall, the House of Lords remains an important part of the British Parliament, with a key role in the legislative process and the ability to provide important checks and balances on the power of the government. However, the debate around its role and legitimacy continues.

REFERENCES

[1] P. Norton, "Post-legislative scrutiny in the UK Parliament: adding value," J. Legis. Stud., 2019, doi: 10.1080/13572334.2019.1633778.

[2] T. Al Baghal, "Usage and impact metrics for Parliamentary libraries," IFLA J., 2019, doi: 10.1177/0340035218821391.

[3] E. Robinson and J. Watts, "Doctrine and decision: Navigating labour's new constitutional position in the lords," Polit. Q., 2019, doi: 10.1111/1467-923X.12660.

[4] M Swertz, "XIV: The House Of Lords Past, Present And Future," Camden Fifth Ser., 2019, doi: 10.1017/s0960116319000198.

[5] J. Smith, "Fighting to 'Take Back Control': The House of Lords and Brexit," in European Administrative Governance, 2019. doi: 10.1007/978-3-030-06043-5_4.

[6] A. Dennett, "10. The House of Lords," in Public Law Directions, 2019. doi: 10.1093/he/9780198807315.003.0010.

[7] R. Veenhoven, "The Origins of Happiness: The Science of Well-Being over the Life Course," Contemp. Sociol. A J. Rev., 2019, doi: 10.1177/0094306119853809g.

[8] B. Tarran, "Forensic science in 'crisis', needs funding for research," Significance. 2019. doi: 10.1111/j.1740-9713.2019.01268.x.

[9] I. I. Mitroff, "The Revolution of Everything," in Technology Run Amok, 2019. doi: 10.1007/978-3-319-95741-8_2.

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An Overview of Salisbury Doctrine

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Abstract— The convention, as it now exists, allows for the presenting of rational amendments to a motion seeking second reading of a government bill, provided that the modifications are not wrecking amendments intended to kill the law. In this chapter author is discusses the Salisbury Doctrine and the parliament act 1949. The Salisbury Doctrine reflects the principle of parliamentary sovereignty, which holds that the elected House of Commons has the ultimate authority in law-making. It recognizes the democratic mandate of the governing party and seeks to ensure that their manifesto commitments can be implemented without obstruction from the unelected House of Lords.

Index Terms— Act, Bills, Doctrine, Salisbury, Parliament.

I. INTRODUCTION

The preamble to the Act stated that it was only meant to be a temporary solution while more extensive reform of the composition of the Lords on "a popular instead of hereditary basis" was being considered. The Bryce Commission was created by the coalition government during World War I to study the issue of reform. While the Commission's proposals were not implemented, its analysis of the duties a second chamber should carry out has received strong support. 30 Bryce outlined four primary responsibilities for the Lords: reviewing and amending Commons Bills; introducing Bills on non-party political topics; providing a forum for discussion of important issues; and, perhaps most importantly, delaying Bills for long enough to allow the public's opinion to be heard. We'll soon evaluate how well the Lords did in fulfilling their duties. Before doing so, we take into account a contention raised by the 1911 Act over the character of "Parliament" and its purportedly "sovereign" legislative authority [1],[2].

A. Parliament

The Act created a number of improvements in how legislation may be produced. The most significant clause gave the Commons and the King the authority to adopt laws in cases when the Lords refused to support a bill passed by the lower chamber. There are two unique possibilities in which the Commons and King might come into possession of this new power [3],[4].

If a Money Bill is not passed by the House of Lords without amendment within one month of being sent to that House, unless the House of Commons directs otherwise, the Bill shall, unless the House of Commons directs otherwise, be presented to His Majesty and become an Act of Parliament on the Royal Assent being signified, despite the fact that the Money Bill was passed by the House of Commons and sent up to the House of Lords at least one month before the end of the session [5],[6].

Examples of the kinds of bills that might be considered "Money Bills" were provided in Section 1. Yet Section 1 also stated that the Speaker would confirm if a Bill really met the criteria of a "Money Bill."

After addressing certain measures other than "Money Bills," Section 2 stated: "If any Public Bill is passed by the House of Commons in three successive sessions, and, having been sent up to the House of Lords at least one month before the end of the session, is rejected by the House of Lords in each of those sessions, that Bill shall, on its rejection for the third time by the House of Lords, unless the House of Commons directs the contrary, be presented to His Majesty and beco With the caveat that this clause won't go into effect until two years have passed between the date of the bill's second reading in the House of Commons during the first of those sessions and the day that it passes the House of Commons during the third of those sessions [6],[7].

In accordance with Section 2, the Speaker was obligated to affix a certificate attesting to the fulfillment of the requirements to any Bill submitted to the King under this clause. The Speaker's certificate on this topic was also stated in Section 3 to "be conclusive for all purposes and shall not be questioned in any court of law." Section 4 then included the need that the following clause be included in any legislation created via the s 1 or s 2 procedures:

Be it enacted by His Majesty the King, by and with the advice and agreement of the Commons in this current Parliament convened, in conformity with and by virtue of the provisions of the Parliament Act of 1911, as follows. The maximum time between general elections was formerly seven years, but Section 7 of the Act changed it to five years [8],[9].

The 1911 Act has quite odd outcomes when it is interpreted under either the literal or golden approach of statutory construction. The designation of the legislation made by the Commons and King as "Acts of Parliament" in both sections 1 and 2 of the Act may be its most remarkable textual provision. The "Act of Parliament" label in ss 1-2 suggests that lawmakers may have assumed that the 1911 Act created two "new" or "alternative" "Parliaments," these being

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the "Money Bill Parliament" per s 1 and the "other public Bill Parliament" per s 2. This interpretation is supported by the statement in the preamble to the Act that the Act's objective was, among other things, "to restrict the powers of the House of Lords." This is a challenging assumption to accept for three reasons.

First off, the assumption conflicts with the conventional wisdom that Parliament, as the institution that enacts laws, is a tripartite one and that each of its three sections must consent for a proposal to be recognized as an Act of Parliament. We may easily agree that there can be no legal argument against the idea that Parliament can establish law-making organizations with almost limitless legislative authority, or against the idea that the laws enacted by such a body would have the same hierarchical legal standing as Acts of Parliament. These legislation might alternatively be referred to as "Acts of Parliament," although doing so would be confusing, inaccurate, and constitutionally ignorant. Nonetheless, such entity would be a product of Parliament, and its legislation would be a direct result of the 1911 Act, regardless of the shape it may take or the scope of its authority. The group would function as a subordinate "legislature," and the laws it enacted would be referred to as delegated laws. From this vantage point, the 1911 Act should have described the laws passed by the Commons and King as measures "equivalent in effect to Acts of Parliament" and referred to them as "Parliament Act legislation" rather than "Acts of Parliament." This would have been a "better" way for Parliament to have expressed its wishes.

The second argument is that s 1 and s 2 are inherently irrational. The "Money Bill Parliament" is plainly defined—in absolutely literal terms—as a law-making body with very little authority. Its authority is confined to measures addressing the issue mentioned in § 1 itself. Moreover, Section 2 expressly prohibits the "other public Bill Parliament" from "enacting" a Money Bill or a Bill that would increase the term of a Parliament's existence beyond five years. The idea that a lawmaker may be both sovereign and subject to unambiguous limitations on the extent of its powers, as indicated in both sections 1 and 2, is intrinsically contradictory.

The existence of the s 3 ouster clause is the third argument, which is also derived from the wording of the Act itself. An expulsion clause is used to shield governmental entities from court scrutiny. And the goal of judicial review is to provide a way to prove that governmental entities are working within the bounds of their authority. Yet, because "Parliament" has unrestricted authority, there is no need to shield it from court examination. The 1911 Act unavoidably recognized that it was producing legislators with limited competence when it sought to shield the "Money Bill Parliament" and the "other public Act Parliament" from judicial scrutiny.

The challenges stated above may suggest that any effort to understand the Act's meaning would need to identify the "mischief" it was meant to correct in order to make sense of its wording in relation to the goal it was meant to serve. Asquith's remarks to his constituency constituents in the January and December 1910 general elections may be the most illuminating example of how his government saw the matter.

Asquith described the issue in the following words in January:

It is unique and only a usurpation for the House of Lords to assert its authority over finance. Yet, the experience of the now dissolved Parliament demonstrates that having an unrestricted veto by a partisan people, no matter how explicitly articulated, is always likely to be deemed ineffective. The liberal majority in the House of Commons has shown over the last four years that it is powerless to enact the same laws that it was sent to Westminster to do so in order to put them on the Statute-book.

Speaking about this system as if it gave us the benefits of a second chamber in the sense that the word is used and practically used in every other democratic nation is ludicrous. The veto's restriction is the first and most important action to be done since it is a prerequisite for the big legislative changes that our party wants to see implemented.

In December, he stated that the plea being made to you and the nation as a whole was essentially limited to one topic. But, the whole future of democratic administration relies on its decision in one way or another. Are the people, via their freely elected representatives, to have influence over their creation of legislation as well as their financial and administrative policies? Or are we to continue with the unbalanced system where a Tory majority, no matter how small and haphazardly created, has free reign over the Statute Book, while Liberal legislation, no matter how obvious the message of the polls, is persistently denied a fair and equal chance due to the Constitution's forms?

The "mischief" Asquith points out here is a specific one, namely that the House of Lords has the power to stop government-sponsored Bills addressing policy issues receiving substantial public support from being granted legal effect.

The main legal issue raised by the 1911 Act is whether or not courts would acknowledge that the Commons and Monarch were, in fact, a "subordinate legislature" and would therefore consider the possibility that a measure passed by the Commons and Monarch might be outside the bounds of their authority to make laws. If the first proposal were to be accepted, the follow-up inquiry would be, "Exactly what was the scope of the virres conferred to the Commons and King by the 1911 Act?" The 1911 Act was put into effect, and soon after, the s 2 method was applied twice. The Government of Ireland Act of 1914, which established an Irish Parliament with significant legislative authority, was "enacted" in 1914 in accordance with section 2. The Welsh Church Disestablishment Act of 1915 was handled using the same manner. No legal action was taken against either legislation on the grounds that it was used to further an aim beyond the

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scope of the King and Commons.

II. DISCUSSION

A. The Salisbury Doctrine and the Parliament Act 1949

During a large portion of the time between 1916 and 1945, the possibility of disagreement between the Commons and Lords was almost eliminated. The Conservative, Liberal, and Labour parties worked together to form a multi-party coalition that served as the government for many of these years. The administration didn't need to use the legislative authority provided by the 1911 Act to the Commons and King in that particular political setting. There was no visible opposition party for Tory peers to represent and limited room for the Lords to assert the national interest against a partisan Commons due to the clear convergence of policy aims for Conservative, Liberal, and Labour MPs. The Lords in 1945, according to one writer, were "a squandered and ineffectual parliament." It has long since stopped having even the slightest influence on politics. 35 The 1911 Act's preamble's promise that the composition of the Lords would be determined on a basis of representation has not been implemented by succeeding administrations since that time, which has given the upper chamber an increasingly out-of-date character. By 1930, almost all adult men and women had been included in the electorate; hence, the Commons could legitimately be described as "the people's" representative in the broadest sense. In contrast, the upper house continued to be virtually wholly hereditary.

B. Salisbury's philosophy

The Labour Party won a sizable Commons majority in the 1945 general election. The Labour Party ran for office based on a bold policy platform that included pledges to establish a thorough welfare state and to nationalize a number of private sector enterprises. Nevertheless, it was unclear if the required Laws would be passed by the Lords, whose members remained mostly Conservative36. The possibility emerged that the Lords might use their authority granted by the 1911 Act to postpone such bills for two legislative sessions.

The action would have been perfectly lawful. In addition, the Labour Party's sizable Commons majority was only made possible by 48% of the popular vote. Similar to 1906, there is some evidence to suggest that the bold ambitions of the Labour administration were not universally embraced. Yet, Conservative Lords formed a new convention about their powers under the 1911 Act in consideration of these altered political conditions. The Lords would not even postpone any Measure included in the government's 1945 election programme, according to the Salisbury policy.

This trend seems to be explained by the inverse relationship between the degree of "democracy" influencing the makeup of the Commons and the traditional scope of the Lords' powers. Yet, the Salisbury doctrine simply outlined the legislative duty of the Lords although the majority of peers agreed with its tenets. The philosophy caused two problems for the Labour administration from 1945 to 1950. The first was that it wasn't always possible to rely on a majority of the Lords to exercise restraint. The second involved a matter of time. Since public bills other than money bills were still subject to the Lords' three-session/two-year suspensory power, the government could only be certain that its proposed legislation would pass both houses if it started more than two sessions before the end of the current parliament's five-year term.

C. The 1949 Parliament Act

The Labour administration introduced the Parliament Act 1949 through the 1911 Act method because it regarded this potential barrier to the "enactment" of its intended legislative agenda to be too onerous. The Lords' ability to postpone matters was limited to two sessions per year by this second Parliament Act. The 1947 introduction of the Bill resulted in three House of Lords rejections. In light of the fact that the Labour Party had not explicitly said before the 1945 election that it desired to see the 1911 Act changed in this manner, the Lords' reluctance to adopt the Bill was perhaps very compatible with the new Salisbury doctrinal tradition. In its election platform from 1945, the Labour Party promised to "send clear notice that we will not accept obstruction of the people's will by the House of Lords." This may easily be seen as falling short of providing "clear notice" that the voters was being asked to support a government initiative that could further limit the upper house's authority by applying the 1911 Act. Throughout the Bill's passage, several claims were made that using the 1911 Act approach would be "unconstitutional" since the 1911 Act was not meant to be used to further limit the Lords' authority. Such claim, however, was not put to a judicial test, much like in 1914 and 1915.

A cross-party drive to reach consensus on changes to the Lords' makeup and authority coincided with the 1949 Act. A consensus was reached on the principles that this body should be a reformed House of Lords rather than a new institution, and that its composition "should be such as to secure, as far as practicable, that a permanent majority is not secured for any one political party." The Bryce recommendations regarding the functions of a second chamber were broadly accepted.

The Lords didn't seem to undergo any substantial modifications, and it was possible that they may just become obsolete. The average attendance was sixty people in the middle of the 1950s. The top home seems destined to become a charming historical artifact. But things did not work out that way.

D. In the modern period, the House of Lords

This article looks at four recent occurrences in the history of the Lords, including the creation of life peerages, the proposed changes of 1968, the Lords' participation in the 1974–1979 Parliament, and certain facets of the relationship between the upper chamber and the Thatcher administrations.

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E. Lifetime peers

With a faultless Lower House, an Upper House would undoubtedly be of little service, said constitutional thinker Walter Bagehot in the late 1800s. But in addition to the real House, a relaxed and revising legislature is quite helpful.

The House of Commons was overburdened by the middle of the 1950s, both as a legislative body and as a check on the administration. We saw in chapter five how different reforms to the Commons' internal operations were encouraged by succeeding governments in an effort to solve this issue. It is reasonable to assume that these reforms were implemented with differing degrees of seriousness. The Conservative administration in the 1950s turned to the Lords to ease the load on the Commons rather than drastically reforming the lower chamber.

The 1958 Life Peerages Act added a new class of Lords members. The king nominated "Life peers" on the Prime Minister's recommendation. While they were allowed to speak, vote, and sit in the upper chamber, they were not allowed to pass on their titles when they passed away. The majority of Life Peers have historically been notable contributors to public life, such as politicians, unions, soldiers, businesspeople and women, and a lesser number from the arts or universities. 39 The upper chamber was better suited to carry out its complementary role as a result of the new type of peer. The Lords were able to refute claims that they were only made up of old landowners because to the influx of peers from many walks of life with diverse knowledge and experience. Life peers' traits do not coincide with those of the wider population, but MPs' traits also do not, of course.

Arguments in favor of reducing the hereditary component in the upper chamber gained some traction once the Lords' function changed from co-equality with the Commons to completement by 1911. The need for adding appointed members grew as experience and competence became more crucial qualifications for the second chamber and as intellectual deficiencies of hereditary peers increased displeasure. The purpose of the 1958 Act, which had some bipartisan support, was to improve the Lords' complementary relationship with the Commons. It wasn't just a question of undertaking some of the Commons' work that was considered complementary. The 87-year-old Lord Samuel, a minister in Asquith's 1911 administration, blamed the entrenchment of party politics in the Commons for the need for change. Although he saw parties as necessary, he was concerned that the strictness of party rules had resulted in "a considerable crushing of the independent mind," excluding people who "might be of the greatest value to the community, but who have not the time or the temperament... to face the turmoil and the preoccupations of strenuous Parliamentary life." The following discussion examines how well the Lords have been equipped to carry out their complementary roles by life peers. We may sum up by simply bringing up a party-political position. Given the conservative lean of the bulk of hereditary members, life peers in the Lords were still a very small minority even by 1990 and had little effect on the Tory majority.

Only the Macmillan and Home administrations among Conservative governments made significant attempts to boost non-Conservative sentiment. Labour prime ministers did. It is difficult to avoid the conclusion that the introduction of life peers led the Lords in some way towards the situation advocated by Lord Lansdowne and feared by Asquith in 1911—namely, a Conservative house that could use its more expert members as a partial justification for obstructing Labou. Less than a quarter of the peers created by the Thatcher governments took the Labour or Liberal whip,43 and since cross-benchers voted primarily for Conservative policies44, it is difficult to Although a "political honors committee" made up of three privy councillors played a limited role in ensuring that the Prime Minister's nominees weren't wholly unsuitable, the appointment of peers remained a non-justiciable matter.

F. The changes of 1968

In 1964, Labour Prime Minister Harold Wilson issued a warning to the upper house: "We shall seek a mandate to amend the Parliament Act so as to end the Lords' power to block Commons legislation." Wilson said this in response to the upper house's delay of government bills.

45 This kind of impediment was improbable given the Salisbury convention. The War Damage Bill 1965, which, as mentioned in four, retroactively overturned Burmah Oil, was first opposed by the Lords. The retroactive aspect of the Bill was deleted by a Lords amendment, but it was quickly reinstated by the Commons. The Marquess of Salisbury then convinced peers to support the Bill by defending the convention that bears his name. Although the Bill had support from all parties in the Commons, the Act offers an intriguing illustration of a disagreement between the Lords and Commons that did not have a straightforward party political foundation. The Lords' position can be seen as compatible with the function of "watchdog of the constitution" given the Act's inconsistency with most notions of the rule of law. The controversy's demonstration of the Lords' helplessness in rejecting Conservative-backed initiatives in the Commons, however, is just as significant.

The incident may have made the administration more determined to continue with a bipartisan approach to change since it set up an All Party Committee to think about the future of the upper chamber. The Committee's recommendation to divide the Lords into voting and non-voting peers was its principal novel idea. Voting would be restricted to peers in real life. Hereditary Lords might receive life peerages from the king, but they would have to renounce their titles in order to cast a vote in the new parliament.

When the Lords exercised their first veto on delegated legislation under the 1949 Parliament Act, the bipartisan strategy fell apart in June 1967. The Labour administration

published a White Paper on House of Lords Reform in November 1968. The strong resemblance between the White Paper's and the Bryce Commission's interpretations of the Lords' proper legislative duty serves as an effective illustration of the continuity in this area of constitutional evolution. The second chamber should act as a venue for public discussion, a reviewer of bills submitted in the Commons, a starter of bills on less partisan-politicized matters, and a scrutinizer of the executive branch and delegated legislation.

The All-Party Committee's suggestions were quite similar to the recommendations made in the White Paper, which received the Lords' enthusiastic support. Nonetheless, there was strong Commons resistance to the Bill that included the proposal. Although Labour's left side believed it did not go far enough, right wing Tories opposed it for going too far. However, in 1969, the government withdrew the Law. Government initiatives to support legislation that would have changed the authority or makeup of the upper chamber were not made between 1969 and 1999. This does not imply, however, that there was no significant constitutional issue during that time due to the Lords.

G. 1974–1979: The parliament

The Labour administration in Britain from 1974 to 1979 never had a majority of more than four in the House of Commons. As a result, even passing bills through the lower house proved to be quite difficult for the administration. It encountered considerably greater challenges in the Lords. Table 6.4 demonstrates that these Labour governments only received majoritarian support based on the votes they received in the two general elections held that year. However, the administration lost a number of by-elections and had members defect throughout the course of the Parliament, momentarily placing it in the minority in the House of Commons.

After 1977, the Liberals and Labour developed a "pact" in which the Liberals pledged their support in exchange for certain policy concessions from Labour. Given that the parties' combined percentage of the vote in the most recent general election was more than 50%, one may claim that this increased the government's legitimacy. The 1974–1979 administration adopted radical economic reforms despite having a weak legislative and electoral base. The upper chamber faced numerous challenging challenges about its "proper" constitutional function as a result of the government's legislative agenda being obviously factional and its shaky Commons majority.

There were 299 votes in the Lords during the 1959–1964 Parliament, while the Tories were in power. Eleven times, or 3.7% of the time, the government was defeated. There were 445 divisions in the Lords between 1974 and 1979. Around 355 times—or 80% of the time—the Labour administration was defeated.

Such blatant facts undoubtedly lend credence to claims that the Lords remained a Tory body. Nonetheless, they should be somewhat qualified. Between 1974 and 1979, the Lords virtually always yielded whenever the Commons sent the Bill back. Government plans were not being overruled nor even postponed for the full amount of time allowed under the 1949 Act. Yet, they were being impeded. A bill's passage may take a while, and the Commons only has so much time to do it. The Lords severely hampered government policy by often rejecting government initiatives and demanding that the Commons revisit controversial topics. We may attempt to address the complex issue of whether the Lords' actions were constitutionally appropriate by quickly examining two of the items on which the chambers differed.

III. CONCLUSION

Recognizing that the Salisbury Convention is obviously not a law must be the first step. As a constitutional convention, it symbolizes the culmination of an established political view on the proper conduct of key constitutional actors, in this case, the members of the House of Lords. As a result, the convention reflects whatever idea is prevalent at any particular moment, which implies that it may change over time or perhaps disappear entirely. As a result, defining how "binding" a convention is a very elusive science. It is also crucial to keep in mind that the degree to which constitutional conventions matter — in the sense of establishing genuine restrictions upon relevant actors' behavior — is changeable. Overall, the Salisbury Doctrine is an important convention in the British Parliament that seeks to balance the democratic mandate of the elected House of Commons with the role of the unelected House of Lords. While it is not without its challenges, the convention has helped to ensure the smooth passage of legislation and reflects the principles of parliamentary sovereignty and democratic legitimacy.

REFERENCES

[1] G. Baines, “The Arsenal of Securocracy: Pretoria’s provision of arms and aid to Salisbury, c.1974–1980,” South African Hist. J., 2019, doi: 10.1080/02582473.2019.1574886.
[2] A. Bouchard et al., “Promising Future for the Berry Industry,” J. Agric. Food Chem., 2019, doi: 10.1021/jf061538c.
[3] J. Song et al., “Broadband and Tunable RCS Reduction using High-order Reflections and Salisbury-type Absorption Mechanisms,” Sci. Rep., 2019, doi: 10.1038/s41598-019-45501-8.
[4] E. J. Hulse, J. D. Haslam, S. R. Emmett, and T. Woolley, “Organophosphorus nerve agent poisoning: managing the poisoned patient,” British Journal of Anaesthesia. 2019. doi: 10.1016/j.bja.2019.04.061.
[5] H. Salisbury, “Helen Salisbury: The 10 minute appointment,” The BMJ. 2019. doi: 10.1136/bmj.l2389.
[6] S. Costanzi and G. D. Koblentz, “Controlling Novichoks after Salisbury: revising the Chemical Weapons Convention schedules,” Nonproliferation Rev., 2019, doi: 10.1080/10736700.2019.1662618.
[7] G. Kim, S. Kim, and B. Lee, “Design of wideband microwave absorbers using reactive salisbury screens with maximum flat

reflection," J. Electromagn. Eng. Sci., 2019, doi: 10.26866/JEES.2019.19.2.71.

[8] B. R. Loyola, "Salisbury, Novichok and the OPCW," LOJ Pharmacol. Clin. Res., 2019, doi: 10.32474/lojpcr.2019.01.000118.

[9] H. Salisbury, "Helen Salisbury: The inverse care law in the digital age," BMJ (Online). 2019. doi: 10.1136/bmj.l308.

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Trade Union and Labour Relations Bill

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Abstract*— The new Labour law states that an employee's base wage must be at a minimum of 50% of their gross amount. This means that employees will make greater contributions toward their EPF accounts, and gratuity deductions will increase as well. It will reduce the take-home pay for the majority of employees. In this chapter author is discusses the deliberation. The Labour Relations Bill introduces a number of important provisions, including the establishment of a centralized bargaining council, which will provide a forum for negotiations between employers and employees in specific industries. The bill also strengthens the right to strike and provides for dispute resolution mechanisms, including mediation and arbitration, to resolve disputes between employers and employees.

Index Terms*— Bill, Labour, Law, Rule, Trade.

I. INTRODUCTION

The 1974 Trade Union and Labour Relations Act was meant to be changed by the first Bill. The amendment bill aimed to limit the conditions in which workers might decline to join a union without running the danger of losing their employment, as the Act dealt with controlling mandatory union membership in the workplace [1],[2].

The main concern raised by Tory and cross-bench peers was their desire to provide further protections for newspaper editors, whose freedom of expression was seen to be at risk if they were required to join a union. The government proposed a Charter to protect journalistic freedom, but chose not to give it legal weight. The Commons overruled a Lords amendment to make the Charter court-enforceable, but the Lords insisted on it nevertheless. A Lords majority of thirty-seven finally agreed to the administration's stance despite threats from the government to both create new peers in large numbers and to use the Parliament Acts [3],[4].

