Legal controversies and ethical considerations concerning the property rights in the human body.

Bachelor Thesis

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DECLARATION OF HONOUR:

I declare that this thesis is my own work, and that all references to, or quotations from, the work of others are fully and correctly cited.

(Signed) ……………………………………………

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I consider myself very fortunate to have them all in my life, starting with my mother, who is the best model of strength and endurance I have come across in my life. Her endless sacrifices and kind spirit have made her not only an excellent pediatrician in her professional life but also a remarkable mother to my brother and me.

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I hope you always win your silent battles and feel empowered and confident in yourselves.

X

Abstract

When considering the rise of the biotech industry over the years, one might wonder if the procurement of the biological materials, that are necessary for the success of the industry, was done through ethical and safe measures, especially considering the stagnant position of many countries towards granting individuals ownership rights over their bodies. As such, this paper inspects and compares the current legal approaches that are used in certain common law and civil law jurisdictions to determine individuals' rights over their bodies, and considers the bundle of rights concept and the law of equity as possible solutions to the ethical and equitable deficiencies observed in certain jurisdictions that employ the property law approach.

Keywords: body autonomy, property rights, bio-equity, bioethics, commercialization of biomaterials.

Summary

The topic of this thesis is mainly concerned with the ethical and equitable nature of the current legal approaches that determine the property rights in the human body. This paper attempts to uncover certain legal controversies connected to these approaches by initially assessing the foundational concept of property, then looking into how certain ethical considerations are loosely adopted internationally and amongst EU Member States, leaving room for the potential misuse and commercialization of biological material.

As such, the first chapter in this thesis examines the philosophical foundations of the concept of property, where the natural rights theory is differentiated from the social constructivist theory of property, and is embraced predominantly, despite limiting the concept of property to a unitary model. Thus revealing the root and initial problem with the scope of property law. Additionally, the chapter also attempts to then ascertain if the idea of property rights in the human body is codified within the legal landscape by analyzing universal declarations, EU legal instruments, and national laws of certain states such as Germany, the United Kingdom, Belgium and Spain. Through this analysis though, certain ethical considerations such as the prohibition of commercialization are witnessed, with only Germany appearing to have a liberal approach in considering the human body as a proprietary object.

Subsequently, the second chapter of this paper takes a step forward by attempting to practically examine the current legal approaches employed within courts in relation to the use of the human body, where the stigma over the property law approach appears to be well-founded and in need of further amendments to be more ethical and equitable. While the contract law approach and the privacy law approach, appear to comparatively be better alternatives under certain circumstances.

The research comes to an end at the third and final chapter, where the law of equity is suggested as a viable solution to the deficiencies witnessed in the property law approach, and where the new property classification known as bio-equity, which has been proposed notably by Nils Hoppe, is analyzed and is fairly (re)recommended as a pragmatic solution that concurrently ensures the protection of an individual's biological material, and the progression of science and the economic market of the biotech industry.

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Introduction

The rise of a more politically conscious and correct society that is currently prevailing in certain regions around the world has evoked discussions on body autonomy as it interrelates with heavily debated topics and affects areas, such as reproductive rights, privacy rights, contractual freedom and even intellectual property. The current research available on body autonomy, though not extensive, has also been analyzed from various perspectives over the years, from economic, philosophical, ethical, religious, and more importantly legal perspectives, and has illustrated on numerous occasions the need for the current legal approaches that determine the property rights over human body parts to be amended. This sentiment is particularly true since the law has evidently taken a passive role in adapting to the constant advancements and innovations in science, as this paper will illustrate, leading further to the dismissal of numerous proposed amendments over the years, some of which have rarely been considered or even implemented in real life.