As heated was the debate over the Aviation and Shipbuilding Industries Bill, which sought to privatize these sectors. The Conservative and Labour Parties were sharply divided over this strategy. Furious disagreement erupted during the Bill's Commons debate, which saw the government's ideas significantly altered. In a split that the government won with the Speaker's casting vote, the government repeatedly guillotined discussion, and on one occasion, a government whip was accused of willfully breaching a pairing agreement. Cross-benchers and several Labour lawmakers joined the Tory Lords in insisting on a number of destructive changes. The government then started the Parliament Act processes, but after speaking with the opposition, a significantly modified Bill was eventually enacted [5],[6].

It is questionable if the Lords' actions on these instances were constitutional. These policies were ostensibly covered by the Salisbury convention since they were part of the Labour Party's electoral platform in 1974. Even still, there were only slight Commons majority for each of these very divisive Measures. The then-leader of the Conservative peers, Lord Carrington, found no flaws in the Lords' stance. Invoking its authority, the Lords said they would use it "for the purpose for which they were given to us—that is as a chance for additional deliberation, for second thoughts [7],[8].

Yet once again, we are struck by how conventions may undermine what is unquestionably lawful behavior. According to Shell, the Lords made a tactical error after World War Two when they adopted the customary strategy of pretending they weren't going to deploy their delaying tactics. Shell contends that this gave a power that was intended to be a normal element of the legislative process by the authors of the 1911 and 1949 Parliaments an inappropriate degree of constitutional importance. The events of 1976 and 1977 caused such a constitutional uproar because this authority had been rendered invalid by a lack of application [9],[10].

The Labour Party promised, if it won the next general election, to completely abolish the House of Lords in light of the events of the 1974–1979 Parliament. Nonetheless, it was unsuccessful at the polls, and succeeding Conservative administrations showed little desire to change the status quo. Yet, it would be incorrect to believe that there were no issues with the relationship between the upper house and the Thatcher administrations.

A. The Thatcher and House of Lords administrations

Like with Asquith's Liberals in 1906 and Attlee's Labour Party in 1945, the Thatcher administrations of 1979–1990 came to power with the intention of enacting a radical policy agenda. Additionally, the Thatcher governments had sizable Commons majorities won with less than 50% of the vote, similarly as Asquith's and Atlee's administrations. Between 1979 and 1990, the Thatcher governments were defeated in the Lords 155 times, according to Shell. The administration acknowledged 63 losses, and on 30 instances, a compromise was achieved; the remaining defeats were refused. The Tory MPs had to deal with the inconveniences caused by having to be present in the House to vote to overturn the Lords'

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amendments as the decade went on because the administration became more reluctant to accommodate their Lordships' viewpoints.

It is difficult to pinpoint exactly why there are disputes between the Lords and Commons so often nowadays. One possible reason is that Commons Conservatives had shifted dramatically to the right of their Conservative peers in terms of political convictions; these differences of opinion were most apparent in regards to criminal justice legislation in the early 1980s. Another contributing cause may have been the extreme chaos between the Labour, Liberal, and Social Democrat parties in the Commons, which may have led some peers to believe they were the only ones capable of effectively opposing Thatcherism policies in the legislature.

Differences of opinion over the proper constitutional role of local government emerged as the source of the most serious hostility between the Thatcher administration and the Lords. The administration had brief setbacks on a number of minor matters, including a proposal to end free bus tickets for students in rural regions and a provision in the 1985 Housing Law that tried to compel local governments and housing cooperatives to offer elderly-specific sheltered homes. Further serious setbacks were suffered by the Lords on government proposals to overhaul local government structure in 1985 and the local taxation system in 1987 and 1988.

B. Backwoodsmen: The working and voting houses

The so-called "backwoodsmen," hereditary Conservative lords who seldom participated in the life of the house, were a necessary component of the government's final triumph on the later problems. They seldom participated in debates or attended them, although they periodically prepared to cast a ballot when it seemed that the Conservative administration would lose an important vote. Labour governments never had access to such a resource, but when facing major parliamentary challenges, even a Tory administration would turn to backwoodsmen as a last option. These peers were not particularly receptive to the government whip since they were so uninterested in the routine duties of legislative action. A Tory administration could only count on two or three calls during any given parliamentary session.

Even one call was too much for many onlookers. The rapid influx of peers who never demonstrated any legislative skills and who were clearly acting under party orders did not enhance the dignity or authority of the house because the Lords' continued legitimacy depended on its members developing a reputation for independent thought and expert abilities.

It was suggested that one may distinguish between the "working home" and the "voting house," due to the issue of backwoodsmen. The administration and the opposition shared the working house—those peers who regularly attended and participated in discussion—about equally in the 1980s. This could give the idea that the Lords might provide a formidable barrier to both a Conservative and a Labour administration. Yet, the backwoodsmen were overrepresented in the voting house. Conservative that no major danger existed to the government's programs. As a result, the Lords discussions indicated that the majority of people were against the government, but when the vote was taken, the non-working Lords showed up and defended government policy, which seemed like an unhappy situation.

If the 1968 changes had been implemented, the backwoodsmen issue would have been resolved. To a doubt, passing a third Parliament Act to accomplish that goal would have been a straightforward issue for a motivated administration with a dependable Commons majority. How well the "working home" fulfilled its function is a trickier matter.

C. The House of Lords current work

The majority of experts agree that starting in 1960, the Lords had a larger role in the governance process. Shell talks of a "far better attended and a partially professional House," whereas Adonis describes a "wonderful resurgence." The amount of time the Lords spend on their jobs has significantly grown since 1950. This focuses on four areas where the Lords might have played an obviously complementary role to the Commons, areas discussed in the 1967 White Paper and/or the Bryce Report: deliberation on matters of public concern; revision and initiation of legislation; recognition of delegated legislation; and scrutiny of the executive.

The Lords are distinct from the Commons in a number of ways. Most notable, though, was the looser party discipline. This was partly caused by the fact that peers weren't elected, so they weren't obligated to appease the biases of the groups who made up their local constituencies. Peers' age and origins also contributed to the lessening influence party loyalty had on their behavior; for peers towards the end of their careers or with significant extra-parliamentary interests, "the lure of Ministerial office dangled so successfully in the Commons is lacking." The major parties retain official organizations inside the house for which they are granted a certain amount of public funding. They also have a disciplinary mechanism, although one that is more exhortatory than directive. Before the whip is withdrawn, a peer's behavior must be heinous.

Comparatively to the Commons, the Lords still use a more negotiating approach to scheduling their agenda. Government business doesn't have a formal priority; the fact that it does so in practice is due to the upkeep of amicable relationships between the parties and cross-bench members via the upper house's version of the "usual channels." The lack of a Speaker with the authority to enforce procedure was more proof of how laxly disciplined the Lords were. In a formal sense, the Lord Chancellor presided over the House, but it was up to the peers to control one another's behavior. The Leader of the House "directed" the chamber on these topics. The Lords sometimes debated whether it would be beneficial to establish a position like to the Speaker of the Commons, but up until 2006 they chose to depend on members' good manners to uphold decorum norms. In 2006, the Lords did create the position of Lord Speaker while she

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lacks the disciplinary authority possessed by the Speaker in the Commons, the Lord Speaker is now in charge of preside over discussions in the parliament. She also assumes a significant ambassadorial role, speaking for the house in public and hosting guests on its behalf. According to the regulations governing the position, the Lord Speaker may be chosen by the members of the house for up to two terms of five years each. While holding the position, the Lord Speaker must renounce all party political affiliation and is not permitted to cast votes.

II. DISCUSSION

A. Deliberation

It is sometimes said that discussions in the Lords are of a better caliber than those in the Commons on issues of wide public interest. This is due in part to the fact that many members have notable knowledge in certain fields and in part to the fact that party allegiance is not as steadfast as it is in the Commons. Such subjective judgments are difficult to verify or dispute, according to Griffith and Ryle. Unquestionably, one can point to debates on significant issues where speakers have contributed a substantial body of knowledge and experience to the discussion; the upper house has particular expertise in the reform of the legal profession, the administration of justice, and foreign and commonwealth relations. 62 The more subdued character of party politics and the more liberal procedural rules both contribute to the quality of discussion in the sense that it may thoroughly investigate the content of the problem at hand rather than just forward a partisan answer. The Lords' performance is harder to measure, however, if debate quality is viewed in terms of its impact on subsequent policy. Although Shell contends that "almost everyone engaged with the House admits that a large deal of what is said there is meaningless," Adonis claims that arguments in the House of Lords "rarely have an influence on policy which is more than modest and indirect.

Less cynically, one can propose that the Lords, as a deliberative body, serves more as a sounding board than as a significant contribution to policy creation throughout the whole spectrum of governmental tasks. Only in areas where the Lords combine expertise with personal interests in topics that are largely non-contentious in the sense of party politics, such as legal reform, issues affecting the elderly, and policies affecting agriculture and the countryside, does debate in the upper house appear to have a significant impact. The periodic revision of laws. An increase in focus given to the Lords' solely legislative responsibility has more than compensated for the decrease in the proportion of time spent on general discussion. By 1989, the rewriting of legislation, the vast bulk of which originated in the Commons, took up 60% of the house's sitting hours. The conditions under which the Lords could reject a Bill have previously been discussed. In terms of quantity, the Lords' revisionary function is largely focused on helpful rather than harmful alteration.

The Lords are supposedly better at amending proposed legislation than the Commons because of the Lords' greater procedural freedom and lesser emphasis on party allegiance. Peers are seen to be less steadfastly committed to party ideology and so more open to the possibility that bills may have technical issues. This presumption is supported by the existence of a large number of cross-bench peers. In addition, it is more probable that the upper house will be able to sway an educated audience for even the most complex legislative proposals from the administration due to the rising diversity of experience and knowledge among peers in life. A bill's journey through the Lords superficially resembles that of the Commons. Nonetheless, there are some significant variations. Instead of using a guillotine procedure, the house depends on peers to make sure that their oral comments are topical and succinct. Perhaps more significantly, committee stage in the Lords is often held on the floor of the house rather than in a standing committee structure. The Chairman of Committees, a paid position, oversees the committee stage. Each legislative session, the house appoints a peer to this position. The Chairman is required to withdraw from all party political activity during this time.

In recent years, the upper chamber has spent almost half of its time performing legislative tasks in committee. During the previous forty years, The Lords has sometimes experimented with standing committees, but none of these efforts has been deemed successful. The Lords made a further attempt in this area in 1993–1994 by debating five very uncontentious Bills using the so-called "Jellicoe approach." Every time an amendment vote is conducted, the physical act of going through division lobbies adds additional, almost ludicrous, pressure on time. In the 1985–1986 session, voting alone took up forty hours.

The actions of the Lords seem to have increased significantly. Workload numbers shouldn't be interpreted too literally since they sometimes mask significant differences in the complexity or significance of apparently identical subject matter. To address flaws that the Commons missed, several amendments may be proposed at the government's request. Although serving this purpose may be an important one for the upper house, there is a risk that it may lead to the Lords serving as a convenient location to deal with legislative details that the Commons refuses to take up. Another issue is that the administration consistently fails to distribute the Lords' legislative workload fairly during the parliamentary term, leaving the upper chamber with very difficult duties that cannot be completed in any meaningful manner.

Considering that the Conservatives had a majority in the Lords at the time, it is reasonable to assume that many of the changes that were passed against the preferences of the government in the 1980s were not driven only by party politics. Yet, as Adonis notes, "The Lords have never since 1979 persisted on one of their amendments once overruled by the Commons." When the government only has a slim Commons majority, a Lords amendment that is opposed to the government may be important because the Lords' logic

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may convince backbencher MPs who are on the fence to deviate from the party line. Yet when a strong Tory majority in the lower house was present, the Lords began to resemble a constitutional watchdog that had been long devoid of any meaningful bite and was only sometimes prepared to bark.

The Lords' rejection of the War Crimes Bill was a significant recent exception to this tendency. Through this Bill, it was hoped to criminally prosecute former foreigners who later became British citizens for their war crimes committed during World War II. In the Commons, the Bill was overwhelmingly supported by all parties. But, a similar cross-party majority in the Lords rejected it for what seemed to be 'rule of law' type reasons—namely, principled hostility to retroactive legislation—pace the War Damage Act. Due to the Lords' actions, some Tory MPs even questioned whether it was constitutionally permissible for a non-elected chamber to frustrate the elected house. Nevertheless, when the government invoked the Parliament Acts process, the predicted constitutional crisis did not materialize.

The 1994 Criminal Justice Bill, which dealt with issues of sentencing guidelines and how criminal trials should be conducted, also suffered a number of setbacks at the hands of the upper chamber. While most losses were overturned in the Commons, the administration still had to make a number of adjustments for the upper chamber. 73 During the 1993 Conservative Party Conference, Home Secretary Michael Howard had declared the Bill to be a key pillar of government policy. One may see the Lords' resistance as either an intolerable impediment to the aims of an elected administration or as a wise precaution to prevent crucial legislation from being overly affected by inappropriately political goals.

B. The power to control delegated legislation

Even though this subject may not be relevant enough to warrant discussion here, the Lords continue to have equal standing with the Commons when it comes to private bills. The Lords' continuous co-equality with regard to statutory instruments is a bigger problem. One may have anticipated that the upper house would serve as a significant check on government excesses given how often contemporary governments resort to such tactics and the Commons' clear deficiencies in overseeing their usage. Their equal participation on the joint select committee that assesses the technical appropriateness of such legislation highlights the formal parity between the two chambers.

Therefore, we may once again see a significant discrepancy between the Lords' legal and customary power with regard to the substantive policy advantages of delegated legislation. Just once have the Lords overruled an order. By the middle of the 1980s, it seemed to be generally acknowledged that repeating this behavior would be against protocol. The Lords' hesitation may be caused by a worry that using their veto will just result in a third Parliament Act abolishing their legal equality, but it's not quite obvious what good comes from having a legal right one would never exercise. The house has created many mechanisms for expressing displeasure of government ideas without rejecting them, which is potentially another instance in which the Lords' legal authority has been delegitimized by inaction. Motions expressing disapproval or sorrow for an act may be made and put to a vote. Nonetheless, their utility would seem to be more of a symbolic reinforcement of the Lords' independence than a real restraint on executive action. Such devices may embarrass the administration, particularly if they get press attention.

C. Scrutiny of the executive

Bagehot noted that if the Commons did an effective job of scrutinizing executive behavior, there would be little need for the upper chamber to do so. Yet, the efficiency of MPs' supervisory abilities is severely constrained in the lower house due to the severity of party discipline and the scarcity of investigative resources. There is thus a sizable opportunity for the Lords to support the Commons in this regard.

Yet much like the Commons, resource constraints affect the Lords' oversight function. They come from more structural institutional factors rather than just the restricted office space and government-funded research help, as in the Commons. In the nineteenth century, it was typical for as many ministers to sit in the Commons as the Lords; now, nearly all ministers are members of the lower chamber. Although though recent Tory administrations have had a number of top Lords Ministers, a Labour administration is likely to just have the Lord Chancellor and the Leader of the House as Lords Ministers. Just because the politician in charge of the majority of government ministries' operations is never present in the chamber, this creates clear accountability issues. There have been sporadic proposals to give all senior Ministers the right to address either chamber, but none of them have been implemented.

Competence issues are also brought on by the government's scant representation in the house. As a result, it has become customary for politicians with, often, little experience to take on significant governmental duties early in their careers. Finding enough front-bencher spokespersons was a particular challenge for the Labour Party, especially while in opposition. A junior cabinet or shadow role was not appealing since almost all Labour members were life peers, older than many of their hereditary Tory colleagues, and nearing the end of their political careers.

The membership of the Lords is not paid, with the exception of a small number of Ministerial positions, the positions of Leader of the Opposition and Chief Whip of the Opposition, and the non-party political positions of Chairman and Principal Deputy Chairman of Committees. Although peers may be eligible for reassuringly high cost reimbursements for days spent in the house, individuals without independent financial resources cannot afford to be full-time politicians, which inevitably limits the time and effort peers may commit to studying government operations.

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D. Select committees of the House of Lords

Select committees in the House of Lords are quite different from those in the House of Commons. Most are only interested in issues that pertain to the house's internal affairs and procedures. The European Communities Committee and the Science and Technology Committee are the two permanent bodies with a clearly extra-parliamentary perspective. Both are better seen as parts of the Lords' deliberative rather than administrative duties.

The EC Committee was established in 1974. Its main purpose is to assess potential EC legislation before it is passed, giving the British government access to a wider body of knowledge when it participates in the EC's legislative process. The Senior Deputy Chairman of Committees, a paid position in the House, is largely responsible for monitoring the work of the EC Committee. The Committee has a good amount of resources, including a dozen research and clerical employees and the ability to hire paid consultants with specialized knowledge. The Committee, which consists of 24 peers, has the authority to designate subcommittees to conduct in-depth analyses of certain subjects. Each year, the Committee produces numerous reports. While many of the Lords' works get a thoughtful government response, it may be difficult to determine how they will really be used.

The Science and Technology Committee has been successful in elevating its status as a venue for inquiry. The Committee was founded in 1980 to fill a void created by the Commons departmental select committees' coverage. It has the means to create a significant body of in-depth findings, and its fifteen members include prominent scientists who are life peers. Griffith and Ryle's description of it as "the non-party political voice of the scientific community" perfectly sums up its essence.

E. The changes of 1999

In their respective manifestos, the Labour and Liberal parties both called for some kind of elected assembly to take the place of the Lords during the 1992 general election. While the Tories' election triumph eliminated any chance of change, it did little to address the Lords' glaring flaws. The most obvious of them came from the materials used to build the home. Because competent and independent judgment is not a quality that is passed down genetically, the Labour and Liberal parties could not see any plausible justification for a hereditary type of membership in our contemporary society. The appointment of the Lord of Hardwicke in 1995 served as a potent illustration of the hereditary system's fundamentally rotten character. According to a story in The Times, this young guy, who was raised in the West Indies, added to his inherited money by "organizing raves" and "working in public relations." Hardwicke did not find assuming his place intimidating since he had hundreds of relatives in the Lords and did not seem to have any notable intellectual prowess or a history of public service. After I took the oath, my cousin Lord Hesketh, the chief whip, was there, and he brought me to the Tory benches. The Lords, he said, is "a lovely location to take friends for lunch—although it should include a snooker table—and you usually find yourself sitting next to someone intriguing.

This arrangement was inadmissible because of Hardwicke's enormous, undeserved political prominence as well as the equally unjustified boost to the Conservative Party's voting strength that his seat provided. In its election manifesto for 1997, the Labour Party promised that if elected to power, it would bring forth a bill to eliminate hereditary peers from the House of Lords. However, the manifesto did not make it clear whether the party preferred to keep the Lords as they were on a life peer basis alone or whether it thought the Lords might someday become an elected body. In theory, the Bill's prominence in the manifesto should have prevented an obstruction to its passage in the upper chamber. Peers' rejection of the Bill would have been an obvious violation of the Salisbury agreement. The administration wouldn't have had to use the Parliament Acts to get around the Lords' reluctance to accept the Bill if the convention had been followed.

Notwithstanding the overwhelming Commons majority in favor of the government, the Conservative majority in the Lords did not follow suit. The expansive Crime and Disorder Bill was tabled by the government in the House of Lords in 1998. The Measure was first approved by the upper house without any controversy. Nevertheless, when the Bill arrived to the Commons, a Labour MP offered an amendment aimed to equalize the age of consent to sexual encounters for persons of both heterosexual and gay inclination. In the Commons, the amendment was passed by a majority of more than 200 in July 1998. The Bill was defeated in the Lords on July 23 with 290 votes against 122. The administration dropped the amendment rather than take a chance on losing the whole Bill. The Lords' rejection of the proposal could not be seen as a violation of the Salisbury convention since it was not included in Labor's election platform. The argument that the Lords acted as a balancing factor against a narrowly partisan House was somewhat weakened by the prejudiced and intolerable attitudes stated by several lords who had opposed equalizing the age of consent.

After that, the Blair administration demonstrated its support for the equal-age amendment by inserting a similar clause in its Sexual Offenses Bill in 1998. All three of the main parties in the Commons backed this legislation, but the Lords rejected it. Once more, the rejection was expressed in such anachronistic and intolerable terms that one might wonder if the government purposefully gave the upper house the chance to damage its reputation in the eyes of the public, a chance that, if seized, would lessen public apprehension about future Lords reform.

By breaking the provisions of the Salisbury convention by late 1998, the Tory majority in the Lords had significantly irritated the administration. A Bill to change the electoral process used to choose British members of the European

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Parliament will be adopted for the elections slated for May 1999, according to the Labour Party's 1997 election platform. The Lords repeatedly rejected the Bill in the fall of 1998, claiming that since the Labour platform did not expressly state the new system that would be implemented, rejecting the legislation did not violate the Salisbury convention. As in 1910 and 1911, the Tory majority in the Lords had the full backing of the Conservative opposition in the Commons; so, it would seem completely appropriate to refer to the Lords majority as "Mr. Hague's poodle"80.

The debate surrounding the European elections would have erased whatever reservations the Blair administration may have had about moving forward with Lords reform. Late in 1998, in the midst of an unparalleled lack of discipline inside the Tory shadow cabinet, the reform's specifics came to light. The Blair administration had struck a deal with Lord Cranborne, the leader of the Conservative peers, under which ninety-two hereditary peers may continue to sit in the house in an effort to quell resistance to change in the upper chamber. When it was discovered that Cranborne had not notified his shadow cabinet colleagues of these negotiations, the shadow cabinet quickly expelled him. Strangely, the Conservative Party afterwards chose to support the deal.

The unreformed Lords' last weeks were a pantomime and comedy extravaganza. The ninety-two hereditary members who would sit in the new house would be "elected" by their hereditary peers, the administration had determined. Seventy-five word "manifestos" in favor of each of the 82 Candidates' positions were allowed. The papers that surfaced led some to believe that the Blair administration had once again seized the opportunity to make the hereditary Lords seem foolish.

The house first veered into the ludicrous during the "election" for hereditariness, then on the third reading of the Bill in October 1999, it veered into the surreal. The Earl of Burford sprang upon the Lord Chancellor's seat as the discussion got underway and launched into a rant of ridiculous hysteria. Burford warned his audience that the Bill was "Treason," supported by Prime Minister Blair as a first step towards the abolition of Britain, as they watched in shocked silence from all sides of the house: Before us lay the wasteland. No culture, no independent state, and no freedom. Vote this down and defend your Queen and nation. 83 When asked to envisage a situation in which the public would be made most aware of the Lords' anachronisms, reformers of the upper chamber could scarcely have imagined anything more successful than Burford's intervention. Unsurprisingly, his pleading was ignored. The majority of peers honored the Cranborne agreement, and the bill passed third reading with a majority.

The following day, when they voted again against several aspects of the controversial welfare reform Bill—a policy that was already inciting mutiny among Labour MPs in the Commons—the house reserved one last annoyance for the administration. Ironically, the way the house handled this situation was the ideal illustration of the function that a subordinate second chamber may properly do. The opposition to the Bill came from both sides of the chamber, with measured and calm arguments. By rejecting the government's plans, the Lords gave one of society's most marginalized groups a voice that was absent from the Commons due to the weakness of Labour MPs whose demands for party allegiance outweighed any moral hesitations.

III. CONCLUSION

A labor agreement may be reached for an unspecified, defined duration of up to five years. The employment agreement is deemed to have been formed for an unlimited time if the term of validity is not specified in the agreement. The parties sign two versions of the written labor agreement, each of which has their respective signatures. This Act governs the organizational rights of labor unions and encourages and facilitates sectorial and workplace collective bargaining. Strikes and lockouts, workplace forums, and alternative conflict resolution are also covered. The main goals of labor laws are to protect employees' rights, support union activity, and provide job security. They want to raise working-class people's standing. Moreover, they guarantee that all workers have fair and appropriate working conditions. The bill has been the subject of extensive debate and consultation, with various stakeholders expressing their views on its provisions. Some have raised concerns about the potential impact of the bill on the competitiveness of South African businesses, while others have welcomed its focus on improving working conditions and protecting the rights of workers. Overall, the Labour Relations Bill represents an important step towards improving Labour relations and promoting fair and equitable working conditions in South Africa. While it may face some challenges in implementation, the bill has the potential to make a significant positive impact on the lives of workers and their families.

REFERENCES

[1] R. Gumbrell-McCormick and R. Hyman, “Democracy in trade unions, democracy through trade unions?,” Economic and Industrial Democracy. 2019. doi: 10.1177/0143831X18780327.

[2] J. Visser, “Trade Unions in the Balance,” International Labour Organization. 2019.

[3] E. Kesküla and A. Sanchez, “Everyday barricades: bureaucracy and the affect of struggle in trade unions,” Dialectical Anthropology. 2019. doi: 10.1007/s10624-018-9535-4.

[4] P. del Rio Loira and M. Fenger, “Spanish trade unions against labour market reforms: strategic choices and outcomes,” Transfer, 2019, doi: 10.1177/1024258918818267.

[5] B. Meyer, “Financialization, Technological Change, and Trade Union Decline,” Socio-Economic Review. 2019. doi: 10.1093/ser/mwx022.

[6] P. Vulkan and B. Larsson, "Patterns of transnational trade union cooperation in Europe: The effect of regimes, sectors and resources," Eur. J. Ind. Relations, 2019, doi: 10.1177/0959680118783551.
[7] J. Grady and M. Simms, "Trade unions and the challenge of fostering solidarities in an era of financialisation," Econ. Ind. Democr., 2019, doi: 10.1177/0143831X18759792.
[8] M. Debono, "Attitudes towards trade unions in Malta," Econ. Ind. Democr., 2019, doi: 10.1177/0143831X16681482.
[9] L. Baccaro, C. Benassi, and G. Meardi, "Theoretical and empirical links between trade unions and democracy," Economic and Industrial Democracy. 2019. doi: 10.1177/0143831X18781714.
[10] S. S. Abd Razak and N. A. K. Nik Mahmod, "An Analysis Of The Good Faith Bargaining Practice In The Trade Union Recognition Process: Reform Of The Malaysian Trade Union Legal Framework," IIUM Law J., 2019, doi: 10.31436/iiumlj.v27i2.455.

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Reformed House of Lords

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***Abstract*— A significant adjustment permitted 92 hereditary peers to continue serving as Lords members in the interim. According to the Act, membership was cut from 1,330 to 669, mostly life peers. In this chapter author is discusses the High Court and Court of Appeal. The Reformed House of Lords is a proposal for reform of the British Parliament's upper chamber, the House of Lords. The proposal aims to create a more democratic and accountable second chamber that better reflects the diversity of British society.**

***Index Terms*— Appeal, Act, Commission, High Court, Parliament.**

I. INTRODUCTION

The House of Lords Act 1999 is a remarkable brief and narrow piece of legislation given the gravity of its influence on the makeup of Parliament. No one may be a member of the House of Lords by virtue of a hereditary peerage, according to Section 1. According to Standing Rules established by the house, Section 2 allows up to 92% of people to be excluded from Section 1. Hereditary Lords were to be permitted to run for office in the Commons and cast ballots in Commons elections if they weren't exempted under section 2.

Asquith rejected the Lansdowne ideas from 1911 because of concern that a more legally constructed house would be more obstructionist to the Commons than a hereditary chamber. The Act establishes a second chamber with clear resemblance to those plans [1],[2]. The Blair administration had obviously missed this prospect since, in January 2000, a multi-party coalition in the Lords successfully vetoed the government's plans to limit the right to a jury trial by a majority of 100 votes [3],[4]. The bill seemed to be a prime candidate for a justifiable delay in the new upper chamber. It was very contentious, had a significant negative effect on civil rights, and highlighted the kind of issue that many of their colleagues in real life were qualified to assess due to their legal training [5],[6]. Nevertheless, the administration rejected this suggestion. The Lords' threat, said to Home Minister Jack Straw, was undemocratic. This remark was poorly thought out. It could hardly be 'undemocratic' for those powers to be used since the Blair government had likely supported the Lords reform Bill in the belief that the house's new composition was ideal for a body possessing delaying and scrutinizing powers; unless, of course, the government accepted that the reformed house was per se a 'undemocratic' institution. The incident rather suggested that the Blair administration thought the Lords' democratic credentials were solely based on a majority in the upper house agreeing with the majority in the Commons; this viewpoint implies that having a second chamber isn't really necessary [7],[8].

Nonetheless, the 1999 Act significantly reduced the Conservative Party's influence in the upper house right once. The Conservative Party controlled 222 Lords seats as of November 2001, compared to the Labour Party's 197, the Liberal Party's 62, and the crossbenchers' 216. The administration could not hope to win a dependable majority in the upper chamber given the conservative leanings of numerous cross-benchers. Therefore, the frequently voiced criticisms that the Blair administration had "packed" the Lords with its own supporters lacked substantial factual support. Instead, the Prime Minister had used "his" appointment powers to start to address the enormous historical imbalance within the house that was in favor of the Conservative Party [9].

A. The Wake Ham Commission's proposals

A house for the future, the report of the Royal Commission, which was created in 1999 to provide suggestions for long-term change to the House of Lords, was released in January 2000. The Wakeham Commission had moved on with the presumption that the upper chamber's authority would largely stay unaltered. So, it has to think about how to improve the Lords' current complementary function to the Commons by reforming the makeup of the Lords.

In order for complementarity to be effective, the upper house would need to be independent and knowledgeable. There is no need for the Lords' members to be chosen if we agree that they should be both subservient to the Commons and independent of the common patterns of party identification in the lower chamber. An elected second chamber might be very dysfunctional for those goals. The Lords may simply replicate the Commons' party alignment if chosen using the same criteria, losing any semblance of independence. The Lords may be seen as a more genuine representation of the will of the people if elected using a different voting method, which would undermine the lower house's 'democratically' justifiable supremacy. Whichever method of voting was used, there is always a chance that candidates may win seats by appealing to fleeting public prejudices, creating a chamber that is intellectually unfit to its function of exerting a supra-party political impact on governing and legislative procedures.

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So, it seems appropriate to employ the life peerage system as a selection procedure for a complementary house. However, the greatest weakness in the membership of the Lords that selection through life peerages would appear to produce would seem to be not one of political bias or limited ability, but of age: a more vigorous house may require that we have a younger house. Reform to the Life Peerage Act to impose some justiciable limits on the Prime Minister's powers to nominate peers may seem desirable.

It would be naive to believe that party politics could be eliminated from the Lords given the importance of parties in contemporary politics. Even if formal party organization were destroyed, it is guaranteed that party loyalty would still shape members' behavior. There must be enough capable Ministers in the house for other peers to examine, since scrutinizing the executive is one of the tasks we want the Lords to carry out. So, a more appropriate question would be how much influence should be given to party discipline in relation to each of the several duties of the house rather than how to remove party influence.

Arguments against the Lords' authority to postpone or alter government bills stem less from the delay itself than from how it affects the two parties differently. The Lords' stance appears to have been motivated more by a reflexive mobilization of their Conservative majority than by a principled belief in the integrity of their position, as evidenced by the fact that they engaged in such behavior much more frequently prior to 2000 when a Labour government controlled the Commons. Giving party ideology considerable sway in a comprehensive parliament is not justifiable. This implies that the Lords' makeup as a body would need to be built on a quota system that assured a government Bill could only be postponed or changed if opposition peers won over a sizable body of cross-bench views, and potentially some ruling party peers as well. So, there would be a greater likelihood that the government's legislative problems stemmed from defects in its programs than from the basic factional opposition's resistance. Moreover, a house of life peers shouldn't have any customary hesitation to utilize such legal authority since it would serve their very goal to generate problems for the government if it looked that legislative policy disregarded popular opinion. The Lords' duty in this situation, as with other scrutinizing duties, is to alert the voters to criticism of the government's stance while exposing its policy to the oxygen of public discourse.

The Wakeham Commission did not advocate for an expansion of the legislative authority of the upper house. In fact, the Commission advocated replacing the Lords' veto on delegated legislation with a far more limited ability to postpone such actions for up to three months. It did suggest a minor increase in the Lords' authority to examine executive behavior, principally via the establishment of more select committees in the house. The Commission also recommended that members receive increased attendance allowances in place of salaries, which created the prospect that some members would be able to attend meetings more often than just sometimes.

The Commission's suggestions for changing the makeup of the house mirrored the modesty of these initiatives. Wakeham believed that the remaining 92 "hereditary" peers had no place in a house that had undergone reform. The Commission recommended that the vast majority of the new house's members, who would number about 550, be appointed to their positions. The Prime Minister had no legitimate participation in the selection process, according to the Commission. Instead, 10 members of an impartial "Appointments Commission" should be chosen to make the appointments. Each appointment would have a set tenure of fifteen years. The Appointments Commission would make sure that the proportion of each party's vote in the most recent general election was closely reflected in the party balance of appointed members. The Commission suggested that the general makeup of the house should more fairly represent women and racial and ethnic minorities than it had in the previous house and in the Commons, breaking yet another precedent. The Commission also suggested that just some of the members of the new house be chosen.

On how many members should be selected in this manner, the different commissioners were unable to come to an agreement. Three proposals were put forward, with sizes ranging from 10% of the home to a maximum of 35%. Shell made the modest observation that "One detects throughout the report a basic hostility towards incorporating elected members" as a result of these small s. 85 The opposition parties and pressure organizations for constitutional change, the majority of which supported the establishment of a second chamber that was entirely elected, showed little excitement for the ideas. There is hardly much to recommend that viewpoint. The fact that appointed peers firmly rejected the government's plans for jury trials shows that an elected house is not required to guarantee the second chamber's useful participation in the legislative process. Maybe it was a bad idea for the Commission to recommend that any members be chosen. By suggesting that just a few members be selected in this manner, it exposed itself up to accusations of hypocrisy and cowardice, even if it indirectly recognized that it saw merit in this argument. This opinion was supported by persistent rumors that the government had informed Lord Wakeham that it favoured the idea of a fully or mostly appointed parliament.

Despite having its requests fulfilled, the administration did not immediately make an effort to support measures that would have further reformed the upper chamber. Any such suggestion seemed to be postponed until after the next general election. Moreover, it was probable that the somewhat modest character of the Wakeham Commission proposals would provide the administration with a solid excuse for not pursuing any further change at all, should the current house showed to be routinely obstructionist to

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government Legislation.

B. The 2001 White Paper

The text of the white paper, which was released in 2001 and completed the reform, made it quite plain that the second Blair administration had no appetite for dramatic Lords reform. The administration came to the conclusion that establishing a completely or mostly elected upper chamber was not an option because it may result in a scenario where the two houses could not agree on any legislation. 88 Although there is unquestionably some strength in this viewpoint, the administration did more harm than good by suggesting a house whose members would be chosen in a disjointed assortment of methods.

Hereditary peers should be expelled from the house, according to the white paper. Then it suggested a chamber of 600 peers, of which 120 would be elected regionally, 120 would be appointed by a legally mandated non-partisan Appointments Commission, and 360 would be chosen by party leaders in proportions roughly equal to the popularity of the parties at the most recent general election. The Wakeham plans, which called for the Appointments Commission to choose all non-elected peers, have been significantly watered down as a result.

The white paper received very little favorable attention outside of Parliament. Other extreme ideas were put up, such as the Conservative Party's breathtakingly hypocritical suggestion that a reformed parliament be wholly elected. More importantly, in a rare show of independence, a sizable number of Labour backbenchers strongly opposed the white paper, with many of them seeming to want an upper chamber that was mostly or entirely elected. An early-2002 report by the Commons Public Administration Select Committee represented the opinions of Labour backbenchers.

The report provided a persuasive example of the Commons' ability to follow a course of action that is quite distinct from the one that the administration favors. The Committee did not find the suggestions of the Wakeham Commission to be much more impressive than those in the white paper, which it found to have little validity. The Select Committee believed, perhaps foolishly, that the second chamber's legitimacy and, thus, its ability to successfully serve as a revising or delaying chamber within the legislative process, would be severely weakened if it did not have a large elected element. According to the paper, a nonpartisan Appointments Commission similar to the one proposed by Wakeham should appoint at least 60% of the members of the reformed parliament. Moreover, it was suggested that the law Lords and bishops be expelled from the reformed house. A chamber made up in this manner, in the Select Committee's opinion, would not serve as a competitor to the Commons and its restricted powers as specified in the Parliament Acts should not be expanded.

The administration declared in May 2002 that further comprehensive reform suggestions would be addressed by a joint Commons and Lords Committee, indicating that it did not believe the issue of further change to the House of Lords to be important enough to deserve an open debate with its backbenchers. It was unclear how sympathetic the Blair administration would be to the Committee's proposals. 'The topic is now in the hands of parliament and the speed and the radicalism with which we may now go is very much down to how MPs proceed on this matter and how they subsequently vote,' said the Leader of the House, Robin Cook, in May 2002. 91 Notwithstanding this declaration of purpose, news reports from June 2002 indicated that the execution of the revised Lords' powers would determine whether this "gridlock" would be symbolic or actual. The administration did accept Wakeham's suggestions to limit the Lords' authority over delegated legislation. No increase in authority over core legislation was anticipated. If this weak chamber were made up entirely of elected members, any deadlock that may result would disgrace a majority government in the Commons rather than obstruct its legislative agenda.

The Joint Committee's report, which was released in the fall of 2002, came to the conclusion that until the question of the Lords' composition was resolved, there was little value in discussing whether any modifications should be made to their powers. Moreover, the Joint Committee listed a number of requirements that the reformed house must achieve, including "legitimacy," "representativeness," "no dominance by any one party," "independence," and "expertise."

Although undoubtedly ambiguous, the requirements would seem to be quite acceptable. The Joint Committee was rather less clear on the issue of changing the make-up of the home, however. The main suggestion of the report was that MPs be allowed free reign to vote on a variety of reform choices, from establishing a completely elected chamber to maintaining a wholly appointed body by means of a number of hybrid elected/appointed solutions.

The idea of allowing a free vote on the issue was theoretically supported by the administration. Yet the Prime Minister made it plain that he was staunchly in favor of a completely appointed second chamber just before the Commons debated the matter. Mr. Blair seemed worried that an upper house that was entirely or partially elected would function more like a competitor than a checking chamber for the Commons. His involvement drew some criticism from the media and members of Parliament since several of the more reserved Labour MPs would not openly oppose him, regardless of their own opinions on the issue's merits.

The ensuing reform vote in the Commons degenerated into comedy. Seven reform ideas were finally made and submitted to the Parliamentarians. None of the proposals received support from the majority of Labour MPs despite claims that Labour whips were pressuring them to back the Prime Minister's position. 94 It was anticipated that the Joint Committee would try again to draft a plan that would get support in the Commons, but no effective change materialized.

Notwithstanding the public criticism the Blair

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administration has received for not taking a strong posture on this topic, the status quo may be seen to have certain advantages. The House, which has undergone some restructuring, has shown to be a stronger barrier to government policy than the Commons. The Lords were successful in convincing the government to make numerous significant modifications to Bills dealing with refugee and animal health problems as the reform debate raged towards the end of 2002. The government's flagship Bill to revamp the National Health Service was similarly obstructed by the upper house in 200396, and the Lords dealt the government setbacks in 2004 and 2005 with regard to planned anti-terrorism legislation.

It may also be argued that, at least in terms of the topic of party political allegiance, the current House had by that point grown to be fairly reflective of the general populace. The proportions of eligible voters who backed the Labour, Conservative, and Liberal parties in the 2001 general election were 24%, 19%, and 11%, respectively. At the time, cross-benchers held the remaining seats in the Lords, which were controlled by Labour peers with 28%, Conservative peers with 32%, and Liberal peers with 9%. The Lords might legitimately assert that they are a more accurate representation of current voting tendencies than the Commons, as we will see in chapter seven.

C. Attorney-General Jackson

While neither the Blair administration nor the Parliament expressed enthusiasm for further Lords reform, the courts provided responses to the legal issues raised by the Parliament Act 1911 in 2004 and 2005, namely whether or not the Commons and King were "subordinate legislatures" and if so, what restrictions applied to their legislative authority.

Two contrasting perspectives have developed among academic critics in the postwar period. First, according to Professor de Smith, the Parliament Act "redefined Parliament" and "established a simpler, voluntary mechanism for legislating on most matters. Any legislation created by the Commons and King was thus just as much an Act of Parliament as a law passed in the traditional way. The Commonwealth legislative instances covered in cases two looked to have had a significant impact on De Smith's perspective on this issue. It's a little unclear as to why these instances should be seen as having any bearing on the makeup of the British Parliament.

William Wade's second viewpoint, which is more compelling, looks more reasonable. The argument that laws approved by the Commons and King via the Parliament Act's processes constituted delegated legislation was made in 1955 and was later reaffirmed in 1980100. Although the Commons and Monarch may actually be a "legislature," they can only be one that is subservient to the Parliament that gave them the authority to make laws:

Primary legislation must pass this crucial test: be upheld by the courts on its own merits, without the requirement for backing from any higher authority. Yet, an Act enacted by the Queen and the Commons alone has no inherent face validity. If an Act is written that the King with the consent of the Lords, or with the assent of the Commons, it is not an Act of Parliament since three ought to agree to it: the King, the Lords, and the Commons, as Coke said in The Prince's Case. An act enacted by the Queen and the Commons alone must specifically state that it was passed "in line with the Parliament Acts 1911 and 1949 and by authority of the same" in order for the courts to recognise it. This is how subordinate legislation is recognized. Ultimately, the case underwent legal scrutiny in 2004 and 2005. The enactment of the Hunting Act 2004 served as the catalyst for the incident. The Blair administration attempted to convince Parliament in 2002 to enact legislation to control the practice of hunting wild animals in packs by horseback with packs of dogs that followed and killed their victims. The proposal generated a lot of debate in the press and in both Houses of Parliament.

An proposal to completely outlaw such hunting, proposed by a backbench Labour MP, was accepted in the Commons but rejected in the Lords. It was immediately obvious that the authorities had little interest in pursuing the matter further. Nonetheless, a significant number of Labour and opposition party MPs supported the hunting ban in the Commons, and the Bill was reintroduced in September 2004. While the plan had received a very strong majority in the Commons, the majority view in the Lords rejected the provision, and after attempts to find a generally acceptable compromise option failed, the House of Lords once again declined to adopt the Bill. In accordance with the Parliament Act of 1949, the bill was thereafter referred to the Queen for her assent. Opponents of the Hunting Act of 2004 then brought a legal case to the courts after losing the political battle in the Commons. Their primary argument was that the Parliament Act of 1949 was an illegal policy. If this claim were true, then all subsequent legislation—including the Hunting Act 2004—that was allegedly passed through the Parliament Act 1949 mechanism would likewise be null and void. The argument supported Wade's theory, according to which the 1911 Act's creation of the Commons with a simple majority and royal approval made it a "subordinate" rather than "sovereign" legislature. As a result, its abilities were restricted. One such restriction, that the Commons and Queen could not prolong the interval between general elections beyond five years, was clearly stated in the language of the 1911 Act. It was also argued that the Monarch's and Commons' powers were also subject to implicit restraints, particularly the restriction that they could not expand the purview of their own legislative authority. The Parliament Act of 1949 was thus said to be a measure that was beyond the competence of the Monarch and Commons to create since it aimed to expand the powers of the Commons and Monarch by further diminishing the Lords' power of delay.

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II. DISCUSSION

A. The High Court and Court of Appeal

These arguments had little weight from the Supreme Court102. It believed that the Commons, Lords, and Queen made up the same body known as "Parliament." According to the Court's ruling, the 1911 Act had the intended effect of "redefining" Parliament in a way that allowed the Parliament as the Commons and Monarch to pass Acts of Parliament, even though these new Parliaments had to abide by the terms of the 1911 Act in order for their "Acts" to be valid.

The Court of Appeal handed down only one ruling. Although coming to the same judgment as the High Court, it did so using a quite different set of justifications. Wade's assessment of the Commons and Queen as a subservient legislative definitely had a significant impact on the Court of Appeal. The ruling stopped short of explicitly classifying the Commons and Queen-produced measures as "delegated legislation." However, the Court accepted that the Commons and Queen could not be regarded as the equivalent of Parliament in the conventional sense, citing both the express limitation placed on the power of the Commons and Queen by the 1911 Act and the context of the Act's passage: The 1911 Act's goal was to create a new constitutional arrangement that kept the Lords' involvement in the legislative processes while limiting the amount of time they could take to block legislation that had been first proposed to the Commons. The 1911 Act, in our opinion, would be violated if it were used as a tool to eliminate the House of Lords. The 1911 Act was intended to be a temporary measure in the absence of greater change, according to the preamble. It offers no evidence in support of a desire to use the 1911 Act, directly or indirectly, to enable more significant constitutional amendments than have already been made. Once it is acknowledged that the 1911 Act may only be used in certain circumstances, the question of how much is restricted is raised. When we get to this point, it's critical to understand that the ability to make significant constitutional modifications might be offered. It is reasonable to assume that if Parliament intended to establish such a power, it would be expressly mentioned in the Act. Not so with Section 2 of the 1911 Act.

This argument appears well supported by its underlying reasoning. Regarding the Commons and the Queen as "Parliament" would mean adopting the absurd idea that the United Kingdom has had two sovereign legislators since 1911. The Court of Appeal's reasoning faces the apparent practical challenge of the Court of Appeal's use of the vague term "fundamental constitutional change." The Court of Appeal believed that a step like abolishing the House of Lords or removing most of government action from judicial review would have a "fundamental" nature whereas a measure like the decrease of the Lords' delaying power in the 1949 "Act" was not fundamental.

Avowedly teleological or purposeful in character, the Court's argument. This makes it somewhat puzzling that neither the judgment, nor even the claimant's submissions, seemed to attach any significance to the "purpose" that had apparently led Asquith to promote the original 1911 Bill, namely to ensure that the Lords could not prevent the legal effect being given to policy proposals that a government with a majority in the Commons had put clearly before the electorate. 105 By 1945, the major policy manifestos served as the foundation for the political parties' election campaigns. The Labour Party's radical legislative goals were extensively discussed in the party's platform for that year, but none of those explicitly stated proposals called for the 1911 Act to be amended in order to further restrict the upper house's authority.

B. The Lords' House

The Jackson case was deemed important enough by the House of Lords to warrant examination by a panel of nine justices rather than the customary five.

The Court of Appeal's ruling was unanimously affirmed by the House of Lords, but this was done for a quite different—and utterly inadequate—reason. 108 Reasoned rulings were made by eight of the nine judges.

The longest decision was given by Lord Bingham, who started out by carefully examining the historical setting in which the 1911 Act was created. According to Lord Bingham, the 1911 Act did, in fact, bring about a significant constitutional shift. However, this change did not result from the creation of a new kind of sub-primary parliamentary legislation but rather from the development of a new method for enacting primary legislation.

Lord Bingham's understanding of the Act's historical context is said to have contributed to his coming to this view. Nevertheless, his justification seemed to be based mostly on a literal interpretation of the 1911 Act's wording, particularly Sections 1 and 2, which state that any legislation voted by the Commons and Monarch would be considered a "Act of Parliament." So, in Lord Bingham's view, the legislative authority of the Commons and Monarch is unrestricted in substance. They could pass a law on any topic imaginable if they worked together. A legislation that overrides the specific clause in Section 2 of the 1911 Act that the new process does not apply to Acts that prolong the term of a parliament beyond five years would fall under this category. This analysis has several glaring and significant flaws.

The first issue is that Lord Bingham's logic inevitably assumes that the United Kingdom now has two independent legislators. This is illogical in every way. Thus, Lord Bingham is not proposing a situation in which, as was the case in South Africa in the 1950s, power is shared between Parliaments with various identities. 109 Evidently, each of Lord Bingham's parliaments has omnipotent legal authority.

When one analyzes the practical ramifications of Lord Bingham's unthinking reliance on the literal text of sections 1 and 2, it is clear that the reasoning has a second weakness. According to this logic, the Commons alone would have become a sovereign legislature if the 1911 Act had simply

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stated that any measure approved by a slim majority in the Commons at third reading was "an Act of Parliament" and done away with any requirement for the Lords or Monarch to assent to legislation. Furthermore, it appears that a majority of the Cabinet would also be 'Parliament,' and thus a sovereign lawmaker, if the 1911 Act had granted the status of 'Act of Parliament,' to a written government policy proposal that was endorsed by a majority of the Cabinet and acknowledged as such by the Prime Minister. Furthermore, according to Lord Bingham's analysis, either of those additional "sovereigns" could now be created by the Commons and Queen acting in accordance with the 1911 or 1949 Act procedures; and the additional sovereigns would then have the legal authority to create even more sovereign law-makers since their desires would be considered "Acts of Parliament" in turn.

Much more troubling is Lord Nicholls' assessment. Lord Nicholls, like Lord Bingham, bases his claim that the Commons and Monarch are not a subordinate legislature on the use of the term "Act of Parliament" in sections 1 and 2. He writes: "To describe an Act of Parliament made by this procedure as "delegated" or "subordinate" legislation, with all the connotations attendant on those expressions, would be an absurd and confusing mischaracterization." 110 Instead, the 1911 Act established "a alternative channel" for the enactment of laws. Nevertheless, De Nicholls ruled that the Commons and Lords could not utilize his "parallel way" to overturn the significant limitations on its use outlined in Section 2 (unlike Lord Bingham). 111 This must imply that the Commons and Monarch are incompetent legislators. They do not, however, seem to be "subordinate" to the Parliament made up of the Commons, Monarch, and Lords. Adopting this stance is inherently illogical. After that, Lord Nicholls provides "the second source of confirmation." On page 112 of his conclusion, he makes the odd notion that any laws made via the Parliament Act's 1911 or 1949 processes must be considered "Acts of Parliament" since they have been recognized as such or altered by later laws passed by Parliament. Beginning with language that looked a little more sophisticated than that used by his colleagues, Lord Steyn delivered his decision. He seemed to be careful to avoid referring to the laws passed by the Commons and the Queen as "Acts" that were "enacted" by Parliament.

C. Unsatisfactory

The House of Lords members' thinking and subsequent findings are utterly unacceptable. The Court's apparent refusal to accept William Wade's assertion that the sovereignty of Parliament is not a phenomena that arises from a legal source and, as such, is not a phenomenon that can be changed by a legal source at the basis of the issue. The "ultimate political truth" of the constitution is that the sovereign authority of Parliament cannot be limited or ceded by non-revolutionary methods. The Commons and the Queen, however strong they may be as legislators, are not and cannot be the Parliament, and as such, they are not permitted to have sovereign authority. In this regard, the Court of Appeal's decision provides a significantly more thorough—if not entirely thorough—analysis of the constitutional ramifications of the 1911 Act than the House of Lords' various decisions.

An elected second chamber shown that the Brown administration saw little benefit in continuing with a second house made up of of appointed members. Jack Straw, the minister who sponsored the white paper, asserted that the government's positions on more change were not set in stone, saying that the document was "designed to inspire further discussion and thought rather than being a blueprint for ultimate reform." A smaller house with 400 members, all of whom would be elected to serve a single twelve to fifteen-year term, looked to be the preference of the administration. Regarding the election process to be utilized to elect the new members, no concrete proposals were given. The apparent implication being that membership in the house should be seen as a full-time political commitment led to the suggestion that members should be paid. The administration did not believe that any legislative reform measures would be submitted to Parliament before the subsequent general election.

The Conservative/Liberal coalition government's 2010 reform program included further change, with the following statement: "We will create a committee to put forth recommendations for a totally or mostly elected upper house on the basis of proportional representation." In May 2011, a draft bill outlining an 80% elected parliament was released. The proposed bill called for a substantially smaller house with just 300 members. A third of the seats would be up for election every five years, and elected members would have fifteen-year tenure. Backbench MPs from both parties originally seemed to be antagonistic toward the Bill. In order to assess the specifics of the change, the administration suggested a protracted consultation process. As of late 2011, it was unlikely that any substantial measures would be implemented.