Though the discussion over the ownership of the human body and its parts appeared to date back to the 17th century, where it was mainly in reference to the ownership of a deceased human body in the landmark *Haynes'* case (1614),[1] nonetheless, it was only until the 19th century that the controversy and debate over the commercialization of the human body had reached a new height, as a result of the rise in incidents such as body-snatching that were curiously financed at times by medical researchers, professionals and even medical schools for their anatomy departments in various countries, such as the United States, Great Britain and Russia. These incidents have consequently not only given rise to the growing "market" of the sale of human tissues and organs but have further also sparked debate on whether a next of kin to a deceased person could even retain any ownership to their corpse.[2] This debate was only finally settled in the United Kingdom, in the landmark case *Dobson and Dobson* v. *North Tyneside Health Authority and*

[1] Haynes' case (1614) 12 Co Rep 113 77ER

[2] Ruth Richardson, "Fearful Symmetry, Corpses for Anatomy: Organs for Transplantation," in *Organ Transplantation: Meanings and Realities*, ed. Stuart J. Youngner, Renee C. Fox, and Lawrence O'Connell (Madison: University of Wisconsin Press, 1997), Ch. 5 at 82.

Newcastle Health Authority (1996), [3]and most recently by the ECtHR in the 2015 case *Elberte* v. *Latvia*.[4]

It is worth noting though that while the rulings did determine the law's standpoint on the matter, they still stirred some outrage over the lack of ethical and religious considerations taken by the courts.[5]

In addition, the rise and prevalence of the body-snatching incidents were also evidently curbed by the adoption of the Anatomy Act in 1832 in the UK, which legally allowed medical researchers and doctors to dissect corpse and prevent the illegal trade of human body parts and cadavers. Nevertheless, while over the years, additional laws were passed in the United Kingdom and the United States concerning the extraction of human tissues and other uses of human material, most of these legislative acts maintained a vague legal standpoint towards the ownership and property rights of said human materials.[6] In fact, during the 20th century, while there was a leap in the adoption of national laws and legislative acts towards medical law and issues with bodily materials, of utmost importance and relevance was the adoption of both the European Patent Convention in 1973 and the Convention on Human Rights and Biomedicine by the Council of Europe in 1997, as they set the criteria on what materials can and cannot be patented, along with certain limited ethical guidelines that scientists need to consider when attempting to innovate using the biological materials.

Still, despite the adoption of several national legislative acts that are relevant to the donation and utilization of the bodily materials in different jurisdictions, and the adoption of these crucial yet marginally inadequate aforementioned conventions, there has yet to exist a body of legislative acts that directly and consistently addresses and regulates the property rights that arise from individuals inhabiting their human bodies.[7] This issue will also be further manifested and

[3] *Dobson and Dobson* v. *North Tyneside Health Authority and Newcastle Health Authority* [1996] EWCA Civ 1301
[4] *Elberte* v. *Latvia* [2015] ECHR 211
[5] Dorothy Nelkin and Lori Andrews, "Homo Economicus Commercialization of Body Tissue in the Age of Biotechnology," *The Hastings Center Report* 28, no. 5 (1998): pp. 30-39, Accessed on: March 12, 2021 https://doi.org/10.2307/3528230, 36.
[6] Ibid, pp. 32
[7] Gerald Dworkin, "Should There Be Property Rights in Genes?," *Philosophical Transactions of the Royal Society of London. Series B: Biological Sciences* 352, no. 1357 (1997): pp. 1077-1086, Accessed on: March 14, 2021 https://doi.org/10.1098/rstb.1997.0088, 1078.

outlined in the first chapter of this paper, as the author attempts to analyze and interpret a selection of current legal instruments that likely have an effect, however indirect, on the determination of property rights over bodily materials.

On the other hand, various courts around the world, such as in the United Kingdom, Australia, New Zealand, Canada, the United States and even Germany, during the 20th century, were issuing judgments on matters pertinent in determining the property rights in human body parts, even if it was of indirect relevance. Some of these judgments include the US landmark cases *Diamond* v. *Chakrabarty* in 1980, which permitted the patenting of life form,[8] and the *Moore* case in 1990, which has been the cornerstone for patent holders and scientists who wish to patent their inventions.[9] Whether these "inventions", however, are always utilized towards the common good by creating affordable medications for example, is the essence behind the debate between moralists and pragmatists, and is also one of the fundamental reasons behind analyzing the current legal approaches that determine the property rights in the human body.