Nonetheless, changes to the House of Lords' judicial function were completed in 2010. The formation of a new "Supreme Court" with the authority of the House of Lords' appeal committee was provided for in Part 3 of The Constitutional Reform Act of 2005. Twelve people make up the Supreme Court; the first members were the law lords in power at the time the Supreme Court was established. The Act establishes a thorough selection procedure for future Supreme Court justices. A nonpartisan "selection commission" has the initial recommendation power. The Lord Chancellor and Prime Minister may reject the Commission's recommendations, but the government no longer has the initiative, which in a structural sense strengthens the independence of the court. The Supreme Court will be housed in a new structure outside of the Houses of Parliament, which serves as a symbolic reminder of that institution's independence. The surprisingly quick speed at

which the building's preparation moved forward demonstrates that the administration did not feel any particular urgency in putting these adjustments into action. Work wasn't finished until the end of 2010.

The provisions in Part 4 of the Act for the establishment of a new Judicial Appointments Commission may have been more significant. The JAC was supposed to be a non-partisan organization that would be heavily involved in choosing judges for all judicial levels. Despite the fact that there hasn't been any credible evidence in recent years that Lord Chancellors and Prime Ministers selected judges for partisan party-political motives, the 2005 amendments essentially eliminated any potential for that kind of misuse of the appointment authority.

Reforming the House of Lords in its position as a legislative body obviously poses a far more difficult issue. But before we draw the conclusion that only the House of Lords lacks a "democratic" foundation inside Parliament, we should review the House of Commons and take into account not only its powers but also the procedures used to choose its members. A harsh challenge is posed in chapter seven: to what degree can we say with credibility that the House of Commons' membership correctly reflects the preferences of "the people"?

III. CONCLUSION

There are many variants on the issue of changing the functions and makeup of the House of Lords as a legislative body, and there are advantages and disadvantages to every plan put out. Yet the majority of reform strategies have a contradiction. More and more, we demand of a second chamber that it be "expert," "experienced," and "non-partisan." As a result, we disclose the crushing domination of party politics in the lower house and the inability and/or reluctance of backbench MPs to place a restraint on government actions. This may imply that party versus national interest, rather than Lords vs Commons or Labour versus Tory, is now the primary split inside the legislative process. If such is the case, it will be exceedingly challenging to come up with successful reforming plans for the Lords without also taking into account the benefits and shortcomings of "Parliament" as a whole, in terms of both its legislative authority and its connection with the "people." The notion that the legal and traditional subordination of the upper house to the Commons is acceptable for what one would naively perceive as "democratic" grounds underlies discussions of Lords reform rather often. It is possible to depict the Lords as an aristocratic, unelected entity that lacks the authority to oppose the will of "the people," as these desires are always faithfully reflected by the elected members in the lower house. The Wakeham Commission's recommendations and the ideas presented in the 2001 White Paper only partially address this problem.

REFERENCES

[1] P. Norton, “Post-legislative scrutiny in the UK Parliament: adding value,” J. Legis. Stud., 2019, doi: 10.1080/13572334.2019.1633778.

[2] T. Al Baghal, “Usage and impact metrics for Parliamentary libraries,” IFLA J., 2019, doi: 10.1177/0340035218821391.

[3] E. Robinson and J. Watts, “Doctrine and decision: Navigating labour’s new constitutional position in the lords,” Polit. Q., 2019, doi: 10.1111/1467-923X.12660.

[4] J. R. Polo Sabau, “The church of england’s representation at the british parliament: A controversial anacronism,” Rev. Esp. Derecho Const., 2019, doi: 10.18042/cepc/redc.116.05.

[5] P. J. Pina Queirós, A. J. de Almeida Filho, A. Cunha-Oliveira, S. G. Cantarino, F. A. Bastos Almeida, and J. R. Moreira Pascoal, “Nursing in the logbooks of sessions of the Houses of the Portuguese monarchy, between 1900 and 1910,” Rev. Enferm. Ref., 2019, doi: 10.12707/RIV19017.

[6] B. Tarran, “Forensic science in ‘crisis’, needs funding for research,” Significance. 2019. doi: 10.1111/j.1740-9713.2019.01268.x.

[7] I. Davis, “The Experimental Conception Hospital: Dating Pregnancy and the Gothic Imagination,” Soc. Hist. Med., 2019, doi: 10.1093/shm/hky005.

[8] I. I. Mitroff, “The Revolution of Everything,” in Technology Run Amok, 2019. doi: 10.1007/978-3-319-95741-8_2.

[9] J. Read, “The profile of professional midwifery leadership in England,” Br. J. Midwifery, 2019, doi: 10.12968/bjom.2019.27.2.120.

[10] J. Read, “The profile of professional midwifery leadership in England,” Br. J. Midwifery, 2019, doi: 10.12968/bjom.2019.27.2.120.

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The Dawning of the Democratic Age

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***Abstract*— The efforts of the ancient Greeks, whom 18th-century thinkers regarded as the founders of Western civilization, are often connected with democracy. These people tried to use these early democratic experiments as a model for a new post-monarchical political system. In this chapter author is discusses elections and referendums Act 2000. The Dawning of the Democratic Age is seen as a continuation of the democratic wave that began in the late 18th century with the American and French revolutions. It is characterized by the expansion of suffrage, the rise of political parties, the growth of civil society, and the emergence of new forms of media and communication.**

***Index Terms*— Act, Democratic, Electoral, Jurisdiction, Parliament.**

I. INTRODUCTION

Disraeli guided the Election Petitions and Corrupt Practices at Elections Act through Parliament soon after the 1867 Act was passed. The Act gave the courts back control over contested elections. The action had both practical and symbolic repercussions; the former ensured the development of a cohesive body of precedent outlining what constitutes improper behavior, while the latter suggested that the election process was now governed by traditional rule of law norms [1],[2].

In 1872, the secret ballot was first used. During the general election in 1868, there was a lot of corruption and intimidation. 34 The secret ballot was determined to be the most efficient anti-corruption tool by a Select Committee that was constituted in 1869. In 1871, a Bill was submitted by Gladstone's Liberal government, but it was blocked by the Lords and opposed by the Conservatives in the Commons. In 1872, Gladstone put up a similar Bill and threatened to dissolve the House of Commons if it was not passed. The Bill was reluctantly accepted. The Corrupt and Illegal Practices Prevention Act of 1883 was also crucial. This set a ceiling on the amount of money that each candidate may spend locally on their campaign, calculated as a per capita amount for each voter [3],[4].

Both measurements showed a further cultural movement away from an aristocratic constitutional morality and toward a meritocratic one. Instead of the previously given unquestioning respect to landowner interests, the political process itself was more structured by middle class norms of fair competition, in which political power was earned on the basis of reasonable reasoning. By the middle of the 1880s, this reason had persuaded Parliament to elect a sizable number of working-class males [5],[6].

A uniform borough/county voting requirement established at the lower borough level, which would provide two million more people the right to vote, was the main component of Gladstone's 1884 reform. At first, the Measure was opposed by the Conservatives. The Liberals were a minority in the Lords despite having a solid Commons majority. The leader of the Conservative lords, Lord Salisbury, was prepared to use his "referendal theory" of the veto power to compel a dissolution. Several Liberal MPs welcomed the possibility of a veto because they saw it as a chance to limit the authority of the upper house. Any such veto, according to Gladstone, would be "A precedent against Liberty." Similar to 1832, popular pressure for change was sparked by the Lords' stubbornness. Conservative members of the Commons disregarded Salisbury's recommendation to give the Bill "a solid parting kick at third reading." 38 The Lords was thus unable to demonstrate a distinct division in electoral sentiment on the subject. The major Liberal newspaper referred to the conclusion as "a seizure of the office and powers of Parliament" since the crisis was averted by agreement between a small group of each party's leaders, with minimal discussion in either chamber. This was in stark contrast to the passage of the 1867 Bill, when the Commons committee stage was crucial to the ultimate form of the Act. The statutory labels that might be applied to both initiatives mask significant variations in the legislative process' reality [7],[8].

The RPA 1918's changes had a more political feel to them. Women had the right to vote for the first time. Women were permitted to serve as Commons members by Parliament in the same year. 41 Male adult suffrage was only conferred if a person had lived in a constituency for six months. As the university franchise and the business premises franchise remained in place, some voters still had two votes, but repeated out-voting was prohibited. The Act also recognized that it was desirable to have constituencies with comparable sized electorates, while it did not compel perfect mathematical equality. The RPA 1918 also included a number of noteworthy financial improvements. The government should pay the administrative expenses of the election, not the candidates, the parliament eventually agreed. A £150 payment was needed in order to deter applicants with frivolous applications. If a candidate received more than 12.5% of the vote, this was returned. The expenditure restrictions imposed by the 1883 Act were practically cut in half in real terms in order to further equalize the playing field

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for candidates. Yet, it wasn't until 1955 that every seat was up for election [9].

A. The current election processes

Notwithstanding Britain's voting system's obvious "democratic" credentials, numerous voices have recently called for electoral change in the current political climate. Three issues are the main sources of criticism. The first has to do with constituency allocation. The second is about how elections are run, particularly the price and nature of party-political advertising. The third, and most crucial, factor is the method used to relay voter preferences.

II. DISCUSSION

A. Apportionment—drawing constituency boundaries

The Boundary Commission's authority and duties are outlined in a consolidated law known as the Parliamentary Constituencies Act of 1986. In Scotland, Northern Ireland, Wales, and England, the Commission chooses the size and form of each constituency. Obviously, this is a duty that has to be attentive to claims of political prejudice. It is possible to create boundaries on purpose to provide one party a political advantage. Each nation's Commission is led by a high court judge to minimize this issue. Two other team members support her. Members are chosen by the administration but must also get the opposition parties' approval by custom. In 1944, a Commission that takes this form was first constituted. Previous laws had established political party-staffed organizations with less clearly defined apportionment tasks, which made it very difficult for them to refute claims that they couldn't be impartial. The Commission conducts regional hearings on reapportionment recommendations every fifteen years. The Commission then gives the Home Secretary a report with recommendations. The report must then be presented to the Commons and Lords for approval together with an implementing Order in Council.

B. Apportionment criteria: an unresolvable legal matter?

The Parliamentary Constituencies Act of 1986, Section 2, has "rules" that set limits on the Commission's discretion. The term "regulation" is misleading since the legal status of Sch 2 provisions often amounts to little more than advice that the Commission is required to take into account. The total number of constituencies is stated in Rule 1. The Commission must determine an electoral quota in accordance with Rule 7, which entails dividing the total number of registered voters by the number of seats. The quota is now somewhere around 66,000. After that, the Commission must use somewhat more subjective factors that seem to be rated in the following order of significance. According to Rule 4, seats shall not cross county or London borough lines "as far as practicable." Following that, Rule 5 instructs the Commission to make all constituencies as close to the electoral quota as possible, subject to Rule 4. The Commission may deviate from Rule 4 only if maintaining county or London borough boundaries would result in an "excessive disparity" between the size of a constituency and the electoral quota. Then, under Rule 6, "specific reasons, including, in particular, the size, form, and accessibility of a constituency, seem to constitute a deviation desirable." the Commission may disregard Rules 4 and 5.

Hence, the law does not demand that constituency sizes be equivalent mathematically. The original 1944 Act did prioritize numerical equality as the most important factor in apportionment, but this was changed in 1947 to prioritize generating constituencies based on established local "community." 43 The Commons were still unmistakably seen by Parliament as the "House of Communities."

In actuality, the Act results in significant disparities in constituency size. Newcastle Central only had 24,000 voters, but Buckingham seat had 116,000 before to the 1983 reapportionment. 44 Notwithstanding the revisions from 1983, more than 100 seats had exceeded the limit by 1987. The Orkney and Shetland constituency, with 31,000 votes, and the Island of Wight, with almost 98,000, were at the different extremities. Due to the system's disregard for the "one vote, one value" premise, these deviations elicit accusations of anti-democratic activity. Both a communal and an individual dimension exist in this complaint. As both districts only elected one MP, the votes of Orkney inhabitants were collectively "worth" more than three times as much as those of Isle of Wight residents. More broadly, the degree to which an electorate is less than the electoral quota determines how much the "value" of that constituency's voting power grows or drops. For electoral reasons, not all communities are created equally.

Harder to determine is the actual "worth" of a single vote. The relative sizes of the seats would not have an impact on the parties' total success if, for instance, voters in Newcastle Central and Buckingham cast equal numbers of votes for the Conservative, Labour, and Liberal Parties in 1983. Nonetheless, if all of its followers resided and voted in Newcastle Central, a party could still win one of the two seats even with just 12,001 supporters in the two regions combined. This is an extreme example of the more general fact that a party gains a lot by having a high concentration of followers in sparsely populated areas.

Undoubtedly, there is a sizable potential for unintentional political bias in the apportionment criteria, and as a result, there is a sizable potential for legal challenges to the Commission's conclusions. Nevertheless, by stating in s. 4 that any Order in Council allegedly issued in accordance with the Act "must not be questioned in any judicial proceedings," Parliament attempted to reduce litigation. The usage of "purports" ostensibly protects the Act from the judicial "threat" that Anisminic poses. This shows that lawmakers do not consider appoint- mentment to be a subject for the rule of law according to Diceyan principles. The courts seem to concur with that view thus far.

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C. The debate of 1969

As seen by the events of 1969, the court's limited oversight function has led to an openly partisan style of conflict resolution inside Parliament. The recommendations made by the Commission in 1969, which took into account demographic shifts away from cities, seemed set to lose the Labour Party twelve seats in the next election. The Home Secretary, Jim Callaghan, opted against introducing an implementing Order. Instead, the government unveiled a Bill that would only partially implement the Commission's recommendations and remove the Home Secretary's statutory duty to lay the Order. The administration justified its plan by arguing that constituency reapportionment should take place concurrently with the anticipated redrawing of local government borders in the coming years.

The opposition to the Conservative party believed that the administration was behaving partisan- ly. As a result, the Bill's destructive amendments were enacted by the Lords' Tory majority before being withdrawn. The administration ordered Labour MPs to vote against the Orders when Callaghan placed them before the Commons rather than reintroducing the Bill and using the Parliament Act processes. Hence, the border adjustments could not be made before the subsequent election. This was fully lawful since the Act only ordered the Home Secretary to propose the Orders; neither Parliament was required to adopt them. In Crossman's Diaries, the cynicism that underlies the Cabinet's plan is clearly shown.

We decided to submit all of the Orders to the Commons, with the intention of negating them all by submitting them but not approving them. Since the general people believes that both the Government and the Tories are worried about our own self-interest, we have not lost credibility.

D. The debate of 1983

Notwithstanding the fact that Orders cannot be contested in court, is there a provision that forbids litigation from seeking to block the Commission from submitting its findings to the Home Secretary? Up until 1983, it was unclear if such lawsuit had any chance of success; the courts at that time provided a brief response.

The Labour Party was concerned that the Conservative Party would gain considerably from the Commission's recommendations for the 1983 election. Michael Foot, the party's leader, requested a judicial review of the Commission's conclusions in R v Boundary Commission for England. By treating the legislative "rule" mandating about equal constituency sizes as subservient to the "rule" stating that constituencies should not cross county or London borough lines, Mr. Foot said the Commission had misunderstood its mandate. According to Mr. Foot, the plans' vastly different constituency sizes "violate the principle of equal representation for all voters which is needed by our current system of Parliamentary representation." To stop the Commission from delivering its recommendations to the Home Secretary, the petitioners requested a court injunction.

Considering the 1949 Act's language, the petitioners were making an upbeat claim. It is debatable whether the notion of "equal representation" in electoral districting, which requires mathematical equality, is recognized by the constitution, although it is not expressly stated in the Act. In essence, Mr. Foot was requesting that the Court accord the moral concept of "one vote, one value" the same constitutional weight as it had accorded the moral ideal of "rule of law" in Anisminic. The Court turned down the request. When it comes to the Commission's work, Sir John Donaldson MR categorized it as presumptively non-justiciable in the absence of all but the most serious wrongdoing.

E. Act of 2000 Concerning Political Parties, Elections, and Referenda

The Labour administration tabled the Political Parties, Elections and Referendums Bill in 1999, which would give the Electoral Commission, a new statutory body, the authority to carry out the Boundary Commissions' duties.

The Commission would include five to nine members, who would be formally appointed by the Queen after receiving Commons approval. Also, the Speaker's Committee was to be established under the Bill to regulate the Commission's operations. Strangely, the Speaker would not be a member of the Committee, which would also include six backbench MPs, the Home Secretary, the minister in charge of local government, and the chair of the Home Affairs Select Committee. According to the Bill, candidates chosen to serve on the Commission must have approval by the Committee. The suggestion seems to be an effort to guarantee that the apportionment question operates on the basis of multiparty agreement rather than to depoliticize the issue. Political Parties, Elections and Referendums Act was the name given to the Bill when it was passed in 2000. The Electoral Commission was given more time to assume the Boundary Commission's duties. In April 2002, the Commission inherited control over drawing local government borders; however, it has not yet taken on authority over parliamentary seats. The principle of "one vote, one value" had not yet found its place in the British constitution at that moment. At the conclusion of this, we take a look at a more recent effort to deal with this problem. Nevertheless, the possible drawbacks of the apportionment procedure should not be seen in isolation from other election law provisions, particularly the below-discussed vote-counting procedure. But before we answer that, let's quickly go through how election campaigns are run.

F. The contents and conduct of election campaigns

This covers four topics: the electorate, the candidates, the funding and nature of political advertising. The High Court retains jurisdiction over contested elections and has the authority to void results and exclude wrongdoers from running in future elections. There are now not many petitions filed, which is largely due to an apparent widespread

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endorsement of the morality of election legislation.

G. The Participants

In 1832, voter registration became a requirement in order to reduce fraudulent votes. The RPA of 1918 imposed a stricter procedure and gave local governments control over assuring the correctness of the register. There haven't been many claims that the registration procedure is considerably exploited in the present period.

Nowadays, constitutional morality recognizes that the right to vote belongs to almost all adult citizens and may only be denied in extremely specific situations. Voting is no longer seen as a privilege obtained via property or educational requirements. The concept of residency is now what underlies the awarding of the franchise. Since the RPA of 1948 was passed, all other citizens above the age of 21 have the right to vote provided their names are included on the electoral register of the district in which they now live. 53 Before the year 2000, local government representatives created the register once a year in October. The unpleasant result of this was that potential voters who just missed the October registration deadline would not be allowed to register in their new constituency until the following October, making it impossible for them to participate in any subsequent elections. This issue was resolved by the RPA 2000, which made it possible for the register to be updated continuously. While registered people are not required by law to vote, it is illegal to not reply to registration forms. Since 1948, when the university and business franchises were eliminated, no one has been permitted to cast more than one ballot in a general election.

Many small-scale efforts have been made in recent years to expand the electorate even further. The RPA 1985 made it feasible for previously registered voters to continue to cast ballots in their prior constituencies while residing abroad. The RPA 2000, which was supported by the first Blair administration, significantly weakened the connection between voting rights and habitation by allowing homeless persons to establish a fictitious address for electoral reasons. A person who is homeless may list "a location in the UK where he regularly spends a major portion of his time" as his or her address. 54 The 2000 Act also grants inmates confined in jail on remand the right to use the jail as their primary residence.

The Monarch, the surviving hereditary Lords, and life peers are the only citizens55 who are ostensibly prohibited from voting due to their position. Some disqualifications are based on conduct or competency issues. If a person is incarcerated or has just been found guilty of electoral fraud, they are unable to vote. Enfranchisement of convicted criminals was briefly discussed in the legislature during the passing of the RPA 2000, but the Blair administration maintained that disenfranchisement was a necessary extra punishment for those who had been imprisoned for crimes. 56 In 2010 and 2011, the Conservative/Liberal coalition administration took the subject back under consideration. Those incarcerated in hospitals under the Mental Health Act of 1983 were formerly disqualified, but that rule was repealed by the RPA 2000.

H. The contenders

There aren't many general restrictions on running for office. Parties that support extreme political ideologies, like the British National Party and Socialist Workers Party, often run candidates, yet they seldom succeed. Parties like Plaid Cymru, the Scottish Nationalists, or Sinn Fein, whose main political goal has often been to gain the independence of their own countries, are also not prohibited. Yet, certain "proscribed organizations," as defined by the Prevention of Terrorism Acts, are not eligible to participate in democratic elections. The organizations in question choosing to pursue their political goals outside of the democratic process serves as the presumed reason for this.

In 1872, the requirement that MPs be affluent was eliminated. A slight financial hurdle to running for office still exists under current election legislation. Each candidate must provide a £500 deposit, which is refundable if they get less than 5% of the vote. The purpose of the election deposit is to discourage petty candidates from demeaning the election process and/or making it more difficult to administer, not because poor candidates are inherently unfit to serve as lawmakers.

Candidates need not live in the electorate they have selected, but ten registered voters must nominate them. A variety of statutes58 also prohibit a diverse group of residents from running for office, including those who are under the age of 18, those who occupy judicial positions, and those who are a part of other governmental groups. Priests from the Church of England and the Catholic Church were prohibited from running until 2001. 59 Also, some criminal and mentally ill populations as well as insolvent debtors and several other groups are prohibited. Notwithstanding the fact that, as eight shows, some of these limits are individually controversial and quantitatively negligible.

The rules governing candidacy are geared at the candidate as a person. Britain, unlike the majority of other 'democratic nations,' lacks legislation that specifically addresses matters like choosing parliamentary candidates, creating party policies, and electing party leaders. Moreover, there is currently no evidence that suggests the courts see these cases as justiciable. When John Major replaced Margaret Thatcher as head of the Conservative Party in 1990, the Conservative Party had the chance to put that presumption to the test. 60 Yet no challenge was made. Nevertheless, it doesn't seem that constitutional lawyers think the problem is significant: intra-party democracy is a topic that few legal experts have looked at.

Political parties' internal membership and candidate selection procedures may be subject to laws against racial and gender discrimination, although the legal system has not yet verified this. This brings up a new aspect of the "electoral equality" principle: women and people of color are

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disproportionately underrepresented as candidates and MPs, and as candidates, they are concentrated in unwinnable seats.

I. Chichester v. Sanders

A strange incident in 1994 exposed a further gap in election legislation. While the issue in the case was equally pertinent to elections for the Commons, the plaintiff in Sanders v. Chichester was a Liberal Democrat candidate in the 1994 European Parliament election. Mr. Sanders wanted the election results in his district overturned.

While it wasn't his behavior that was in issue, the defendant was chosen as the winning applicant for the position. A Mr. Huggett ran for office as a "Literal Democrat." According to Mr. Sanders, Mr. Hugget was attempting to sway reckless Liberal Democrat supporters away from Mr. Sanders in order to increase the odds of the Conservative candidate prevailing. If that was Huggett's goal, he accomplished it wonderfully. He received almost 10,000 votes. Just than 800 votes separated the Conservative candidate, Mr. Chichester, from the opposition.

The interpretation of Rules 6 and Sch 1 of the RPA 1983 was crucial to the decision. Candidates had to provide their complete name and address on the ballot according to these regulations. Applicants might add a description of up to six words if they so desired, but they were not required to submit any further information. Often, the description was used to verify a candidate's political party allegiance.

The court came to the conclusion that because Parliament had made a candidate's complete name and address a requirement for candidate identification, the only way it could nullify an election result was if the candidate had given false information. The court determined that Parliament had not meant for the data that candidates can provide on the ballot form to be used as justification for annulling an election outcome. A legal safeguard against potentially misleading entries on the ballot form was not provided by the Act: "The regulations did not forbid candidates, whether out of spite or a wicked sense of humor, from defining themselves in a confusing manner or engaging in spoiling tactics."

Unfortunately, this interpretation of the law was sterile. In the context of a contemporary party-based election contest, Parliament's omission to explicitly safeguard parties against spoiling candidates was deplorable, but it was not a necessary obstacle to the court reaching that conclusion. According to a teleological interpretation, the candidate's ability to add a description to his or her name and address may easily be seen as a tool designed to help voters make an educated choice when casting their ballots. So, any descriptions that blatantly prevented such conclusion would be illegal.

The Registration of Political Parties Act of 1998 lessened the room for misuse Sanders left open. The Act gave parties the ability to register certain emblems with the Registrar of Companies and gave them the authority to forbid other parties from using the registered insignia. More significantly, the Act forbade candidates from identifying themselves in a manner that would mislead voters into believing they are on behalf of a recognized party. The PPERA 2000 expanded the party registration process under the control of the Electoral Commission, essentially prohibiting candidates from running for dormant or "spoiling" organizations. This would seem to be a welcome—if tardy—reform to election law, which states categorically that voter behavior is primarily influenced by party identification.

III. CONCLUSION

Democracy is a system of governance in which the citizens of the nation elect the governing party. Forming a government cannot be inherited since the party that may do so must win the majority of votes in the election, which is held every five years. A system of checks and balances between the executive and legislative branches of government, as well as the separation of powers, are all important aspects of liberal democracy. Liberal democracies often have multi-party systems with at least two enduring, viable political parties. While the Dawning of the Democratic Age has brought about many positive changes, it has also faced challenges and setbacks, including the rise of populism, the erosion of civil liberties, and the persistence of inequality. It is a dynamic and ongoing process that requires constant vigilance and active participation by citizens, governments, and civil society organizations. Overall, the Dawning of the Democratic Age is an important concept that reflects the continuing evolution of democratic ideals and institutions around the world. It serves as a reminder of the progress that has been made, as well as the challenges that remain, in the quest for a more democratic and just society.

REFERENCES

[1] N. D. Anggraeni, M. Jayanti, and F. Syahrizal, “The Concept of Democratic Parenting and Impact for Elementary School Ages,” Soc. Humanit. Educ. Stud. Conf. Ser., 2019, doi: 10.20961/shes.v2i1.38196.

[2] A. Sangiovanni, “Democratic control of information in the age of surveillance capitalism,” J. Appl. Philos., 2019, doi: 10.1111/japp.12363.

[3] C. H. T. Lesch, “Democratic solidarity in a secular age? Habermas and the ‘linguistification of the sacred,’” J. Polit., 2019, doi: 10.1086/702948.

[4] C. G. McKenna, S. A. Bartels, L. A. Pablo, and M. Walker, “Women’s decision-making power and undernutrition in their children under age five in the Democratic Republic of the Congo: A cross-sectional study,” PLoS One, 2019, doi: 10.1371/journal.pone.0226041.

[5] F. Esser and C. Neuberger, “Realizing the democratic functions of journalism in the digital age: New alliances and a return to old values,” Journalism, 2019, doi: 10.1177/1464884918807067.

[6] F. R. Kaniki, “Factors influencing the use of modern contraceptive methods among rural women of child bearing age in the Democratic Republic of the Congo.,” Journal of family medicine and primary care. 2019.

[7] B. J. Newman and T. J. Hayes, “Durable Democracy? Economic Inequality and Democratic Accountability in the

New Gilded Age," Polit. Behav., 2019, doi: 10.1007/s11109-017-9435-3.

[8] J. Marshall, "The Anti-Democrat Diploma: How High School Education Decreases Support for the Democratic Party," Am. J. Pol. Sci., 2019, doi: 10.1111/ajps.12409.

[9] N. Vannavong, R. Seidu, T. A. Stenström, N. Dada, and H. J. Overgaard, "Dengue-like illness surveillance: a two-year longitudinal survey in suburban and rural communities in the Lao People's Democratic Republic and in Thailand," West. Pacific Surveill. response J. WPSAR, 2019, doi: 10.5365/wpsar.2017.8.4.001.

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A Study about the Financing Elections

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***Abstract*— The presidential public financing program provides federal assistance to qualifying presidential candidates to cover the costs of their political campaigns during both the primary and general elections. In this chapter author is discusses the television and radio broadcasting. Financing elections is the process of providing financial resources for political campaigns, including the costs associated with advertising, travel, and organizing events. Elections require significant funding, and the way in which campaigns are financed can have a significant impact on the democratic process.**

***Index Terms*— Act, Election, Finance, Law, Voter.**

I. INTRODUCTION

It makes perfect democratic logic to have spending limits, which were originally implemented by the Corrupt and Illegal Practices Prevention Act of 1883. The limitations make sure that a candidate's popularity in the election is determined by the strength of her ideas rather than the amount of money she spends on advertising. The 1883 law's letter has been preserved, with periodically adjusted financial thresholds. Currently, RPA 1983, s. 76 permits each candidate to spend up to £7,000 plus a few pennies for each voter in the constituency who is registered to vote. So, wealthy candidates are unable to take use of their money by, for instance, hiring a large number of full-time employees or sending out glossy flyers for weeks on end [1],[2]. The time at which the spending clock begins to run is uncertain [3],[4]. The most probable event would seem to be the announcement of the dissolution of Parliament. Naturally, this implies that a rich candidate might spend as much money as they wanted on publicity before the dissolution. The guidelines for this matter changed beginning in 2010. Now, it is possible to divide a candidate's expenditure between what is known as "the long campaign" and "the short campaign [5],[6]." Prior to the dissolution of Parliament, there is a "long campaign" that lasts for around three months. Candidates had a spending limit of £25,000 plus 5 or 7 pence per registered voter in urban or rural areas during this time [7],[8]. Three weeks or so before the election during the brief campaign. In urban and rural areas, candidates were allowed to spend around £7150 plus 5p or 7p per registered voter during this time. Early attempts to implement spending limits were hampered by the law's narrow scope.

Only the candidate himself or his agent was subject to the regulation; spending by "independent" people or businesses was not restricted in any way [9]. This led to creative attempts by candidates and their supporters to create 'independent' financial links, and many legal disputes followed as defeated opponents tried to refute the supporter's apparently autonomous status. This gap was closed by RPA 1918, s. 34, which forbade any spending intended to support a candidate without first receiving written consent from the candidate's representative. Any such expense is deducted from the candidate's total budgetary allotment. The campaign manager for the candidate is required to compile a full election return. This is a public document that other candidates are free to see. A violation is also committed if the return is not produced. Nevertheless, there is no system in place for impartial official examination of returns. The initiative of other candidates or voters is required for any challenge to the legality of a candidate's spending.

A. The case of Fiona Jones

The legislation on this issue was notably uncertain before to 2000. This was shown by a story featuring Fiona Jones, the Labour candidate who won the 1997 election in Newark. The Liberal candidate who lost on the ballot charged Ms. Jones of inflating her expenditures. Jones was found guilty of dishonestly filing a fraudulent election expenditure statement in accordance with section 82 of the RPA 1983. Jones said that she was innocent and that she would appeal. Any individual convicted of such a crime seemed to be required under the Act to resign from her Parliament seat. The seat was later declared vacant by the Speaker. Before any by-election could be called, the Court of Appeal overturned the conviction shortly after. The majority of the Court's ruling focused on the law's very vague character.

No amount shall be paid or expenses incurred by a candidate at an election or his election agent, whether before, during or after an election, on account of or in respect of the behaviour or management of the election, in excess of the maximum amount specified in this, according to Section 76 of the 1983 Act.

Election expenditures are defined as "expenses spent, whether before, during, or after the election, on account of or in relation of the conduct or administration of the election" under Section 118.

The Court agreed that it was possible that some of Ms. Jones's expenses were in fact "election expenses," such as the cost of renting an office that she shared with local election

candidates before the general election was called and the use of an already-existing database on election day that contained the names and addresses of likely Labour voters. Yet there remained space for debate over it. Yet in light of that uncertainty, there was no proof that Jones had broken the law by deliberately making a false statement.

In the case of A-G v. Jones77, the High Court was asked to decide whether Ms. Jones' resignation from her seat should be viewed as invalidating the Newark election or whether it was merely a temporary disability that, if overturned by a conviction under Section 82, would not prevent Ms. Jones from resuming her seat.

It is sad that the RPA 1983 did not provide a clear response to this question, given how important it is to the MP in question, her opponents, and their constituents. The court found in a brief, somewhat technical decision that the Act subjected candidates who submitted fraudulent returns to varying punishments depending on the forum in which the behavior was contested. The court ruled that the RPA only allowed for the election to be declared illegitimate if legal action was launched in front of an election court. An MP in Ms. Jones' situation may retake her seat as long as a by-election had not been called in the meantime and a criminal conviction did not invalidate the election results. The outcome is straightforward, but it took some creativity on the part of the Court, which argued that a more simplified legislative framework could be preferable.

The PPERA 2000 suggested certain changes to the legislation in this area. Yet it is clear that these did not resolve the issues raised by the Jones case, notably in the manner that'spending in kind,' or a candidate's use of donated office space or staff members, is taken into consideration. a regional rather than a federal cap on party expenses

Spending restrictions only applied to local races before to 2000. The kind of campaign the legislation envisions is focused on door-to-door canvassing and gatherings in public spaces, as Alder notes. The statute saw 660 separate elections rather than the idea of a "general election" for financial considerations, as it did with apportionment.

The Tronoh Mines case serves as an illustration of this. The Tronoh Mines Company published an advertisement in The Times just before the 1951 General Election that, in part, read: The coming general election will give us all the opportunity of rescuing our nation from being reduced, through the policies of the Socialist government, to a bankrupt "Welfare State."

The advertisement openly mocked the Labour Party, which helped the Tories' chances. For making prohibited expenditures intended to support the Conservative candidate in the constituency where the newspaper was produced, the firm and The Times were charged. According to McNair J, there was no case to be answered. He believed that the advertisement's goal was to influence public opinion in order to "advance the prospects of the anti-Socialist struggle generally." The Act, however, did not regulate campaigns for all elections; rather, it solely addressed campaigns for a specific election. As the advertisement was broadcast to a nationwide audience rather than a constituency, it was legal.

The ruling implied that there was no legal limit on the amount of money a party might spend on its national campaigns. Parties could purchase as many poster locations as they could afford nationwide or place as many advertisements as they could afford in national publications. Tronoh Mines, according to Rawlings, "is a great instance of our electoral law's myopia to the reality of national election campaigns." It is an excessively severe assessment of McNair J., whose analysis of the Act was completely reasonable. If the legislation was unacceptable, Parliament should be held accountable.

Nonetheless, the courts have determined that the regulations apply to regionally focused spending meant to ensure a specific candidate's loss. The earliest instance of this argument was in R v Hailwood and Ackroyd Ltd.84 The defendant, a disgruntled Conservative, handed out pamphlets in his district that advised people not to back the party's nominee but did not specifically instruct them to choose any other candidate. The Court of Appeal maintained the conviction on the basis that such actions should be seen as financial support for the campaigns of all other candidates in the constituency since they indirectly increased their prospects of winning. Fifty years later, in DPP v. Luft, the Chamber of Lords upheld the notion. Although without naming a preferred candidate, Luft had distributed fliers in a number of seats asking people not to support the National Front candidate. Lord Diplock's assertion that "to convince candidates not to vote for one candidate in order to prevent his being elected must have the effect of boosting the aggregate chances of success of the other candidates" was unanimously agreed upon by the court. Hailwood and Luft might have justified their cost if they had run an advertisement in The Times to convey their displeasure.

A notion of financial equality restricted to local campaigns was maybe defendable in 1883's Britain. Although though the party system was obviously well-established at that point, there were still some "independent" candidates, and local campaigns played a significant role in influencing voter choice because to the relative technical adolescence of the news media and transportation infrastructure. Voter behavior was impacted by party loyalty, although it was not overwhelmingly so.

Political realities in contemporary Britain are considerably different. On the national arena, general elections are contested, won, and lost. The primary factor influencing voter choice is party affiliation. The information used to make that decision is also more likely to have come from the national news media than from more regional methods like reading a candidate's election material or listening to her local speeches. So, one may logically draw the conclusion that a party's local candidate is more likely to win support throughout the nation the more money it spends on its

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national campaign. Spending a lot of money does not ensure that a party will get a lot of support. There is no simple way to determine if the Conservative Party's increased expenditure and its political victory in the elections of 1983, 1987, and 1992 are related. It would seem simpler to decide whether the constitution should permit the prospect of election choice being influenced by party money. The 1883 Act was intended to break the direct connection between economic and political power; nevertheless, by retaining just the language of the law in a very different political environment, it was made clear that this goal was no longer being successfully pursued.

The lack of any legal obligation that parties disclose their money sources was an equally important omission. This heightened the likelihood that significant commercial interests may 'purchase' influence over legislation. Also, there were no restrictions on the amount that people or businesses may donate to a political party. Throughout the 1980s and 1990s, reports periodically surfaced in the national news stating that powerful businesspeople who have donated a lot of money to Conservative Party finances had in fact "purchased" life peerages. While these claims were unsubstantiated, they would undoubtedly further jeopardize the legitimacy of the Lords if true. The likelihood that a sizable number of MPs would support policies that benefited a large contributor, regardless of the programs' inherent merits, was of increasing concern. Midway through the 1990s, revelations that the Conservative Party routinely took large amounts of money from foreign commercial interests caused special worry since it raised the possibility that the contributors were seeking to purchase legislative influence. Throughout the first year of the Blair administration, these accusations became more intense. The £1 million donation made by Bernie Ecclestone, the owner of the British racing team, to the Labour Party, sparked particular concern. The gift 'coincided' with what seemed to be the government's decision to drop its intention to outlaw cigarette advertising. Ecclestone made a significant portion of his wealth from cigarette advertising; therefore it was reasonable to assume that he had paid for the shift in government policy. The Labour Party afterwards returning the money didn't do much to dispel concerns that its financial integrity had been compromised.

B. The Political Parties, Elections and Referendums Act 2000

Such legal voids highlighted how this section of the constitution's formal framework had not evolved to reflect changing political conditions. The PPERA made a significant effort to align election financing legislation regulations with current political reality. A number of significant projects were unveiled. The Act's Part V and Section 8 most importantly impose restrictions on a party's national campaign spending. 87 The amount was set at £30,000 for each contested seat. A maximum of £810,000, £120,000, and £60,000 may be spent by parties running for a small number of seats in England, Scotland, and Wales, respectively. According to the Act, each party must choose a treasurer and a deputy treasurer, who are the only individuals allowed to approve campaign expenditures. After the campaign, the party Treasurer is required to provide the Electoral Commission with thorough accounting that are open to public scrutiny. The act of exceeding the boundaries is now illegal. The Act further stipulates that the only people and legal entities permitted to donate to political parties are those who are UK citizens and are registered to vote there. All contributions from unapproved contributors must be refunded, and a party treasurer or donor who intentionally violates the guidelines would be breaking the law. The party's finances, which must be reported to the Electoral Commission and made available for public view at the end of each fiscal year, must include a record of any contributions exceeding £200.

C. These are worthwhile endeavors.

88 The Bill's justification was that political parties should be completely transparent about the sources of their funding so that people may choose their candidates with greater knowledge. It's significant that the Bill had cross-party support in the Commons and the Lords and was passed into law essentially unaltered. The apparent flaw in the original Law was that it only applied to people when its provisions were broken. It would not be feasible to impose a punishment that required completely invalidating the results of general elections. Yet if a party's violation resulted in hefty penalties being levied against them, the clauses' deterrent impact may have been increased.

In the general elections of 2005 and 2010, neither the Labour Party nor the Conservative Party spent the full permitted sum. This hints further at the exaggeration of the worry expressed by the Act that the stronger parties may increase their vote by unrestricted expenditure on campaigns. The Act has, however, increased public and media attention to the methods used by political parties to generate money. All registrable contributions to political parties are listed in full in a database that the Election Commission keeps online. By making the pertinent information generally accessible and allowing rival political parties, the press, or interested parties to query the legality of contributions made, this invention significantly improves the openness of party fundraising. 90

In 2002, there were new calls for state financing of political parties in the press and within Parliament, along with calls for low limits on the amounts that individuals or businesses could donate. These calls were prompted by ongoing scandals over the major parties' apparent propensity to accept large sums of money from questionable commercial sources. The recommendation is wise. Spending several million pounds of taxpayer money on political parties each year seems wasteful at first glance. However, such spending would be significantly less harmful to the public coffers than the current situation, in which it appears that parties in power are willing to direct significant amounts of public funds into

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subsidies, the sale of government assets, or contracts for services that offer poor value for money but whose beneficiaries made a disproportionately small donation to party coffers.

In 2002, the Election Commission looked at the situation. In its follow-up report, it made the modest suggestion that people should be encouraged to provide small contributions to political parties by either giving matching public money to support such gifts or by making donations eligible for tax breaks.

But, early in 2006, demand mounted for more legislative change. Press reports claimed that Prime Minister Blair had either requested or received extremely large loans from rich businesses on behalf of the Labour Party. These loans were not disclosed to the general public, nor, it seems, to the Treasurer of the Labour Party and certain important Cabinet members. As the PPERA exclusively addresses contributions, there was technically no legal necessity that the loans be disclosed. Indeed, it is conceivable that the conditions of the "loans" were so advantageous to the Labour Party that they may be plausibly seen as being at least partially contributions. The creators of some of the loans looked to have been nominated by the prime minister for life peerages, which was the principal complaint leveled against the prime minister. The logical conclusion to be taken from this was that Prime Minister Blair was selling seats in Parliament to affluent Labour party supporters, which many observers believed to be inherently corrupt. There were also allegations made that the other major political parties had participated in an equally repugnant endeavor to subvert the PPERA system. The government said in March 2006 that it would support an adjustment to the PPERA regulations that would make loans declarable going forward in order to quell criticism of the prime minister.

D. Broadcasting on radio and television

The British method to controlling political party television and radio programming has been a distinctly extralegal affair. The idea that a candidate's or a party's riches shouldn't affect their ability to reach the public has long been widely accepted. Politicians cannot purchase airtime on television. Throughout the contemporary century, Parliament has routinely passed laws to this effect. Initially, members of the major political parties and representatives from television and radio organizations made up the Committee on Party Political Broadcasting, which was in charge of allocating airtime. Each party received a tiny amount of air time from the Committee, with the proportion generally matching the party's percentage of the vote in the most recent general election.

While the BBC and IBA are both required by law to preserve political neutrality in their programming choices, the Committee itself lacks a clear legal foundation. The Committee also couldn't be considered a "conventional" entity in the official sense. When judgments were decided completely by the broadcasting organizations themselves in 1987, the process really came to an end. The three major parties each had five television broadcasts leading up to the 1987 general election, whereas the Green Party only had one. It may seem strange that such a significant aspect of the political process is not subject to statutory regulation. Contrarily, however, this is one of the few elements of the system that is sensitive to the reality of current campaigns. While there are no formal barriers stopping Parliament from making an intervention in this matter, no administration has yet sent an invitation. Given that voter behavior seems to be unaffected by the broadcasts themselves—one analyst characterized voters in the 2005 election as "a shrunken shell of their former selves"—it may be that there is no practical necessity for such control. There is no evidence that the election-related broadcasts in 2010 changed this pattern. The major party leaders had a televised discussion similar to the presidential debates long held in the USA, which was possibly a significant novelty in that campaign. The effort garnered a lot of media attention, and the leader of the Liberal Democrats, Nick Clegg, put on an excellent performance that seemed to help his party's position in the polls. Nevertheless, that rise did not result in a corresponding gain in seats won at the subsequent election.

E. Political advertising's content

The substance of party advertising has not yet been subject to regulation by Parliament. Election campaigns increasingly appear to be characterized by lurid stories about the secret political goals of the opposition parties, as well as exaggerated claims and venomous criticism. It goes without saying that no one wants falsehoods to influence voters' decisions. Yet, "truth" is a nebulous term that doesn't really matter when it comes to political beliefs like "A Labour administration will damage the economy" or "A Tory government would result in more unemployment."

A private member's bill that prohibited making a "false statement of truth" meant to hurt a candidate's chances of winning was passed in 1895. Lawmakers presented examples of such unethical practices, including a circular letter that falsely claimed a candidate had withdrawn from the race and newspaper reports of fish poaching. The Act, according to the courts, only covered remarks made about a candidate's personal traits and not his political beliefs. In 1911, a private members' Bill to overturn this ruling was unsuccessful due to a lack of support from the government. 97 The current legislation, RPA 1983 s 106, 98, preserves the difference between political and personal speech; so, labeling a candidate erroneously a "communist" or "fascist" is not a violation of the Act.

Seldom has the clause been used. This may have less to do with the inherent integrity of the candidates' speeches and campaign material and more to do with the publics and politicians' somewhat fatalistic understanding that honesty and truth are generally virtues that are in short supply during elections. In 1979, the Scottish Conservative MP Nicholas Fairbairn filed a frivolous lawsuit against the Scottish

National Party, accusing it of making up evidence that he failed to routinely retrieve his mail from the Commons. 99 The Court decided that even if the accusation had been shown to be untrue, it was still connected to politics and not a personal affair.

F. Scottish National Party v. Fairbairn, 1979 SC 393

S. 106, however, gained notoriety following the 2010 election. Former Labour Minister Phil Woolas defeated Liberal Democrat Robert Watkins in the close race for the Oldham East seat by 103 votes. Watkins said that Woolas had purposefully spread incorrect information about him, including suggestions that he had solicited financial assistance from dangerous Muslim radicals and had taken illegal payments from a Saudi Arabian sheikh. The main issue in the case was whether or not these remarks should be interpreted as referring to Mr. Watkins' "personal character" or rather as related to his political ideas or actions. The court came to the decision that even while the claims dealt with political subjects, they did so in a manner that cast Mr. Watkins' reputation in doubt and thereby violated s. 106.

It is hard to feel sympathy for Mr. Woolas, even though numerous Labour MPs raged against the verdict. He obviously went through the motions of trying to deliberately mislead local voters. If section 106 is broken, the election in question is declared null and unlawful, and the offender is prohibited from running for office in the Commons for three years. 102 The incident probably put an end to Mr. Woolas' political career. Ironically, however, the new Labour candidate won the ensuing by-election with a somewhat larger margin of victory. Yet, the incident could make candidates more cautious about how they attack their rivals in future elections.

The goal of Section 106 is to safeguard certain candidates. False remarks made to individuals or groups are not protected. So, the publicity utilized in the infamous 1900 "khaki election," in which the Tories accused the Liberals of aiding the Boers with whom Britain was at the time engaged in war, was legitimate. The issue may be made worse by the lack of legal standing party manifestos have in relation to subsequent central government policies. So, one must rely on the electorate's level of sophistication to detect when parties make baseless assertions.

II. CONCLUSION

Now, a similar inference may be made about the rules governing election money. Campaigns in Britain are no longer characterized by the intimidation and violence that so alarmed the reformers in 1832. Bribery and other corrupt practices have little impact on the current system. While such threats theoretically fall within the definition of the crime of "undue influence," charges are more likely to be brought in connection with actions like defacing campaign posters or removing flyers from voters' letterboxes. Fairness, however, is more complex than just being free from violence and financial fraud. This is clear when one considers that, prior to the passage of the PPERA 2000, the laws governing the sums of money that political parties and candidates may spend on election campaigns did not reflect the historical local form of the electoral system as well as the nationalization of political choice that was evident in the apportionment process. To address these concerns, many countries have introduced regulations and laws governing campaign finance, including limits on spending, disclosure requirements, and public financing of political campaigns. These measures are designed to promote transparency, reduce the influence of money in politics, and ensure that all candidates have a fair chance of winning.

REFERENCES

[1] J. Heerwig and B. J. McCabe, “High-Dollar Donors and Donor-Rich Neighborhoods: Representational Distortion in Financing a Municipal Election in Seattle,” Urban Aff. Rev., 2019, doi: 10.1177/1078087417728378.

[2] A. Ghaliya and P. Sjafrina, “Dampak Politik Uang Terhadap Mahalnya Biaya Pemenangan Pemilu dan Korupsi Politik,” J. Antikorupsi INTEGRITAS, 2019.

[3] K. Dommett and S. Power, “The political economy of facebook advertising: Election spending, regulation and targeting online,” Polit. Q., 2019, doi: 10.1111/1467-923X.12687.

[4] P. Gao, D. Murphy, and Y. Qi, “Political uncertainty and public financing costs: Evidence from US gubernatorial elections and municipal bond markets,” Available SSRN 1992200, 2019.

[5] R. H. Pildes, “Small-Donor-Based Campaign-Finance Reform and Political Polarization,” Yale Law J. Forum, 2019.

[6] H. E. Alexander and M. Bauer, Financing the 1988 election. 2019. doi: 10.4324/9780429046568.

[7] I. J. Junckes, R. R. Horochovski, N. F. Camargo, E. A. Silva, and A. B. C. Junior, “Power and democracy: An analysis on the electoral financing network in 2014 in Brazil,” Rev. Bras. Ciencias Sociais, 2019, doi: 10.1590/3410006/2019.

[8] M. A. M. Sani, N. A. S. Shabudin, U. A. A. Zakuan, S. Pandian, N. S. Y. Ahmad, and A. Kasim, “Political financing in Malaysia: The weakest link in Malaysian politics,” J. Adv. Res. Dyn. Control Syst., 2019.

[9] B. J. McCabe and J. A. Heerwig, “Diversifying the Donor Pool: How Did Seattle’s Democracy Voucher Program Reshape Participation in Municipal Campaign Finance?,” Elect. Law J. Rules, Polit. Policy, 2019, doi: 10.1089/elj.2018.0534.

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An Overview of Voting Systems

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Abstract*— The voting process is governed by a set of procedures for casting ballots and tallying them. Voting procedures vary from nation to nation. There are several varieties of voting systems. First-past-the-post is a term used to describe one of the earliest voting methods. In this chapter author is discusses the parliament and a coalition government. Voting systems are an essential element of democratic societies, enabling citizens to express their preferences and elect representatives to govern on their behalf. There are numerous types of voting systems, ranging from simple plurality systems to more complex preferential and proportional representation systems. Each voting system has its own strengths and weaknesses, and selecting the most appropriate system for a given context requires careful consideration of the goals, values, and constraints of the electoral process.

Index Terms*— Election, Electorate, Government, Law, Rule.

I. INTRODUCTION

There is little evidence to imply that abnormalities in the actual process of tallying votes have a substantial impact on the integrity of contemporary elections. Voters cannot modify ballots after they have cast their votes, add forgeries to the ballot box, or lose their ballot boxes. All candidates are welcome to see the count since it is an open procedure. Vote "counting" might, however, have a much broader definition [1],[2]. The limited relationship between a party's vote total and the number of seats it wins is the most common criticism of the current system. One made reference to the issues that the tyranny of the majority poses in a democracy. Far fewer people actively supported the Blair administrations that were elected in 1997 and 2001. On just 40% of the vote in 2001, the Labour Party was able to secure a Commons majority of over 160. Less than 25% of the registered electorate actually voted for the Labour Party since turnout dropped to under 60%.

The results for the general election in 2005 are equally shocking. Again, there was a relatively low turnout. Just 61.2% of voters who were eligible did so. With a 35.2% share of the vote, the Labour Party gained 356 seats, giving them a majority of more than 60 in the Commons. With a 32.4% vote share, the Conservatives won 198 seats [3],[4]. Despite receiving 22% of the popular vote, the Liberal Democrats only won 62 seats. So, the third Blair administration had the unfortunate distinction of receiving the lowest percentage of the vote of any government throughout the 20th century [5],[6]. The Conservative party won 32% of the vote in the 2010 election, in which almost 65% of eligible voters cast ballots, giving them 307 seats in the House of Commons. The vote count/seats won index once again did not favor the Liberal Democrats. Even though the party received 23% of the vote, it only received 53 seats. These allegedly remarkable outcomes are a product of minority rule, not just majoritarianism, as is permitted under the British democratic system. This may appear insufficient if one's goal as a constitutional lawyer is to guarantee that government authority comes from the agreement of the governed, particularly given that the executive routinely exercises de facto control over Parliament's purportedly unrestricted legal authority. Both tyranny and democracy may be seen as notions concerned with what government does with power as much as how it achieves it. Majorities or minorities are not inherently tyrannical or undemocratic. However, one can question if a democratic constitution's goal of preventing tyranny is sufficient. We'll come back to these issues later. We could think about the seat/vote discrepancy's origins for the time being [7],[8].