Therefore, despite the trifling variance in the subject matter amongst some of the cases that exist to this day, this paper will illustrate, through a doctrinal and comparative methodology, how the majority of the discussions around the legal approaches that determine the property rights are based primarily on the existing large number of case law from different jurisdictions rather than statutes. Thus, proving the presence of inconsistencies and controversies within the legal landscape. This paper will also assess if these legal approaches provide sufficient equitable remedies and ethical considerations or if they require augmentation, while taking into account that some limitations exist, such as the lack of sufficient recent publications on the topic, especially after the occurrence of Brexit, and limited research done on the legal approaches that are used in civil law jurisdictions outside of the EU.

Nevertheless, with the help of the currently available resources, this thesis will initially look into the philosophical foundation of the concept of property, and the current legal instruments that impact the use and commercialization of human body parts. Then, a selected number of judicial cases will be analyzed, to observe the legal approaches used in practice, while the final chapter

[8] *Diamond* v. *Chakrabarty*, 447 U.S. 303 [1980]
[9] *Moore* v. *Regents of the University of California*, 51 Cal. 3d 120, 271 Cal. Rptr. 146, 793 P.2d 479, 15 U.S.P.Q.2d 1753 (1990)

will attempt to examine the law of Equity as an alternative legal approach that has been suggested by several scholars, to mitigate the current controversies and ethical qualms in the realm of property rights in the human body.

1- Analysis of the philosophical theories and legal instruments that determine the property rights in the human body and bioethical standards

When understanding the general concept of property rights, what is commonly assumed when advocating for such rights, is the acquirement of ownership as a unitary concept rather than a bundle of duties and obligations that are relatively more flexible and comprehensive than when they're exercised and "provided" through the unitary concept. The differences between these two concepts are not only relevant as they touch upon the debatable part of the transferability of property rights, but rather also on how they were conceptualized from philosophical theories that have likely influenced the current existence of the legal instruments used in determining the property rights and ownership over the human body. Hence, this chapter will initially analyze the philosophical theories behind the legal approaches and the idealistic ethical considerations that are evidently lacking when determining the legal standpoint of self-ownership over the human body. Following this section, the current relevant legal instruments will also be scrutinized. This chapter will conclude by detailing the different areas of law and how they can be used as legal bases when attempting to determine the property rights over the human body and its parts.

1.1- Philosophical Foundations of body autonomy:

The discussion around property rights and ownership theories has been carried on for centuries by several renowned legal and moral philosophers such as John Locke, Jeremy Bentham, Immanuel Kant and Felix Cohen. The work of these distinguished philosophers on property rights has split into two theories over the years, with the first theory being the natural rights theory and the second and opposing theory being the social constructivist theory.

The natural rights theory is particularly of great significance as it has been the basis of the rulings and reasonings of courts in both the civil and common law jurisdictions. It also has, over time, begun being referred to as the Lockean natural rights theory due to the influence that John

Locke had in expanding on and supporting it.[10] The theory mainly portrays property rights as rights exercised by individuals by virtue of being endowed from God, and therefore their legitimacy is independent of the government. Through the natural rights theory, John Locke believed that these exclusive rights are garnered by individuals when they add value to the 'object' in question through their labor, since he viewed earth and all of its elements to be *res communis,* i.e., owned by all humans.[11] Therefore, it was only through strenuous labor that an individual would gain the exclusive rights to an 'object'. This particular aspect of the natural rights theory is hence the key behind the courts' reasonings in legal disputes and the success of biotech companies and patent-holders since, in the eyes of the law, the potential patent-holders would have had to mix their labor in with the extracted bodily material in order to be granted a patent and the exclusive ownership rights that are conferred along with it.[12]

However, this theory is not presented without any criticism, especially since it seems to dismiss the notion of a pre-existing owner to the 'object' and praises an inequitable treatment where the laborer is granted the value of the whole 'object' not just the added value that they have added through their labor.[13] Thus, this zero-sum approach in the natural rights theory, which is applied in practice in several jurisdictions, gives rise to the first issue in the current legal approaches that could be amended with a more ethical and equitable solution.