The decision to use the "plurality" counting method in single-member districts in a nation where the majority of electoral support is evenly split between two political parties has virtually certainly led to this predicament. According to the "plurality" or "first past the post" system, a candidate is declared the victor of a constituency if they get more votes than any other contender. In a two-party race, the victor must get 50% plus one of the votes cast, a result that increases the likelihood of a government with a slim majority. The seat might be won with as little as 25%+1 votes if four people ran, however. Less votes are required to win when there are more candidates and more equally distributed support among them [9].

In our fictitious four-candidate district, supporters of failed parties have only indirectly and negatively influenced the choice of their MP since if they had voted for losing candidates A, B, or C, victorious candidate D would have needed less votes to win. But, these 75%-1 voters have not directly or positively influenced who their parliamentary representative would be. The term "wasted vote" is often used to describe this issue. Legally, voting is done for a specific party representative in a specific constituency rather than a national party. The term "general election" is misleading; there are really 650 simultaneous municipal elections. Votes cast in favor of one candidate from a defeated party cannot be used to support that candidate elsewhere by party members.

As there is only one seat to be gained, there will never be a match between votes cast and seats won within a single

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constituency unless every voter supports the same candidate. Yet when one combines the results of all constituencies to decide which MPs have de facto control of Parliament's unrestricted legal power, the potential drawbacks of the single member plurality system are accentuated. A party could potentially win every seat by winning each constituency with 50%+1 votes if there were only two political parties in contemporary Britain, both having about equal levels of public support. The party that got 50%-1 votes in each constituency would have no MPs at all. In a nation with over 40 million voters, a party would only need 650 more votes to defeat its only opponent and win control of every Commons seat.

In reality, such theoretical extremes don't exist. However since most voters have divided their votes among multiple other parties, candidates often win constituencies with under 40% of the vote: Seldom does a candidate win a constituency with more than 65% of the vote. As a result, a significant portion of votes are constantly "wasted." In the general election of 2005, candidates that received less than 50% of the vote won 419 of the 646 seats. For the 2005 general election, the issue was especially severe in Scottish seats. In Scotland, there were 59 seats up for election, and 42 of them were won by candidates who received less than 50% of the vote. Thirteen of the 42 recently re-elected MPs fell short of the 40% mark.

A. A coalition administration and a hung parliament as a result of the 2010 election

Prior to the 2010 election, surveys repeatedly indicated that no party would be able to secure a majority in the House of Commons. The prophecies came true in 106. The Conservatives gained 307 of the 650 seats, followed by Labour with 258; the Liberals with 57; the Scots/Welsh/Northern Irish parties with 27, and the Greens.

This outcome opened up a number of options for the future government's composition. A minority Tory administration might be one result. A formal or unofficial coalition administration between the Conservatives and Liberals would be a second option. A minority Conservative-led coalition with the Northern Irish Democratic Unionist Party is a third possibility.

A minority alliance of liberals, maybe strengthened by the backing of some of the smaller parties.

None of the parties ran their campaigns based on which other parties they may form a coalition with or under what conditions. So, it might be argued that any result other than the alternative would result in a government for which no one had really cast a ballot. The Liberal Democrats said they would look at the prospect of forming a coalition with either the Conservative or Labour Party as soon as the results were finalized. The Brown administration stayed in power during the five days of negotiations between the parties. Eventually, a formal coalition between the Conservative and Liberal parties was formed as a result of the discussions, and this alliance, at least in terms of basic math, controlled the majority of seats in the Commons.

The new administration quickly developed a coalition agreement outlining its projected legislative agenda and how it would distribute ministerial positions. The fact that the Liberals won five cabinet posts may indicate that they won this election with a voice in government that was far larger than their percentage of the vote. It remained to be seen if the Liberals would also have major influence over the legislation that the government supported and the policies that it pursued.

B. Alternative methods of voting

The "proportional representation" voting process is often compared with the plurality model. PR is a general word that covers a variety of election processes. PR is not a revolutionary notion in British constitutional theory, but all systems do have one thing in common: they aim to generate a tighter link between the votes cast for and seats gained by parties receiving significant national or regional voter support. 108 John Stuart Mill backed the PR "Hare" concept in addition to his support for women's suffrage. 109 A variation of this approach, which was soon implemented in Tasmania, is explained below.

With the passing of the 1884 Reform Act, PR caused a particularly flurry of legislative and extra-parliamentary action. Many supporters were driven solely by a sectarian desire to protect the representation of Ireland's minority protestant population. Others, like E C Clark, the Regius Professor of Civil Law at Cambridge at the time, regarded PR as a Madisonian defense against factional legislation, which would take away any motivation for parties to provide sensationalist ideas that appeal to the prejudice or ignorance of a "impulsive" populace. 111 The Speaker's Conference, which was founded during World War I, had in fact suggested switching from the plurality approach to a PR system. In both chambers, this was put to a free vote and received significant, albeit insufficient, support. It is not fully sane to think about electoral reform in isolation from other constitutional concerns; one's choice of the legislature's powers may have an impact on the voting process one uses to choose it. Nonetheless, a rudimentary description of the alternatives to the plurality/single member paradigm is useful.

C. The system of party lists

A party winning x% of the votes will win x% of the seats under a national list system, which maximizes the connection between votes won and seats won. With a national list system, there is only really one constituency—the whole nation. Instead than picking a specific candidate, voters choose a party. Lists of candidates are created by the parties themselves. The top ten, twenty, or fifty names on a party's list would be sent to the legislature if that party received enough votes to win ten, twenty, or fifty seats, respectively. The cleanest list method is used in Israel. A party may win a seat in the 120-member Knesset with only 1% of the popular

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vote.

Both the issue of wasted votes and the challenges associated with apportionment are resolved by a national list system. The issue of whether it is more "democratic" is complicated. Extremist political parties are given parliamentary representation under the Israeli system, giving their agendas an erroneous air of legitimacy. In contrast, the British electoral system requires that an extreme candidate get at least 25%+1 of the vote in a certain district in order to gain a seat since there are three major parties. A representation threshold might be used to mitigate this risk, with a party receiving no seats at all until it clears a 5%, 10%, or 15% threshold for vote share. Extremist parties find it more challenging to get representation the higher the barrier.

The list approach also gives smaller parties a chance to join alliances with bigger parties and gain access to power. Such coalitions might be formed as a consequence of post-election negotiations, leading to a government that no one really voted for. If parties disclosed their potential coalition partners in advance of the election, that objection may be overruled.

Opponents also point out that the list gives party leaders unlimited power over candidate selection, albeit this objection may be addressed by a legislative framework that makes parties' selection procedures transparent to all of their members. Similarly, by generating lists on a regional rather than national basis, claims that the list limits any link between a certain lawmaker and specific regions of the country might be diminished.

D. The single transferable vote

The benefit of the single transferable vote system is that it has been tried, tested, and unquestionably accepted in Ireland, Malta, and Australia. Multi-member constituencies are used in STV. Parties are free to run as many candidates they choose, and voters rank the candidates according to their preferences. If a candidate receives the number of first choice votes needed to win by one more than the number of electors divided by the number of candidates plus one, she is declared the winner. This would be 20%+1 in a four-member district, 25%+1 in a three-member constituency, and so on. The remaining candidates get the second choice votes for that candidate as new first preference votes. Candidates who meet the quota in this way are also elected, and their second preferences are then distributed among the remaining candidates until every seat is filled. Redistribution starts from the bottom up if all seats cannot be filled by filling them from the top down. The candidate who receives the fewest votes for her first choice is disqualified, and her second choice is distributed to the remaining candidates. The procedure is repeated as necessary until every seat is occupied. STV needs big and sometimes awkward constituencies and is sophisticated and time-consuming. Yet, it minimizes the issue of wasted votes, especially in districts returning four or more members. Moreover, it allows voters who do not want to support a single political party to express their preferences for certain individuals as well as for political parties.

E. System of absolute majority

Absolute majority systems are more focused on ensuring that the winning candidate in a single-member district receives the majority of the vote than strictly on proportionality, which lessens but does not completely solve the issue of wasted votes. The "alternative vote" procedure may be used to accomplish this. Candidates are ranked in order of preference by voters. A candidate is declared elected if she receives 50% plus her first-choice votes. The least popular candidate is removed if none of the others do, and her second-choice votes are then redistributed to the remaining contenders. Up until one candidate surpasses the 50% threshold, this procedure is repeated.

The "second ballot" technique offers another way to achieve the same goal. In the event that there are more than two candidates, the purpose of the first ballot is to remove everyone except the top two. Shortly after the first election, these two candidates compete in a run-off. This guarantees majority support and gives voters the time to think about their decision.

The German system uses a blended technique of plurality voting in one-member districts together with a regional list for elections to the German Bundestag. Candidates who get a majority of votes in their constituency are given half of the seats in the Bundestag, while those on lists are given the other half. Voters may also cast a second ballot in which they can indicate their preferred party. Each party's representation in the Bundestag is raised to the amount that, in percentage terms, corresponds to its share of the party votes after the constituency candidates have taken their seats.

Returning to the ridiculous scenario shown above in which Party A receives 50%+1 of the votes in each seat and Party B receives 50%-1, it might be helpful to understand the procedure. Party A wins every seat in Britain. Party a only gets one party seat in Germany, with the other seats going to Party B. Party A wins every constituency seat. In order to represent its miniscule advantage in the public vote, Party A thereby achieves the thinnest of Bundestag majorities.

The advantages of the German approach include constituency representation and almost perfect proportionality. It also responds to critiques of national list systems that claim lawmakers have no links to specific regions and that parties completely control the process of choosing MPs.

F. The likelihood of reform

With any voting method, there are drawbacks as well as advantages. This has just discussed the negative aspects of our single-member plurality system; one should also concentrate on its purported advantages. Given that since 1945 both Labour and Conservative-controlled Houses of the Commons have opted to maintain an election system in which limitless legal authority is granted onto the representatives of a minority of the populace, one would conclude that these are significant. First is what is referred to

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as the "strong government" theory. This emphasizes the significance of ensuring that the nation always has a stable administration, capable of enacting a clearly defined set of legislative goals, free from the need to compromise its views in order to win the support of smaller parties. In addition, the electorate is aware of who to hold accountable for success or failure and may respond appropriately in the next election. Another argument emphasizes how clear and straightforward the current system is. Both people and the government can easily comprehend and use it. A third focuses on the value of small constituency representation, which guarantees that all candidates are directly subjected to public criticism rather than just party examination and that MPs are not too removed from the concerns of average people.

Such arguments may be quickly refuted. If one considers the project of government as a long-term as opposed to short-term activity, the strong government argument is not believable. First off, it would not be wise for a nation to move forcefully in one way for the duration of one or two Parliaments before moving similarly strongly for the next five or ten years in a completely other direction. More voter education may be necessary if alternative systems are regarded to be too complicated for the people to comprehend. Thirdly, the form and authority of sub-central elected government, a topic covered in ten, determine whether it is necessary or desirable for members of the national legislature to serve in a significant capacity as constituency representatives.

In its election platform from 1997, the Labour Party pledged to convene a referendum in which voters would be given the option of the current system or a proportional alternative. The government quickly formed a commission to identify the best alternative system, which was led by Lord Jenkins of Hillhead, a former Labour Cabinet Minister who later became a Liberal life peer. Before deciding on a device of its own design, the Jenkins report considered a broad range of possible methods. The plan kept the majority of MPs elected under constituency-based systems. The winner would need to get at least 50% plus one of the vote in order to win the election of constituency MPs. Constituencies, however, were to be grouped in sets of five or six. Each cluster would get a second so-called "county" MP, whose position would be distributed in a manner that lessened any disparity between the total number of votes cast and the number of seats gained in the cluster constituency. No referendum was conducted, and neither the Blair nor Brown administrations shown much enthusiasm for change. The Liberal Democrats' political ideology has historically placed a strong emphasis on voting reform, and the party has long supported a version of STV. The Party's inclusion in the coalition administration provided a chance to raise the issue with voters. The Alternative Vote should be used to replace the First Past the Post voting method, which was the only referendum that the Conservative Party was ready to support. The Parliamentary Voting Systems and Constituencies Act 2010 was passed as a result of a coalition agreement commitment to this end. The spring of 2011 saw the holding of a referendum. Despite a relatively low participation of about 42%, the plan was rejected by a margin of around 68%-32%, much to the dismay of the Liberal Party. 116 The "first past the post" constituency system seems to be in good political shape at least during the next several years.

Also, the coalition government suggested that legislation be passed to establish a five-year fixed term for the electoral cycle, subject to reversal by a 2/3 vote in the Commons or the approval of a motion of no confidence in the government. The Fixed Term Parliaments Act 2011 was passed in September after the passage of the Bill. The next general election is expected to take place on May 7, 2015, according to Section 1 of the Act.

In legal words, the Act substitutes a clearly stated statutory norm for the Monarch's non-justiciable prerogative right to dissolve parliament whenever she sees appropriate. A government cannot manipulate the election cycle in a manner that they believe best promotes their party political goals, according to the Act's political impact. As a result, it amounts to a welcome—though modest—improvement to the electoral system's representational foundation.

The coalition government's plan, which became part of the Parliamentary Voting Systems and Constituencies Act 2010 (Sections 10–14), to lower the number of seats in the House of Commons from 650 to 600 for the 2015 election may have been rather more important. The project partially developed in reaction to the expenditures scandal, however the reasoning is not immediately clear. Evidently, the government reasoned that if the Commons had fewer members and was consequently less costly to administer, the people may develop a more favorable attitude about it. The removal of the previously accepted huge differences in voting turnout across seats was a more fundamental goal. One vote, one value was finally accepted by the Act, which stipulated that each constituency's electorate size should not vary by more than 5% from or above the electoral quota, with the exception of a small number of geographically unusual areas.

G. Enhancing turnout

Local councils have the option to investigate strategies to increase voter participation in local elections according to one of the several authorities given by the RPA 2000. Given the lamentably low voter turnout in the most recent general elections, such duty distribution seems particularly appropriate. In the local government elections of 2000 and 2001, a number of experiments were undertaken, including enabling universal postal voting, establishing polling places in grocery stores, and extending voting over several days. There were no unexpected increases in participation noted. The Electoral Commission was charged by the PPERA 2000 with authorizing further developments and keeping the situation under review. In 2002, the Commission issued a comprehensive report on the subject that examined and

evaluated a number of novel approaches that had been used experimentally in many local government elections. Whether adjusting the election system's specifics can solve the issue of low participation is still up in the air. In the general election of 2005, postal voting was used more often. In some seats, this seems to have resulted in minor increases in voter participation. Nevertheless, serious worries that the postal vote method was being misused by "over-zealous" political party workers in certain regions of the nation offset this good development. The incidents that took place during the Birmingham local government elections in 2004 brought this issue into further prominence. An electoral court annulled the results of multiple elections after concluding that some Labour party candidates had participated in a completely fraudulent attempt to rig the postal voting system. The lack of any requirements that the person requesting and casting the vote is correctly recognized made it feasible for the misuse because of the fairly low security precautions that surrounding the grant and usage of postal ballots.

Soon after, the Electoral Commission issued a report suggesting that, in order to safeguard the integrity of the electoral process, substantially more rigor was required in the implementation of postal voting. The Electoral Administration Act of 2006 made a few more insignificant adjustments to the voter registration process, but the government did not suggest that the Act should carefully address the Electoral Commission's concerns. An examination undertaken by the Joseph Rowntree Reform Trust and released in 2008 highlighted the potential for exploitation of the current system. 126 Nonetheless, it seems that there were no notable incidents of misuse that were documented throughout the 2010 campaign.

It can be questioned if tightening the postal voting method would have the ostensibly intended impact of increasing the low voter participation rates. Making voting in general elections mandatory, as it is in countries like Australia, Italy, and Belgium, would be a more extreme but likely more successful solution to the issue of low participation. There is currently little evidence that such a plan has wide support inside Parliament or among the nation.

II. CONCLUSION

To think that there is a "perfect" election system out there just waiting to be discovered would be naive. Before we go on from this subject, we should consider how much electoral legislation assures that the political party in power of the legislature has the support of the government. It has been argued in sections five through seven that the Commons' sovereignty, the majority party's sovereignty in the lower house, the minority of voters who support that party, and the Commons' sovereignty together constitute the sovereignty of Parliament. Legally speaking, the constitution serves as a tool for factional administration on all matters. Factionalism in the legislative process does not necessarily translate into factionalism in the final legislation. We must also take into account the goals that factional parties have in mind when they exert control over Parliament's independent legal power. Majoritarian or minority control of the Commons is less problematic if major parties have similar views on those aspects of the constitution that are considered to be "higher law" in other democracies—factional divisions will only be given legal expression with reference to non-fundamental concerns. Such ideas may be unappealing to losing party supporters, but they are not unacceptable, so they may concede defeat.

REFERENCES

[1] Y. Zhou, Y. Goto, and J. Cheng, “QSL: A specification language for e-questionnaire, e-testing, and e-voting systems,” IEICE Trans. Inf. Syst., 2019, doi: 10.1587/transinf.2018EDP7333.

[2] C. Jin, G. Chen, C. Yu, J. Zhao, Y. Jin, and J. Shan, “Heterogeneous deniable authentication and its application to e-voting systems,” J. Inf. Secur. Appl., 2019, doi: 10.1016/j.jisa.2019.04.009.

[3] E. Ahene, C. Jin, and F. Li, “Certificateless deniably authenticated encryption and its application to e-voting system,” Telecommun. Syst., 2019, doi: 10.1007/s11235-018-0496-3.

[4] N. Chondros et al., “Distributed, end-to-end verifiable, and privacy-preserving internet voting systems,” Comput. Secur., 2019, doi: 10.1016/j.cose.2019.03.001.

[5] K. S. Gururaj and K. Thippeswamy, “Cloud based secured framework for implementation of online voting system,” Indones. J. Electr. Eng. Comput. Sci., 2019, doi: 10.11591/ijeecs.v15.i1.pp328-335.

[6] S. Kadam, K. Chavan, I. Kulkarni, and P. A. Patil, “Survey on Digital E-Voting System by using Blockchain Technology,” Int. J. Adv. Sci. Res. Eng. Trends, 2019.

[7] Y. Abuidris, R. Kumar, and W. Wenyong, “A survey of blockchain based on e-voting systems,” in ACM International Conference Proceeding Series, 2019. doi: 10.1145/3376044.3376060.

[8] A. Singh and K. Chatterjee, “SecEVS : SSecure electronic voting system using blockchain technology,” in 2018 International Conference on Computing, Power and Communication Technologies, GUCON 2018, 2019. doi: 10.1109/GUCON.2018.8675008.

[9] A. Falade, A. A. Adebiyi, C. K. Ayo, M. Adebiyi, and O. Okesola, “E-voting system: The pathway to free and fair election in Nigeria,” Electron. Gov., 2019, doi: 10.1504/EG.2019.102578.

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The Responsibilities of Parliamentary Privilege

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Abstract— A unique privilege, immunity, or exemption conferred to those in positions of power or authority to release them from particular duties or responsibilities. The right of a senator to address Congress without fear of being sued for libel. The conditional provision of a special privilege or immunity to a person, organization, etc. In this chapter author defense of freedom of discussion in the Commons. Parliamentary privilege is a crucial component of the democratic process, granting elected representative's legal immunities and freedoms necessary to carry out their duties without fear of retaliation or interference. These privileges typically include the freedom of speech, freedom from arrest, and protection from legal action for statements made in parliament.

Index Terms— Business, Court, Member, Parliament, Speaker.

I. INTRODUCTION

By 1450, when the Speaker of the Commons started each session of Parliament with an address to the King asserting "the ancient rights and privileges of the Commons," parliamentary privilege had begun to take shape on the constitutional landscape. The boundaries of parliamentary privilege are ambiguous and have several facets. In general, it covers matters like the two houses' authority to manage their own processes, to admit and dismiss MPs and supervise their behavior, and to penalize outsiders who interfere with the houses' activity [1],[2].

Early analyses of privilege made the assumption that the Commons and Lords were superior "courts" with exclusive, inherent authority over subjects falling within their purported purview. Every court of justice has norms and conventions governing its procedures, as Coke CJ put it: It is lexes consuetude parliament that all significant decisions affecting the peers of the realm or the commons in a gathered parliament should be made by the course of the parliament and not by the civil law or even the common laws of this realm applied in lower courts [3],[4].

The pre-revolutionary period book by Coke provides no clear explanation of the legal standing of the let consuetude parliament in relation to statutes and common law. This is partially the result of terminology that is being used incorrectly. Instead of "Parliament," Coke concentrated on the Commons and the Lords as separate constitutional actors, two of its constituent sections. The two English houses were once both legislative and judicial entities [5],[6].

With respect to parliamentary privilege, the revolutionary settlement unresolved a number of theoretical issues. How far did each house's privileges go? Were they inherited abilities, or could each house make its own? In the event of a conflict, were these powers constitutionally superior to Acts of Parliament and/or the common law? And would the house or the courts be in charge of providing an answer to the third question.

The pre-revolutionary history of the various advantages enjoyed by the houses cannot be fully examined here. Yet, three noteworthy incidents need examination in order to pinpoint problems that were very important after 1688 [7],[8].

II. DISCUSSION

A. Peter Wentworth's defense of freedom of discussion in the Commons

The fact that the 1688 uprising was waged against a Stuart monarch tends to obscure the serious conflicts that existed between the Crown and the Commons in previous eras. Due to her lack of a husband or designated successor, as well as her refusal to support laws supporting religious change, Elizabeth I often had severe disagreements with both chambers. 4 Elizabeth often tried to stop the Commons from ever debating such issues, both personally and via her allies in the lower chamber [9].

When Anthony Cope MP brought a Bill to the Commons that called for fundamental religious change, the tension reached its peak in 1587. Elizabeth had requested that the Bill not be discussed. The Speaker, who both sought to block the Bill's reading and afterwards gave the Queen a copy of its wording, was her friend. This generated a great deal of debate within the home. Peter Wentworth, a member of parliament, posed the following query: "Is this house not a place for any member freely and without control of any person, or danger of laws, by bill or speech, to alter any of the grievances of the Commonwealth whatsoever touching the service of God, the safety of the Prince, and this noble realm?" Wentworth had already served time in prison under the Anderson principle when he was once again placed in the Tower of London. This time, a lower house did it out of concern for the Queen's possible reaction to his temerity in bringing up an entitlement that the Commons itself had vehemently defended in the case of Strode.

Strode's Act was obviously not considered at the time as a sufficient legal defense against the Monarch's repressive prerogatives. Wentworth's tragedy also demonstrated that the

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Commons' privileges may be reduced or waived by the house acting as a whole, rather than attaching themselves inviolably to all of its members. Early on, the definition of parliamentary privilege was determined more by harsh political realities than by legalese. Another episode makes the argument even more clearly.

B. The Fifth Member's Case

Despite Elizabeth's apparent eagerness for using the Anderson Resolutions and her equally strong dislike for the freedom of speech in the Commons, neither she nor her Tudor forebears wanted to reign as completely absolutist monarchs. There would be no legal protection for legislation, the common law, or the privileges of either chamber against the prerogative under that kind of constitutional framework.

From 1629 and 1640, Charles I reigned without calling a session of Parliament. His political incapacity rendered that approach untenable by 1640. The newly summoned houses quickly addressed what they saw to be the King's biggest excesses. Only after obtaining royal approval for the Triennial Act, an Act abolishing ship money, and legislation subjecting the Monarch's detention authority under Anderson to court review would Parliament agree to levy taxes. Yet, many MPs felt that these measures did not effectively convey what they saw as the rising importance of the House inside the constitution. After that, a resolution was made in the parliament to provide the King with the 1641 "Great Remonstrance," which listed several political and theological issues. The motion presents the first instance of the house "splitting" on a vote, as opposed to putting up a unified face that concealed its internal disagreements. Members narrowly chose to approve publishing the Remonstrance. Charles I, furious, asked of the Commons that the five "opposition" to his government's leaders be put on trial for treason. The Commons refused to comply with this demand because they saw it as a flagrant interference with their right to independent deliberation.

In anticipation of the King enforcibly kidnapping the five residents, the house got ready to arm itself with a security force. The MPs were then ordered to identify the alleged members as Charles entered the home flanked by 400 armed soldiers. No MP would act in such a manner. By saying, "May it please your majesty, I have neither eyes to see nor tongue to utter in this place but as this House is pleased to direct, whose servant I am here," Speaker William Lenthell disobeyed the King's express order to expose the location of the five members.

The civil war may have started as a result of Charles' "invasion" of the Commons. Yet, his Stuart successors resisted acknowledging that the constitution banned such overt monarchical meddling in the internal affairs of the parliament. The Declaration of Rights emphasized how crucial it was for the Commons to be "independent" of the Queen, both directly and via the courts. Later, Art. 9 of the Bill of Rights included the crucial clause. The freedom of expression, as well as debates or processes in Parliament, should not be subject to impeachment or scrutiny in any court or venue other than Parliament, according to Article 9 of the Bill of Rights from 1689.

It was unclear exactly what significance Art. 9 had inside England's amended constitutional framework. According to one reading, when Parliament passed Art. 9, it eliminated all prior privileges and replaced them with a new legislative formula. The definition of "freedom of expression," "debates," "proceedings," "Parliament," "impeached," and "questioned" would then be left up to the courts' interpretation of the law, with the preceding lex et consuetudo parliamenti perhaps serving as persuasive precedent.

Up until very recently, a lot of scholarly, legal, and political opinion opposed such an interpretation. It seems that the consensus was that Art. 9 just served as a "declara- tory" of the validity of the pre-revolutionary condition. 6 The viewpoint presents serious conceptual difficulties. The Bill of Rights possesses a distinct constitutional validity than any pre-revolutionary law, like all other post-revolutionary laws. There is little problem in thinking that Parliament was simply giving more legitimacy to a political notion that, in certain ways, held equal but different standing from law with regard to Acts issued before to 1688 "declaring" the scope of privilege. However, it would be easy to assume that any legislation enacted by the newly sovereign Parliament would no longer be merely declaratory but would instead necessitate a change in the constitutional status of the subjects it addressed.

There is no textual support in the Bill of Rights for any assertion made by the Commons or the Lords that the interpretation of Art. 9 was a matter for them alone. Such a claim would also go against conventional notions of parliamentary sovereignty and the rule of law, which give regular courts the responsibility of interpreting laws. Yet it is possible to provide a contextual justification for the Commons' desire to exclude judicial interpretation of Art 9. This would stem in part from a worry that the Crown would use its authority to select and remove judges to meddle covertly in the Commons' functioning. Nevertheless, with the Act of Settlement 1700, which gave the Commons the right to block the removal of judges that contextual reason would have entirely vanished.

The Commons' understandable worries about losing control of its purported interpretive power were not allayed by the Act of Settlement, but they were instead replaced. The House of Lords undoubtedly possessed a dual "judicial" position, exercising jurisdiction over its own lex parliamenti as well as the interpretation of laws and the majority of common law principles, notwithstanding the then-eclectic structure of the English court system. The Lords would effectively be in charge of the Commons if the extent of their privileges could be determined by common law. The House of Lords as a "ordinary court" was not formally and functionally independent of the Lords as a legislative

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assembly until the Judicature Acts of 1873 and 1875 were passed; however, as will be discussed below, this initiative was not sufficient to cause the Commons to renounce its claimed interpretive authority.

We go through the conceptual issues caused by Art 9's ambiguous position and significance once more below. Other matters, though, are also important. The pages that follow provide a comprehensive overview of three hundred years of parliamentary privilege history in five main categories. Secondly, the ability of the houses to control their own composition via admission, retention, and Hence, Lord Simon rejected the claim that Article 9 "established" the enrolled bill rule in Pickin v. British Railways Board. Instead, Art. 9 "reflected" an existent practical requirement—namely, maintaining free speech in a democratic Parliament. That is poor analysis. The 1688 revolutionaries had no desire to create a "democratic" assembly as we would now define that word; Parliament?, ch 2, pages 27–29 above). The pre-1689 Parliament was functionally nothing like its modern-day counterpart. Since there was no such attitude, Art. 9 could not "represent" democratic sentiment. The ruling does, however, create significant methodological questions since it implies that judicial perceptions of what is "essential" for the performance of parliamentary business should be used to define the extent of privilege.

C. Membership recruitment, retention, and expulsion

Seven books detailed the convoluted history of the Commons electoral process. Yet, the Acts that progressively expanded the right to vote did not completely define the constitutional ideas that had influenced the make-up of the lower chamber. Privilege issues have also had an impact on how the "people" and the Commons interact.

D. Black v. White

The courts had agreed immediately after the revolution that people who had gained the ability to vote possessed common law "rights of property" in that capacity. As a result, the plaintiff in Ashby v. White may pursue a tort claim against the Aylesbury returning officer who had denied him the right to vote. 7 But, the judges who heard the case had radically different opinions. As mentioned in number seven, from 1604 and 1868, the Commons had legal jurisdiction to decide on contested elections. 8 The outcome of the Aylesbury election was clear, thus the Commons lacked legal authority to hear Ashby's case. Ashby argued that it was unclear if a freeholder's ability to vote came from common law or the Commons' authority to choose its own membership. The second allegation, if true, would essentially give the Commons exclusive authority to choose how the franchise would be allocated, which had grave implications.

The majority of the judges who presided over the first instance hearing in Ashby's case agreed with the latter position. His allegation directly violated a recognized Commons privilege, in which the court was unable to intervene. The issue was one of hierarchy, according to White and Gould JJ; in certain cases, the lex parliamenti superseded common law. CJ Holt disagreed. The assertion of Ashby's right to vote was strongly grounded in common law. It was the courts' responsibility to maintain that legislation. So, the court should consider his claim and rule in his favor if it was well-founded. Otherwise, the court would be in violation of its constitutional obligation: "We must assert the Queen's jurisdiction when an issue of property comes before us; we must not be intimidated by claiming it belongs to the parliament." 9 For Holt, it was up to the courts, not the house, to determine the scope of the privilege.

E. Case Patty

The ruling was overturned by the House of Lords, who agreed with Holt's dissent. It is easy to see this as a win for the "rule of law" against the Commons' irrational preferences. It may have seemed to the lower house as an unauthorized entry into its purview by the higher house.

F. Robert Wilkes

Not all of the American colonists' complaints were caused by British actions in the colonies. The punishment meted out by the Commons and succeeding British administrations to British lawmakers sympathetic to the Americans' cause increased to the Americans' dissatisfaction. It has previously been mentioned that John Wilkes was a critic of government policies, but it is now time to focus on his career.

Early on, Wilkes' adherence to "democratic" values was shaky; in 1757, he used bribery and other unethical tactics to gain the support of the Aylesbury electorate and get a seat in the Commons. Despite this, Wilkes was active in radical political groups. In the 1760s, he served as editor of The North Briton, a publication that published harsh criticism of the government. The King's Speech, which opened the 1763 parliamentary session, contained measures that were denounced in Issue No. 45: "Every friend of this country must lament that a prince of so many great and admirable qualities can be brought to sanction the most odious measures and the most unjustifiable public declarations in the name of his sacred name."

Then Wilkes released An Essay on Women, a possibly blasphemous and seditious pamphlet. The cumulative impact of the two publications prompted the Commons to remove him and the government to charge him with libel. In the meanwhile, Wilkes left the nation. When he arrived back in England in June 1768, he was given a two-year jail term.

The following year's events may seem absurd to us now, but they had a significant impact on how people came to see the Commons' role in regard to statutes and the voters. In the event of a member's expulsion, a by-election is conducted to fill the vacancy. After his first expulsion, Wilkes chose not to challenge his Aylesbury seat. While Wilkes was a condemned prisoner at the time, this did not prevent him from running for office or assuming a seat. 14 As a result, Wilkes ran for office in Middlesex in 1769, when a large number of voters supported him. On February 16, Wilkes was elected to

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the house. On February 17, the Commons kicked him out. On March 16, Wilkes was brought back once again; the next day, he was dismissed. He was once again elected in April. This time, the Commons decided to recognise Wilkes' defeated opponent as the "winner" rather than eject Wilkes and call for a new election. A resolution to the effect that "no person eligible by law may be disabled from election by a vote of the House, but by Act of Parliament alone" was submitted by one of Wilkes' supporters. By a vote of 226 to 186, the proposal was rejected. A government motion that Wilkes' expulsion was "agreeable to the law of the realm" was approved by the house. 15 No legal analysis was done to support that finding. Wilkes lost the chance to launch a potentially historic legal battle between the electorate's "rights" and the Commons' "privileges" because he chose not to fight his exclusion in court.

One can immediately blame the political climate of the time for the house's treatment of Wilkes. Sixty years would pass before the Great Reform Act would put Britain on the arduous, sluggish route towards a universal franchise, therefore the Commons at the time made no claim to be "democratic." Wilkes' repeated ejection was an acceptable formal manifestation of the Commons' long-standing sovereignty. From a practical standpoint, the house's conduct may be seen as a manifestation of Burke's idea of the MP as a representative rather than a delegate: Members were protecting an unwise, unruly electorate from the repercussions of their foolishness. If this is the case, one might assume that the house could no longer justifiably use its privileges to exclude an elected member as the franchise expanded and the electorate became more "mature" and the legitimacy of the Commons' legislative role depended more and more on the idea that it represented "the people." Yet, as Charles Bradlaugh's experience demonstrates, any such presumption would be unfounded.

By 1870, radical political activist Charles Bradlaugh Bradlaugh had gained enormous recognition for both forming the National Secular Society and for facing legal action for releasing a book on population control. The people of Northampton must have found such notoriety appealing because in 1880 they elected Bradlaugh as their MP.

When Bradlaugh attempted to sit down, problems started to arise. During Elizabeth I's reign, it had been a legal requirement for MPs to swear loyalty to the monarch and the Protestant religion before taking their seats. The oath, which was meant to keep Roman Catholics out of the Commons, also included Jews and non-conformist Protestants. The oath was changed in 1829 to allow Catholics to take it, a Jewish-acceptable pledge was added by law in 1866, and the Promissory Oaths Act of 1868 allowed adherents of dissenting religious groups to 'affirm' their allegiance rather than swear it. The law punished members £500 for each time they sat and voted without having taken the oath or affirmation, but it did not really exclude them from the house if they had not.

Bradlaugh wanted to declare his allegiance rather than vow it upon entering the home. But the house came to the conclusion that he couldn't. A resolution also prevented Bradlaugh's subsequent attempt to take the oath in its place. Bradlaugh was evicted against his will after refusing to leave the residence. In April 1881, he was then ejected from the Commons by the majority. A week later, after the Speaker had apparently come to the conclusion that "the house would do well and wisely, according to the constitution, to admit him without question," he was re-elected in a by-election. 18 He was once again dismissed by the majority. Officials from the Commons then forcefully expelled Bradlaugh. Unfazed, he returned to the house and took the unusual step of taking the oath in front of himself before sitting down on the back benches. In the subsequent by-election, he was reinstated after being ejected once more.

The Great Reform Act and Disraeli's 1867 franchise law seemed to have little effect on the electorate of Northampton due to the Commons' continuing unwillingness to accept Bradlaugh. Given that their candidate of choice was unable to represent them, many voters saw no value in the enlarged franchise. The moral and legal situation was obvious to Bradlaugh. He and his constituents were the victims of the House of Commons' arbitrary and unlawful conduct. When one arm of the legislature decides to invalidate legislation that the whole legislature has approved, it is a sad demonstration of the tyranny of orthodoxy.

He subsequently filed a lawsuit against this "arbitrary and unlawful conduct." The Serjeant-at-Arms of the Commons was the target of the lawsuit in Bradlaugh v. Gossett20 because he had implied that he would use physical force to keep Bradlaugh from entering in the future in accordance with a Commons resolution. The Serjeant-at-Arms was prohibited from doing so by an injunction, according to the lawsuit filed by Bradlaugh. According to Stephen J., the case presented a clear conflict between the authority of statute and of privilege: If the House of Commons orders one of its members not to perform a task that is mandated by an Act of Parliament, can we declare this order to be invalid and prevent the executive officer of the House from carrying it out?

According to the ruling, no act may implicitly change the Commons' ability to regulate its own internal processes. The common law did not supersede the house's authority in these cases either. The House of Commons is not a Court of Justice, but the consequence of its right to govern its own internal problems essentially endows it with a judicial character when it needs to apply to individual circumstances the provisions of Acts of Parliament. This is how Stephen J came to this decision. If it makes a judgment that is against the law, it is similar to a judge making a mistake whose ruling is final and cannot be appealed. We shouldn't take into consideration the public interest, the interests of Parliament and the constitution, our own dignity, or any other considerations if we attempted to establish ourselves as a

Court of Appeal from the House of Commons.

Since swearing or affirming were acts primarily performed inside the home, the house had sole authority over their regulation. A citizen's common law or statutory right to vote in a parliamentary election is one example of an element of the procedures impacting its composition that the house would not be permitted to tamper with since they took place outside of its jurisdiction. This would be in line with Holt's conclusions in the Ashby and Paty's Case and reiterates the idea that the courts have the right to define the scope of the privilege but not to impede its use within those defined parameters. Yet Stephen J didn't appear to know how the courts would react if the house decided to go beyond its authority in this way:

In any event, I would be very reluctant to declare a Commons resolution to be outside the scope of the chamber's authority. In every instance, making such a proclamation would be needless and insulting. By letting the Commons decide how to interpret laws, the court effectively renounced its position as the protector of the rule of law. It is unlikely to conclude that Parliament implicitly accorded the Commons such competence given the bitter disputes between the Commons, Lords, and Monarch over the provisions of nineteenth-century enfranchisement laws, which had led to significant alteration of the original Acts. Hence, the verdict completely contradicts conventional notions of legislative sovereignty.

In the 1885 general election, when Bradlaugh was re-elected as Northampton's MP for a record-breaking seventh time, the Bradlaugh story finally came to a close. Legally speaking, the answer wasn't adequate. The former Liberal Member Sir Arthur Peel was appointed as the next Speaker of the House after the election. Peel argued before the assembly that the earlier resolutions prohibiting Bradlaugh from taking the oath had expired. Moreover, the Speaker rejected any further motion on the subject: I don't have the authority, either directly or indirectly, to stand in the way of an honorable member taking the oath. I humbly submit that it is not my place to inquire about a Member's possible ideas when he comes to the table to take the oath, and neither is it the place of the House.

Peel's decision to conclude the debate in such a straightforward manner effectively demonstrates the disciplinary power a determined Speaker may exert over the house, even when their opinions are not shared by the majority of members. Yet, the resolution also reveals how strongly the Commons and the courts believed they had the authority to refuse the voters of Northampton the services of their preferred representative.

The Bradlaugh incident succinctly explains the so-called "dualism" that pertains to the constitutional position of the houses' privileges: As a result, there may be two doctrines of privilege in effect at any one time—one maintained by the courts and the other by either House, one found in the law reports and the other in Hansard—and no mechanism to settle the genuine matter at hand should a disagreement occur. The issues created by dualism go beyond only the issue of whether members should be admitted to their separate houses.

III. CONCLUSION

Some privileges, authorities, and legal immunity are referred to as parliamentary privilege. Given to certain members of Parliament to help them do their jobs. And for the Parliament to carry out its constitutional duties jointly. Certain privileges, authorities, and immunities only apply to parliaments. No member may be confronted or held accountable anywhere for any remarks they make in Congress or a committee thereof. This benefit aims to ensure that members of Congress represent their constituents. While parliamentary privilege is intended to safeguard the independence and integrity of the legislative branch, it can also be a source of controversy and abuse, with some critics arguing that it may be used to shield politicians from accountability or to make defamatory statements without consequences. As such, the precise scope and limits of parliamentary privilege have been the subject of ongoing debate and legal interpretation, with different countries and jurisdictions adopting varying approaches. Nonetheless, despite these challenges, parliamentary privilege remains a critical tool for ensuring the effectiveness and independence of democratic institutions.

REFERENCES

[1] C. Prescott, “Select Committees: Understanding and Regulating the Emergence of the ‘Topical Inquiry,’” Parliam. Aff., 2019, doi: 10.1093/pa/gsz040.
[2] The Right Hon. The Lord Burnett of, “Parliamentary Privilege – Liberty and Due Limitation,” Judic. Rev., 2019, doi: 10.1080/10854681.2019.1632095.
[3] SmartLab, “Lembar Data Keselamatan Bahan NiCl2.6H2O,” Phase Equilibria Bin. Halides, 2019.
[4] A. Brown and A. Sinclair, The politics of hate speech laws. 2019. doi: 10.4324/9781315553917.
[5] MSDS, “Lembar Data Keselamatan Bahan Sucrose,” Phase Equilibria Bin. Halides, 2019.
[6] S. Sribreindranis and P. Govinduraju, “Freedom of the Media in Sri Lanka: A Study,” Asian Rev. Soc. Sci., 2019, doi: 10.51983/arss-2019.8.1.1540.
[7] MSDS, “Material Safety Data Sheet - NaCl (Sodium Chloride),” Phase Equilibria Bin. Halides, 2019.
[8] MSDS, “Lembar Data Keselamatan Bahan Magnesium Chloride Hexahydrate,” Phase Equilibria Bin. Halides, 2019.
[9] MSDS, “Lembar Data Keselamatan Bahan Stearic Acid,” Phase Equilibria Bin. Halides, 2019.

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Freedom from Imprisonment, Arrest and Molestation

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Abstract— According to Section 354 of the IPC, molestation is punishable by severe imprisonment for a period that may last up to three years, a fine, or both. This category includes a variety of offenses, including pornographic content, making sexual comments, and physical contact. In this chapter author is discusses the principle of informed consent. Freedom from imprisonment, arrest, and molestation is a fundamental human right that is enshrined in many national and international legal frameworks. It is a vital element of the rule of law and protects individuals from arbitrary detention, physical harm, or other forms of state-sponsored abuse

Index Terms— Arrest, Freedom, Imprisonment, Molestation, Member.

I. INTRODUCTION

Ferrer's Case in 1543 seems to be the earliest documented instance of the Commons using its authority to order the release of a member who was behind bars. The purpose of the privilege in the pre-revolutionary era was to ensure that members who were paid by the King were not prevented from traveling to London and conducting their parliamentary business thereafter by unauthorized interference or legal proceedings brought before any courts with lesser jurisdiction. A legislation from 1604 "recognized" the privilege as including the authority to release a member who has been rightfully imprisoned by a court of justice and the authority to punish anybody who arrests a member. 28 Both houses might choose to forego the privilege of shielding their members from incarceration if they so choose [1],[2].

Even if the alleged conduct took place within the Commons or Lords itself, the privilege was not claimed in relation to criminal accusations. There have been very few instances of serious accusations against MPs in the contemporary period up to the latest expenses scandal29. For crimes related to the Irish independence fight, many Irish Parliamentarians were jailed in the 1880s and once again in 1918. The house never hinted that it might affect the court's procedures on any of these instances [3],[4]. With claimed fascist tendencies, Captain A. Ramsay MP was held in 1940 in accordance with rule 18B. This case was more conceptually challenging. The Committee of Privileges was informed that Ramsay's incarceration could have violated the arrest privilege. The Committee couldn't agree on the answer, but the majority came to the conclusion that there had been no violation. The reason that so many MPs questioned the government's decision to detain Ramsay was likely due to the fact that his sole "crime" was to have raised the Home Secretary's concerns about his commitment to Britain's war effort. Ramsay's arrest was not the consequence of a criminal conviction. Ramsay was held captive until 1944.

A. Congressional Privilege Act of 1770

Even still, the arrest privilege had a lot of practical implications for civil lawsuits, particularly as long as it was still possible to go to jail for debt. The houses first claimed a narrower scope for the arrest privilege, not just the persons of members, but also their land, movable goods, and servants, as a result of their increased feeling of self-importance after the revolution. The extended privilege was often used by Parliamentarians and their retinues as a convenient means to avoid several legal requirements; this practice drew harsh public condemnation [5],[6].

Parliament finally narrowed the extent of the privilege as a result of public outcry. An Act for Preventing Any Inconveniences That May Occur by Privilege of Parliament was passed into law in 1700. The Parliamentary Privilege Act of 1770, Section 1, restated its main clause, which read: No action shall at any time be impeached, stayed, or delayed by or under color or presence of any privilege of Parliament. Any person may at any time commence and prosecute any action or suit against any Lord of Parliament, any member of the House of Commons, or any other person entitled to the privilege of Parliament [7],[8].

The Court interpreted Section 1 using the mischief rule as opposed to the literal approach. It believed that the "mischief" at hand was not MPs' right to free expression in the house but rather MPs' growing propensity to wield privilege as a blanket exemption from all civil proceedings. The Privy Council believed that this independence had been a fundamental principle of the 1688 agreement and that it was impossible for Parliament to have limited its reach twelve years later. The Court came to the conclusion that the Act only applied to judicial proceedings that had no connection to a "proceeding in Parliament [9]. The Commons or the courts were to assess whether the action in issue had been prompted by a "proceeding in Parliament," according to this ruling. It is widely accepted that the constitution gives the courts the authority to interpret the law. The definition of "proceedings" would thus be a judicial duty. Yet, this assumption might be

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disproved in two different ways. Secondly, it may be argued that this privilege had a unique situational character that protected it from implicit repeal. By stating that the free speech protection was "solemnly reasserted in the Bill of Rights," the Court seemed to adopt this point of view. The idea of "reassertion" implies that privilege had a coexisting legal position with Art 9 and that the legislative provision was just declaratory rather than altering the substantive rights that the house had previously enjoyed. The Court rejected the second argument, which claimed that the Bill of Rights implicitly gave the house authority instead of the courts.

In disagreement with the Court's judgment was Lord Denning. He came to the conclusion that the 1770 Act's plain intent was to make it apparent that any effort by the Commons to interfere with a judicial proceeding brought against one of its members would be in violation of the law. An order from Parliament to one of its constituent components not to take such action was included in the Act. But, this did not imply that a case like this could be presented, much less win. Lord Denning further ruled that Art. 9 still required courts to decline to hear cases that "questioned" a "proceeding in Parliament." Denning still emphasized the crucial point that when Art. 9 was passed by Parliament, whatever authority the Commons may have had to decide the scope and meaning of its free speech right prior to 1689 had been superseded. The privilege of the home was not, therefore, "reasserted" by Art 9. Instead, it revoked the privilege and established a new legislative safeguard.

II. DISCUSSION

A. The principle of informed consent

The idea that the proceedings of Congress should be open to the public was highly valued by the American revolutionaries. The Constitution's language explicitly provides legal protection for the notion that the populace should be given the information necessary to make an educated decision about their chosen representatives.

At that time, neither the Commons nor the Lords were required to follow suit by statute or common law. It was up to the houses to decide how much of their business was made public, and at the time, they seemed to favor modest disclosure. Both the pre- and post-revolutionary Commons had enacted resolutions asserting that any records of its proceedings that were published without permission were a violation of privilege. 37 The house made the following declaration in 1762: "This House will proceed with the utmost severity against such offenders. It is a high Indignity to, and a notorious breach of the Privilege of this House, for any printer or Publisher of any printed Newspaper to give therein any Account of the Debates or other Proceedings of this House."

The resolution completely contradicts the idea that voters' informed consent underpins the election process. Radical groups began to grow as the century went on, challenging the legitimacy and legality of the Commons' position. By 1770, many newspapers were regularly reporting on Commons discussions and votes. In the wake of Wilkes' removal from the Commons, a serious debate erupted. Numerous editors adopted what might now be regarded as the eminently "democratic" stance that electors should know which MPs spoke in favor of Wilkes' admission, which members opposed it, and which labeled signatories of petitions supporting Wilkes as "scum." Press coverage of the incident made extensive and scathing use of MPs' speeches.

The majority of the government in the House of Commons decided that certain editors had violated the house's privileges by disseminating these reports. The Commons gave its officers permission to arrest the editors after they disobeyed the house. This put the house at odds with the Lord Mayor of London, who had judicial authority over crimes in his role as a magistrate. The Commons officer was detained for assault after trying to grab one of the editors, and he was given a summons to appear before the Lord Mayor. The Commons then decided that the Lord Mayor had violated their privilege by interfering with their officer's execution of their decision, and they imprisoned him in the Tower as a result. The courts refused to review the Speaker's warrant when given a petition for habeas corpus on the Lord Mayor's behalf, stating that the Lord Mayor had been imprisoned for violating privileges.

The house had effectively established its official power, but unapproved publication of its proceedings was still happening. While the motion was subsequently overturned by the house in 1971, neither house is currently required by law to reveal its business documents. 39 Each house must decide how to handle any revealed information.

B. The legality of parliamentary procedures

It has long been a contentious and significant topic to determine how the courts may utilize documents that are published in the future.

1. Actions that defame others

Statements by members of either chamber that disparage other citizens unmistakably create a potential legal dispute. MPs' freedom of expression may be limited by the worry of losing a defamation lawsuit, but the common law has always offered several remedies that allow individuals to defend their "right" to a good reputation. 40 The conceptual issue of "dualism" is especially severe in these situations. In actuality, however, it seemed that the courts and the houses had come to an arrangement on the purview of the law and privilege with regard to this matter.

In Dillon v. Balfour41, the plaintiff was an Irish midwife. During the time, Ireland's Minister was Balfour. Balfour made comments against Dillon during the passing of the Criminal Process Bill in 1887 that she thought damaged her professional reputation and for which she sought significant damages. Balfour submitted a request to have the lawsuit dismissed, arguing that statements made in the residence

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were not susceptible to a defamation lawsuit.

The ruling is a classic illustration of the conceptual obscurity that permeates many assessments of the legal standing of such utterances. Palles CB turned to Art 9 to begin his judgment. He saw Article 9 as a declaration of pre-revolutionary privilege rather than as establishing a legislative guarantee, nonetheless. He continued, pointing out that the privilege was an "old right and liberty of the realm, raising the possibility that it originated from common law, further complicating the situation.

His reasoning for dismissing the plaintiff's claim was similarly ambiguous. According to Palles CB, the question of whether the remarks at issue were spoken or written as part of a "proceeding in Parliament" was the only one that the courts may decide in a defamation case. No matter where the words came from, if the court found that they were part of a "proceeding in Parliament," it "ousted" its jurisdiction. Any such comment was completely immune from defamation-related legal action.

It is disappointing that the court could not identify the origin of this rule with greater conceptual clarity. Another possibility is that MPs have an overly broad legal immunity due to the case's substantive protection. The idea that MPs should be allowed to utilize the privilege to raise issues of public concern that a later inquiry shows to be well-founded is without a doubt persuasive. MPs, though, might also The courts came to the conclusion in Wason v. Walter LR 4 QB that similar protection applied to newspapers that accurately reported on such "defamatory" proceedings, as long as the report was distributed to inform the public of what was happening in Parliament rather than as a deliberate attempt to discredit the person being criticized. Geoffrey Dickens, a Conservative MP, stirred up a lot of controversy in 1986 when he used his position of authority to accuse a priest of sexually abusing young children. There had previously been a police inquiry into the topic, and the officers had come to the conclusion that there was no reason to bring charges. More recently, two Northern Irish Unionist MPs accused individuals of being terrorist killers. This defamatory claim undoubtedly put the listed individuals in grave risk. In these situations, an MP's actions are unquestionably more despicable if she knows the charge is untrue or hasn't taken the time to verify it than if she's acting in good faith. Regardless of the MP's intentions, damage has still been done to the reputation of the person or business in question.

Dickens made his accusation during a floor address. There is no reason to question if this was a "proceeding in Parliament." Nonetheless, the majority of the Commons' work is done outside of the chamber and includes more written than vocal communication. The issue of just what is meant by "proceedings in Parliament" then emerges.

2. "Proceedings in parliament" – what are they?