On the other hand, when looking into the social constructivist theory of ownership, philosophers such as Felix Cohen believe that it is a better alternative since it requires property rights to be determined based on a chain of social choices that should promote goals such as economic productivity and justice. It is crucial although to note that in contrast with the natural rights theory, the social constructivist theory would not actually be independent of the government, therefore, this theory would mostly be practical and applicable if the property laws within a state were constructed on the basis of the social constructivist theory, i.e., the exclusive ownership rights within a state would be granted to individuals based on just and socially acceptable

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[10] Barbro Bjorkman and Sven Ove Hansson, "Bodily Rights and Property Rights," *Journal of Medical Ethics* 32, no. 4 (January 2006): pp. 209-214, Accessed on: March 10, 2021 https://doi.org/10.1136/jme.2004.011270, 209.
[11] *Supra* note 10
[12] See case law cited in notes 8 and 9 as they include this reasoning by courts.
[13] Donna Dickenson, "Property in the Body and Medical Law," in *Philosophical Foundations of Medical Law*, ed. Andelka Matija Phillips, Campos Thana Cristina de, and Jonathan Herring (Oxford, United Kingdom: Oxford University Press, 2019), 232.

norms.[14] Hence, while this theory might seem to be more idealistic, nevertheless, it is still considered to be relatively more ethical and autonomous than the natural rights theory that applies a more restrictive approach and is more likely to lead to unjust outcomes when determining the property rights in the human body. In fact, advocates of the social constructivist theory of ownership believe that a more practical approach to applying this theory is if property rights are considered to be a set of rights or a "bundle", rather than the unitary concept of property rights that is currently followed by courts. The "bundle" of ownership rights would then include the full spectrum of legal relations that include, the right to possession, the right to use and manage, the right to secure the property, and the right to receive an income or reap the benefits from the owned property.[15] As such, these rights could then be applied in bioethics and properly distributed between the patient and the medical researchers that wish to patent a biological material from this patient.

An example of how the "bundle" of ownership rights apply in bioethics could be that the patient would retain the right to manage how their material is used, while the researchers could then acquire the right to use and possess the biological material, and the right to receive an income could then either be shared between both parties or would be exclusive to the medical researchers, provided that the economic interest aspect of the medical research is declared to the patient beforehand. However, unfortunately this scenario in many cases has been dismissed, out of fear of creating a legal 'market' out of trading organs and a fear of hindering the progression of science and medical research.[16] Though the lack of requirement to disclose any economic interest in a research to a patient beforehand in itself presents yet another issue of when the unitary concept of property rights is applied by courts. This issue will nevertheless be further explored in the analysis of selected case law in Chapter two to look deeper into the dismissal of this particular ethical consideration and the response of specific courts from a legal standpoint.

It is still worth noting though that one of the main reasons behind the controversy in determining whether an individual has any exclusive rights over their body is also that notable philosophers such as Immanuel Kant believed that an entity can either be considered an individual or an object

[14] *Supra* note 10, pp. 210
[15] *Supra* note 12, pp. 233-235. Also see note 10, pp. 210
[16] Ibid, pp. 233

but it can never be classified as both.[17] Therefore, some scholars argue that based on this philosophy human body parts cannot properly be regulated, especially since certain bodily materials, such as human genetic material and human tissues could be classified under either of the categories since they contain both elements of living and non-living matter i.e., an object. These classifications are also deemed necessary as differentiating between objects and persons could be relevant in determining whether the same property rules and principles that are applied on lands and other objects should still be applied on persons and their body parts.[18] However, on the opposing spectrum, supporters of a more regulated system or 'market' for bodily materials consider these materials to be objects and maintain that the use of these biological materials could be justified under two different ethical approaches, the balancing approach and the light-touch approach.[19]

The balancing approach was occasionally used in patent applications and on a case-by-case basis by patent officers who would balance out the purpose of the patent and its benefit against moral norms and ethical guidelines, with scientific benefit usually outweighing the moral objections brought up by bioethics supporters. Though certain rare exceptions were found when the European Patent Office rejected a patent application on a transgenic mouse since it would only serve aesthetic and cosmetic purposes.[20] Hence, through this approach patent applications that insinuate that body parts can be considered as property can still be approved even if they were balanced against the 'rigorous' moral and ethical standards if there is sufficient benefit to mankind from this patent.