In Re the Parliamentary Privilege Act 1770, the Privy Council made clear that it did not have an opinion on what "proceedings in Parliament" meant. It didn't even touch on the more difficult issue of whether the separate houses or the courts had the authority to decide what that meaning meant. After an incident involving Labour MP George Strauss, the Commons brought up the Privy Council. In a letter to a minister, Strauss criticized the London Energy Board. The letter was submitted by the Minister to the LEB Chairman. The Chairman declared Strauss' comments to be libelous and threatened to file a lawsuit. After then, Strauss reported the situation to the house on the grounds that the threat violated a privilege.

Whether or whether the letter qualified as a "proceeding in Parliament" was at question. Strong justifications exist for making this assumption. As a party politician and a constituency representative, the MP's work would often include and depend on such conversations regarding issues that fall within the purview of a Minister. The Committee on Privileges determined that a violation had taken place and that the letter constituted a "proceeding." The House, however, disagreed with the Committee's assessment. In contrast, the house agreed in 1938–1939 that correspondence between members and Ministers started with the intention of posing a question would be considered “proceedings”. Naturally, the queries that are asked verbally or in writing would also be protected. Even if we assume that the houses have the constitutional authority to define the notion, it is obvious that they have not done so. The assertion made by Griffith and Ryle that there are numerous "grey regions" is a kind understatement.

In 1977, the Commons Committee of Privileges proposed that the idea be given a more precise, statutory definition. The house decided against acting on the proposal, most likely because the approval of such legislation would indicate that Parliament had revoked the houses' claimed authority to define the word. So, the phrase "Proceedings in Parliament" still has a murky legal meaning under the constitution. In the past, its obscurity has caused intense dispute.

3. Stockdale v Hansard

In the late 1830s, a constitutional conflict that may have arisen over Wilkes' admittance in the 1760s really did. It was a simple thing that started the argument. About a medical textbook that was being used in a prison, the Inspector of Prisons made defamatory remarks in a report that was released on the house's instructions. The Commons printer, Mr. Hansard, was sued for slander by Stockdale, the book's author.

The house directed Mr. Hansard to tell the court that the house had decided that the report constituted a Parliamentary procedure and as such was not subject to judicial jurisdiction, rather than to dispute the matter on its merits. The Court rejected the Commons' claim of privilege, classifying it as a request for an arbitrary right to authorize the performance of any act on behalf of a body that is admittedly not the highest authority in the state, according to Lord Denman CJ, who wrote the majority opinion.

Lord Denman came to the conclusion that the allegation

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was inconsistent with conventional conceptions of parliamentary authority and the rule of law. The Commons' constitutional authority over privilege issues was limited to enforcing already-existing privilege. Because of such authority, the courts would not become involved. Yet neither home could bestow upon itself new rights. Additionally, the courts, using the common law, had the authority to establish the limits of existing rights, not either house via resolutions. The Commons could not accomplish that objective on its own, but Parliament may grant either house a jurisdiction that went beyond the limits already in place and give the house the authority it requested in this case:

The House of Commons is merely a component and coordinating portion of the Parliament, not the whole body. The sovereign power has the authority to enact and repeal laws, but doing so requires the agreement of all three legislative estates; a decision made by only one of them will not result in a change to the law.

The logic of Lord Denman is in line with that of Ashby v. White and Paty's Case judge Holt CJ. Lord Denman believed that the common law right to defend one's reputation against libellous attack was immune to any regulation other than statutory control, just as Holt believed that the right to vote was a common law entitlement that could only be overruled by Parliament. According to Lord Denman, "proceedings in Parliament" could not be the focus of a defamation lawsuit. But, he refused to acknowledge that later-circulated stories outside the home were given such protection. Lord Denman proposed that the safeguards the houses held under Art 9 only extended to items that were "essential" for them to carry out their obligations, which, to contemporary eyes, would be a teleological interpretation technique. He also said, and this was essential, that it was up to the courts and not the Commons to decide whether or not anything was necessary. Lord Denman did not see a "necessity" for the publishers of this specific report to be protected from a libel case, therefore Stockdale was free to go through with his claim. Middlesex County Sheriff Stockdale's lawsuit was successful. The Commons, however, disagreed with the Court's judgment. Under the orders of the house, Mr. Hansard refused to abide by the ruling.

Thereafter, the decision was attempted to be enforced by the Sheriff of Middlesex, an official of the court. Since the Sheriff had violated the house's rules, the Commons ordered that he be sent to the Tower. Given its longstanding resistance to the Crown's attempts to use a similarly arbitrary authority to imprison anybody who offended it in the pre-revolutionary period, the Commons' attitude on this issue is manifestly hypocritical. The Sheriff was being held because he was following the court's orders. He had been penalized by the Commons for maintaining the law, to put it bluntly. So, one may have anticipated that the courts would order his quick release as a result of his later habeas corpus suit.

The Sheriff was committed for "a violation of privilege and contempt," according to the Serjeant at Arms' answer to the writ. The Court decided not to contest the return, with Lord Denman presiding. According to Lord Denman, no court had the authority to order the prisoner's release as long as the Commons followed the simple formality of announcing that the committal was for "con- tempt." He said it would be "unseemly" for a judge to question the Commons' integrity in such a situation. The ruling is quite similar to the viewpoint expressed in the Resolutions in Anderson, which was rendered some 300 years earlier; the main difference is that the court now allowed the Commons, not the Crown, to parody habeas corpus. Also, Stockdale was totally discredited by the choice. In Middlesex, Lord Denman started by stating that Stockdale was "in every sense accurate." Even if a decision may be "right," it is of little use if the same court later allows it to be overturned.

The Stockdale controversy does not end well for the Commons or the judges. The Parliamentary Documents Act 1840 was passed by Parliament to address the particular legal issue that the case had presented. The Act gave the Speaker the authority to certify that any legal actions over papers disclosed by either house's order are stayed. In R v Graham-Campell ex p Herbert in 1935, the issue took on a more contemporary—and factually far more trivial—manifestation. The Court was asked to rule on whether the House of Commons catering manager might face legal action for serving alcoholic beverages without the license needed by the 1910 Licensing Act. The manager said that since she was, of course, following the house's orders, any legal action was barred.

While being poorly justified53, the High Court's ruling, which came to the conclusion that no prosecution could be brought, raises a number of important questions. The first is that the alleged "privilege" was not based on Art. 9 but rather was cited as an independent source of "legal" protection for the Commons. The second was the Court's assertion that its conclusion was primarily motivated by concerns about the interaction between the Commons and the Lords: To take the opposite course might theoretically entail making the House of Lords the arbiter of the privileges of the House of Commons in proceedings of a somewhat different character from these after the various stages of those proceedings had been passed. Both Stockdale and Herbert failed to find a solution to the "dualism" issue in its broadest meaning. Yet, it's possible that a recent House of Lords ruling has accomplished this.

4. Pepper v. Hart: "Redefining parliament"

One norm that formerly applied to students of British law was that judges would not use the Hansard recordings of debate to explain the meaning of legislative terms. The "exclusionary rule's" legal foundations are unclear. A common law rule governing the admission of evidence might be the cause. An alternate explanation is that the judges were adhering to a legislative requirement under Art. 9 of the Bill of Rights, where the term "questioned" included taking the topic of discussion into account to help interpret statutory

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language. A third defense is that the judges' reluctance to consult Hansard was based on a privilege that coexisted with the common law but was exempt from judicial oversight.

When deciding whether and how to amend a regulation, its source is important. If it were a common law principle, the House of Lords may change it without being constrained by the constitution. In contrast, the courts would be unable to easily overturn a regulation that was based on Art 9. It would go against the authority of the legislative branch. The House of Lords might, however, change its prior interpretation of Article 9 since it is a lawmaker in the interpretive sense. For instance, the definition of "questioned" might be shortened to simply include a defamation lawsuit defense. A judicial amendment would be constitutionally difficult rather than impossible if the norm were a privilege. If we agree that the common law establishes the limits of privilege, the courts may properly come to the conclusion that they had previously misapplied those limits and that the privilege's proper extent did not exclude mentioning Hansard. Yet, as neither house would likely want to give up its claimed authority over such matters, this might lead to a dispute between the houses and the courts.

The goals of the regulation are clearer to see. There have been four arguments made. In Beswick v. Beswick, Lord Wilberforce focused on a "constitutional principle" issue. The courts alone were responsible for interpreting laws; if the judiciary allowed a Minister's remarks to influence their interpretation of a statute, they would be effectively handing over their interpretive authority to that Minister. As a result, government sovereignty would replace legislative sovereignty. This justification may be exaggerated, and it loses its impact if it is suggested that Hansard should just have persuasive power rather than final say.

Lord Reid cited "purely practical grounds" for the rule in the same situation. As attorneys would study discussions in their entirety in search of remarks bolstering their clients' positions, access to Hansard would lengthen and cost the legal process. This reason also appears insufficient. The same justification might legitimately be extended to legal reports; counsel could meticulously review every decision ever rendered on the subject at hand in hopes of unearthing some overlooked judicial nuance supporting their client's viewpoint. Therefore, it is implausible that attorneys would not prioritize cost-effective information utilization.

5. In Davis v. Johnson, Lord Scarman provided a third reason

He asserted that Hansard was a flawed source for interpreting a legislation. Debate topics that are heavily influenced by the need to win party political points are unlikely to accurately communicate official policy. While first compelling, this argument is extremely straightforward. Hansard also includes calm, methodical remarks in which ministers specifically outline the goals they anticipate a bill to accomplish. This is in contrast to many Commons or Lords interactions, which may lack the reasoned expression with which one would want to see legislation presented. Selective use of argument may be used to address Lord Scarman's issue; complete abstention appears unneeded.

According to Lord Diplock in Fothergill v. Monarch Airlines Ltd.60, a fourth justification was that "elementary fairness" required that any documents that a litigant could rely on be easily available. Hansard did not, in the opinion of Lord Diplock, fulfill this criterion. This is also a weak defense. It's unlikely that the public would find Hansard to be any more obscure or difficult to obtain than the All England Law Reports. Insofar as Lord Diplock's remark posed a legitimate informed consent problem, it amounted to an argument for making sure that Hansard's contents were made more generally known and more accessible rather than for keeping it out of the courts.

Throughout the 1960s and 1970s, sporadic objections to the conventional stance were raised. Lord Reid reiterated the rule in his dissenting opinion in Warner v. Metropolitan Police Comr, but he added: "There is room for an exception where examining the proceedings in Parliament would almost certainly settle the matter immediately one way or the other." 61 Lord Denning also showed reluctance to accept the norm, sometimes disobeying it or getting around it by using quotes from arguments that were published in legal textbooks or magazines instead of Hansard, or by sneaking a glimpse at Hansard outside of court. More importantly, the Commons decided in 1980 that courts no longer had to ask for permission to "reference" Hansard in a petition to the house. While it was unclear if the house was surrendering what it regarded to be a legislative protection or a part of its privilege, the Commons seemed to base the ruling exclusively on Art. 9 of the Bill of Rights. Later, it became evident that the Commons' understanding of the term "reference" was limited. The house would consider using Hansard to explain the meaning of a vague act to go beyond the definition of "reference." Nonetheless, it seemed that the regulation will be revised.

6. Opening Pandora’s Box

A linguistic discrepancy in the statute governing the taxation of a certain benefit led to Pepper v. Hart65. The taxpayers argued that during discussion, a Minister had made a clear remark that supported their view. Without using Hansard, this argument could not stand. As a result, the taxpayers asked the court to invalidate the exclusionary rule.

Lord Browne-leading Wilkinson's decision significantly moved from past orthodoxy, although cautiously. His main finding was that, if parliamentary material clearly reveals the legislative aim hidden behind the ambiguous or confusing language, reference to it should be allowed as a help in constructing legislation that is unclear, opaque, or whose literal interpretation results in an absurdity.

Lord Browne-decision Wilkinson's was supported by what he saw as a constitutional fundamental problem. Yet, his philosophy was at variance with the philosophy put forward by Lord Wilberforce in Beswick. He noted that lawmakers

might sometimes make legitimate mistakes on the legal significance of the legislative formula they passed. By excluding references to Hansard in such cases, the courts would thwart rather than uphold their constitutional subordination to "Parliament." For the purposes of this analysis, parliamentary sovereignty must not be understood in the formalistic, Diceyan sense of blind obedience to statutory words, but rather in a more functionalist vein of giving effect to legislative intent, where the courts are charged with defending citizens from the easily detectable errors of legislators.

By restricting the sort of speech to which judges may refer to remarks by the Minister or member pushing the Bill, Lord Browne-Wilkinson tried to allay Lord Scarman's worries about the cut and thrust of discussion. He was less receptive to other earlier court defenses of the norm, however. He noted that Canada and New Zealand had recently permitted judicial references to legislative procedures, and neither country had concluded that this had resulted in an unacceptable rise in the expense or length of litigation. The claim that Hansard was too difficult for plaintiffs to access was also dismissed by Lord Browne-Wilkinson because the same flaw existed in the law.

His Lordship was vague regarding the origin of the regulation, implying that it may have come from any of the three sources mentioned above. As a result, he handled each in turn. There was no obstacle to the House of Lords rebuilding the rule in a more relevant manner for the modern world if it was judge-made self-regulation. Lord Browne-Wilkinson came to the conclusion that Art 9 should be read in the limited manner outlined in Rost v. Edwards should the rule have a legislative basis: Considering the historical context in which it was passed, in my opinion, the simple intention of Article 9 was to guarantee that members of Parliament were not liable to any civil or criminal penalties as a result of their remarks.

His Lordship finally brought up the subject of parliamentary privilege. He indicated, in reference to the Commons' resolution from 1980, that the house saw its privileges as co-extensive with the reach of Art 9. So, because he redefined Article 9, using Hansard could not violate privilege. One can question if the house would follow this logic since it 'confirms' the common law's superiority over privilege. Whether this last point has now been added to the list of the constitution's "ultimate political realities" is now an unanswerable question that won't be resolved until the Commons and the courts take opposing stances on another issue with the weight of Wilkes, Stockdale, and Bradlaugh.

Lord Browne-Wilkinson used careful language while expressing his opinion. But, both the House of Lords and lesser courts swiftly eased the standards he set out. This relaxation, in the opinion of Lord Browne-Wilkinson, had perhaps gone too far. He affirmed in Melluish v. BMI Ltd. that Pepper v. Hart should not be seen as providing grounds for making use of Hansard a standard procedure in the process of legislative interpretation.

I believe it's critical to aggressively enforce the requirements set out by the House in Pepper v. Hart. Otherwise, Lord Mackay's concerns about the expense and difficulty of relaxing the exclusionary rule—which were motivated by practical rather than philosophical considerations—will come to pass. The worst-case scenario would be if parties routinely combed through Hansard and the courts dug through conflicting declarations of parliamentary intent only to come to the conclusion that the statutory provision did not require further clarification or that Hansard could not be used to infer a clear and unequivocal declaration by a responsible minister. Aileen Kavanagh's persuasive interpretation of the Pepper v. Hart principle heartily reinforced the court's caution in Spath Holme about the use of Hansard. 73 According to Kavanagh, the case may be seen as giving ministerial remarks the stature of a legal source. Two aspects of this are considered to be troublesome. First of all, it undermines the function of Parliament as a body of legislators engaged in a thorough and informed process of deliberation and review that ultimately results in the creation of a legal text that faithfully reflects the preferences of the members who voted for it. Second, it undercuts the judiciary's function as the entity tasked with determining the intent behind the legislation passed by Parliament.

When it comes to apolitical constitutional theory, this argument has a lot to recommend it. It could maybe be qualified a little in a more practical sense. There might be two points made. Secondly, there is a weak factual foundation for the idea that MPs consistently and uniformly choose the measures for which they vote. Cowley's previously mentioned examination of backbench Labour MPs' voting patterns since 1997 sheds light on the reality of this stage of the legislative process in an enlightening and rather scary way. 74 Cowley made some almost humorous discoveries. He gives the example of times when MPs cast their ballots by accidently going through the incorrect door. A discussion of the very arcane details of a clause in the Finance Bill 2005 serves as an example of a more typical situation. It is just ludicrous to think that many MPs understood the effects the bill would have if it were passed since the provision was so difficult and a comprehension of its significance was so heavily dependent on a grasp of the convoluted current legislation. One of Cowley's MP answers puts the issue in somewhat more concrete and systematic terms: "I travel through the lobby a tremendous number of times without understanding a fuck about what I am voting for." In these situations, the truth is that MPs just comply with party whip requests.

The second issue is that it's just as easy to argue that Pepper v. Hart strengthens rather than weakens the judiciary's authority over the "executive" Invoking Hansard as an interpretative tool may potentially limit executive authority if one understands "the executive" to imply the present

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administration. It is very plausible that the relevant "ambiguous or opaque" statutory clause was not understood by the current government when it was supported by the previous administration, which had very different political views from those of the current administration. More generally, all of the restrictions Pepper v. Hart places on using Hansard are discretionary and hence susceptible to judicial manipulation. Is a legislative phrase unclear when taken literally? Will such a structure provide a ridiculous outcome? Has a Minister made it clear what the government intends the provision to mean? Such queries are often fairly justifiably answered with "yes" or "no." This implies that the courts may decide whether to employ Hansard and, if so, how much weight to give the material it contains.

Significant constitutional ramifications arise from Pepper v. Hart. This is related, in part, to its acknowledgment of the political reality of the control of the legislative process by the government and, as a result, of changes in the nature of the power separation within the modern constitution. The judgment's larger significance, however, relates to the somewhat more specific question of parliamentary privilege since the court implicitly asserts that it alone has the constitutional authority to define privilege, not the two houses of Congress. As a result, the courts are effectively depriving the Commons of the ability to assert its exemption from conventional interpretations of parliamentary sovereignty and the rule of law. There may be a lot of privileged issues with which the courts feel powerless to deal. Yet, rather than taking its source into formalist account, that determination would be predicated on the functionalist standard of the privilege in question's non-justiciable character.

Yet the ramifications of Lord Browne-decision Wilkinson's are more significant. Contrarily, Pepper v. Hart gives great weight to arguments that challenge the notion of parliamentary sovereignty by establishing the supremacy of Parliament over its constituent elements. At the conclusion, we go back to this point. But, as the next two s imply, it is easy to suppose that many MPs would be unwilling to accept additional court interference with the houses' privilege rules.

C. Disrespect for the home

Each house's privileges are now allegedly in a locked category. The Commons and the Lords are not permitted to establish "new" privileges, just as the Crown is not permitted to create prerogative rights that already existed in 1688. But, if the courts allow the government to find "lost" powers, the prerogative's ostensibly "residual" character becomes meaningless, as four stated while addressing the Northumbria issue. Even if it were acknowledged that the courts were the only ones with the authority to set privilege's boundaries, that statement would still be valid in regard to privilege. Claims that the Commons is the rightful keeper of such limits would be deceptive if the Commons is in fact that role.

The role of the House of Commons and House of Lords as legislative assemblies would be enhanced—at least theoretically—by a decision that gave a ministerial statement decisive significance in such circumstances because the current administration would have to support new legislation in order to change the relevant law.

Moreover, the Commons has historically claimed the authority to punish "con- tempts"—a power that the house seems to view as so broad that it is essentially asserting an infinite jurisdiction. Any act or omission that obstructs or hinders either House in the performance of its duties, or that obstructs or hinders any Member or officer of such House in the discharge of his duty, or that has a tendency, directly or indirectly, to produce such results, is considered to be in contempt, according to Erskine May. One may think that Parliament had given the two houses an arbitrary, unlawful authority if this were a legislative idea. The fact that the houses also assert that they have the power to punish defiance with fines or jail only serves to confirm that presumption. These penalties have not been used in the contemporary age, although throughout the eighteenth and nineteenth centuries, the Commons often used its ability to jail people.

MPs themselves or non-members may conduct acts of contempt. A single MP may bring up allegations of contempt with the Speaker, who determines whether the subject should be sent to the Committee of Privileges for examination. The Speaker essentially has unrestricted authority over referrals, and the Committee also has unrestricted power about how it conducts its own investigations.

A contempt complaint has been sustained often in situations when there may have been criminal offenses involved. One may cite instances such as residents who staged a commotion outside the house in an effort to scare MPs or attacks on specific members. 80 Others, while not inherently illegal, pertain to actions that seriously impair the houses' ability to do their jobs. Examples of this include failing to show up for a committee hearing, declining to respond to questions during the hearing, giving false or obstructive information in response to a question, or interfering with the house's business.

The Commons also has a lengthy history of maintaining accusations of contempt against journalists who have disparaged the body or specific members. The Commons decided in 1702 that publishing any information about its proceedings or members constituted a "grave infringement of its right and privileges." The justification for this authority is undoubtedly that criticism undercuts the house's dignity and diminishes the public respect that the house erroneously believes it is entitled to. But, this kind of disdain is not only a remnant from the past. The term has been used in the twentieth century to describe MPs who claimed to have seen other MPs intoxicated at home and journalists who said that MPs received increased fuel rations in the 1950s.

The efforts made by certain MPs to get even the most unimportant problems addressed are perhaps more interesting. Press commentary after the fuel rationing incident in the 1950s said that the house was using privilege

to limit freedom of expression. As a result, several Lawmakers sought to bring contempt charges against the relevant media editors. In a similar vein, a number of Labour MPs attempted to bring a contempt case against The Spectator after the publication implied that they supported the communist government of North Vietnam. The Strauss event is maybe the most vivid illustration of how the house seems to be able to give its members an exaggerated feeling of self-importance. According to Strauss, a simple threat of legal action for defamation against him might be considered a threat. The idea that a person should be penalized for just trying to determine if her common law rights have been violated is absurd and completely at odds with any accepted notion of the rule of law.

Report from the Privileges Committee from 1967

When he commented on these instances, Marshall said that they had significantly damaged the reputation of the House's privilege jurisdiction. In the late 1960s, the house seemed to acknowledge this. According to a 1967 Privileges Committee report, MPs were "very sensitive to criticism." Since 1967, there have been very few instances of the contempt jurisdiction being used, thus the house seems to have taken this suggestion. Nonetheless, one can question the necessity for the Commons or the Lords to have so broad authority. Courts may deal with cases of contempt that qualify as crimes. There is also no compelling reason for either house to be able to retaliate against criticism of its members or of the institution as a whole. It is regrettable that newspaper editors who have recently been pressured to delete their publications' critiques of the Commons haven't simply disputed the house's jurisdiction and the legitimacy of its contempt actions in court. Because there seem to be a number of valid arguments in favor of considering the Commons to be an organization that is fundamentally flawed in the twenty-first century. This fact is shown by its limited ability to govern the Cabinet as well as by how its election system distorts voter preferences. Both of those flaws are communal in character and indicate to problems with the institutional foundation of the home. The way the house reacted recently to growing public concern about the unethical inadequacies of some of its members is increasingly important to the discussion of whether it is legitimate to keep the privileges of the Commons.

III. CONCLUSION

Particularly, life without parole raises concerns about the use of harsh, inhuman, and humiliating punishment and compromises the right to human dignity by eliminating any possibility of release and thereby nullifying the rehabilitative intent of incarceration. There is little to no evidence to support the claim that life in prison is a more effective deterrence than long-term fixed sentences. The judgment gives the state unrestrained control over its inhabitants and gives the courts the ability to permanently restrict personal freedom. This right is especially important for vulnerable and marginalized groups, including political dissidents, human rights activists, and minority communities. However, the exercise of this right is not always guaranteed in practice, and violations of freedom from imprisonment, arrest, and molestation are still widespread in many parts of the world. This can occur through actions such as extrajudicial detention, police brutality, or the use of politically motivated charges to silence opposition. Addressing these violations requires robust legal frameworks, effective oversight mechanisms, and strong civil society advocacy. Moreover, it is important to recognize that the protection of this right is intertwined with other human rights, including freedom of expression, association, and assembly. As such, ensuring freedom from imprisonment, arrest, and molestation is essential for promoting a just and equitable society.

REFERENCES

[1] J. Graafland, “Economic freedom and corporate environmental responsibility: The role of small government and freedom from government regulation,” J. Clean. Prod., 2019, doi: 10.1016/j.jclepro.2019.01.308.

[2] [2] C. Wirth, “Whose ‘Freedom of Navigation’? Australia, China, the United States and the making of order in the ‘Indo-Pacific,’” Pacific Rev., 2019, doi: 10.1080/09512748.2018.1515788.

[3] [3] S. Bonicalzi and P. Haggard, “From Freedom From to Freedom To: New perspectives on intentional action,” Front. Psychol., 2019, doi: 10.3389/fpsyg.2019.01193.

[4] [4] J. Gracia and V. Gozálvez, “Embodied freedom as a key to moral neuroeducation,” Sophia(Ecuador), 2019, doi: 10.17163/soph.n26.2019.01.

[5] [5] D. Bach, G. Groesbeck, P. Stapleton, R. Sims, K. Blickheuser, and D. Church, “Clinical EFT (Emotional Freedom Techniques) Improves Multiple Physiological Markers of Health,” J. Evidence-Based Integr. Med., 2019, doi: 10.1177/2515690X18823691.

[6] [6] E. R. Boot, “Leaks and the Limits of Press Freedom,” Ethical Theory Moral Pract., 2019, doi: 10.1007/s10677-019-10006-w.

[7] [7] M. Pendenza and V. Lamattina, “Rethinking Self-Responsibility: An Alternative Vision to the Neoliberal Concept of Freedom,” Am. Behav. Sci., 2019, doi: 10.1177/0002764218816827.

[8] [8] B. Mokhonchuk and P. Romaniuk, “Towards a Legal Framework That Protects Freedom of Expression in Electoral Processes,” Balt. J. Eur. Stud., 2019, doi: 10.1515/bjes-2019-0021.

[9] [9] P. Radkiewicz and K. Skarżyńska, “Freedom, Freedom... But What Kind of Freedom? Intrinsic and Extrinsic Sense of Freedom as Predictors of Preferences for Political Community and Attitudes towards Democracy,” Soc. Psychol. Bull., 2019, doi: 10.32872/spb.v14i3.37565.