On the other hand, through the light-touch approach the patent office would be very limited in intervening and rejecting patent applications and would not have to balance the benefits of each patent against ethical guidelines. Thus, the scope of public order and morality in this case would rarely be considered in an attempt to reject a patent unless in extreme cases. This approach has even oddly received significant support, since it was considered to be more practical in allowing scientific innovations to prosper. Especially since the European Patent Office was criticized when it appeared to have deficiencies in its authority and framework when it came to

[17] Ibid, pp. 230-231
[18] *Supra* note 12, pp. 230-231
[19] *Supra* note 7, pp. 1081-1082
[20] Ibid

determining certain areas in science and ethics.[21] Although it is worth noting that while moral philosophers such as Immanuel Kant were also not supportive of the balancing approach, as it undervalues the essence of the person as a human and a moral agent,[22] the light-touch approach was also believed to actually hinder medical research rather than aid in its progress, as was established in the *Myriad Genetics* case.[23]

The case revolved around a company that tried to patent their discovery of a gene that elevates the risk of cancer, but their application was rejected on the account that not only did they not attempt at creating or inventing something novel through this discovery, but also that patenting such a discovery of a gene would prevent any further research to be conducted on this gene by other companies and scientists.[24] Hence, through this case, the effect of applying a light-touch approach on the progression of science can be observed, which led to some scholars in suggesting a more utilitarian approach that would be able to take into account odds and provide a relatively accurate probability of the scientific benefits.

In any case, neither the balancing approach nor the light-touch approach has yet been adopted as the standard approach that the patent office would have to use, but rather the choice would still depend on the nature of the cases, though both approaches would still have to be applied in line with the European Patent Convention, a key legal instrument that references what is and is not allowed to be patented within the EU.[25] Nevertheless, this convention will not be analyzed in detail within this paper since most of the articles within the convention itself are not directly relevant to the commodification of the human body as the primary focus of this paper. The next section will however, be dedicated to the analysis of the relevant international and European legal instruments, along with a brief focus on certain provisions within domestic legislation and statutes.

1.2- Analysis of legal instruments and ethical considerations:

[21] Justine Pila, "THE EUROPEAN PATENT: AN OLD AND VEXING PROBLEM." *International and Comparative Law Quarterly* 62, no. 4 (2013): 917–40. https://doi.org/10.1017/S0020589313000304. pp. 922
[22] *Supra* note 12, pp. 231
[23] Heidi Williams, "Intellectual Property Rights and Innovation: Evidence from the Human Genome," Journal of Political Economy 121, no. 1 (2013): pp. 1-27, https://doi.org/10.3386/w16213.
[24] *Association for Molecular Pathology* v. *Myriad Genetics, Inc*, 133 S Ct 2107 [2013]
[25] *Supra* note 7, pp. 1082

As mentioned earlier, one of the main issues when determining property rights in the human body, is the lack of clear legislative measures that outline and establish property rights over the biological materials and body parts, which while in theory may imply that the human body should not be treated as property. Nevertheless, in practice, this gap would actually mean that donors and patients are not properly protected by the law, since property rights in body parts are still determined by courts and established exclusively through case law.[26] Therefore, in this section, a number of significant conventions and statutes will be analyzed not because they all regulate property law in different jurisdictions, but rather because though they do not directly regulate property rights, most of these legal instruments have had an indirect effect on the discussion of determining the property rights in the human body. As such, this section will be examining international declarations, European conventions and key domestic statutes and legislation that have played a role in the debate over the commercialization of the human body.

International legal instruments:

When it comes to regulating the commodification of the human body in the name of advancing science, at an international level, there have been a few legal instruments or rather 'declarations' that have set out guidelines and principles regarding the use of biological materials and organs within the sphere of biotechnology. Of particular relevance is the strong emphasis made by these declarations on the principle of non-commercialization, as stipulated in Article 4 of the Universal Declaration on Human Genome and Human Rights, and implied in other declarations such as the Universal Declaration on Bioethics and Human Rights and the International Declaration on Human Genetic Data, all of which have been prepared by the United Nations Educational, Scientific and Cultural Organization, also known as the UNESCO.[27] Nevertheless, the existence of this principle in these declarations does not appear without criticism, since primarily declarations are considered non-binding international legal instruments, and also since the wording of the principle is not comprehensive and is thus left open for interpretation.

Yet when it comes to the first issue on the non-binding nature of these international declarations, though some critics may have been dismayed with the limited influence of such instruments,

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[26] *Supra* note 5, pp. 32

[27] Carlo Petrini, "Ethical and Legal Considerations Regarding the Ownership and Commercial Use of Human Biological Materials and Their Derivatives," *Journal of Blood Medicine*, 2012, pp. 87-96, Accessed on: March 10, 2021 https://doi.org/10.2147/jbm.s36134, 90.

optimists still believe that the principles declared within these instruments could still serve as persuasive authority when necessary, and ideally inspire even a few states to enshrine at least some of these principles within their domestic regulations.[28] A helpful example in this case would be when Argentina adopted the American Declaration of the Rights and Duties of Man into its Constitution, thus elevating the non-binding status of the principles within the declaration into binding constitutional norms.[29] Therefore, the hope of some scholars is that the UNESCO declarations regarding bioethics can still be considered effective as guiding sources to the signatory states, so that some of the principles within the declarations could then be incorporated into domestic laws or with time become part of customary law. As postulated in the case of the Universal Declaration of Human Rights of 1948, which some scholars believe has become legally binding over the years and part of international customary law.

Similarly, the second issue which deals with the interpretation of the non-commercialization principle, that is imposed generally on researchers and patent applicants, has also received its share of criticism over its effectiveness, due to the lack of comprehensive wording, despite being considered a momentous progress in the field of bioethics and an appreciated effort towards safeguarding the universal right to human dignity.[30] This is evident in the wording of Article 4 of the Universal Declaration on Human Genome and Human Rights, where the prohibition is limited to the "natural state of the human genome" and is implied in the other two aforementioned UNESCO declarations rather than explicitly outlined in their text.[31] Nevertheless, while some scholars prudently speculate that the vague nature of this particular principle is due to the lack of consensus on the meaning of "financial gain" and "human

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[28] Roberto Andorno, "Global Bioethics at UNESCO: in Defence of the Universal Declaration on Bioethics and Human Rights," *Journal of Medical Ethics* 33, no. 3 (January 2007): pp. 150-154, https://doi.org/10.1136/jme.2006.016543, 151.

[29] Salvador Dario Bergel, "Diez Años De La Declaración Universal Sobre Bioética y Derechos Humanos," *Revista Bioética* 23, no. 3 (2015): pp. 446-455, Accessed on: March 12, 2021 https://doi.org/10.1590/1983-80422015233081, 448-449. [English version available on the same website]

[30] Michael Kirby, "Human Rights and Bioethics: The Universal Declaration of Human Rights and UNESCO Universal Declaration of Bioethics and Human Rights," *Journal of Contemporary Health Law & Policy* 25, no. 2 (2009): pp. 309-331, Accessed on: April 02, 2021 https://scholarship.law.edu/jchlp/vol25/iss2/4, 330.

[31] "The human genome in its natural state shall not give rise to financial gains.", Article 4, United Nations Educational, Scientific and Cultural Organization (UNESCO). Universal Declaration on Bioethics and Human Rights. Paris, France: UNESCO; 2005. Available on: Universal Declaration on Bioethics and Human Rights (unesco.org). Accessed on: April 02, 2021. See also, United Nations Educational, Scientific and Cultural Organization (UNESCO). Universal Declaration on the Human Genome and Human Rights. November 11, 1997. Available on: https://www.ohchr.org/en/professionalinterest/pages/humangenomeandhumanrights.aspx

dignity",[32] certain universal guides such as the WHO Guiding Principles on Human Cell, Tissue and Organ Transplantation have still managed to indicate what is excluded from the meaning of "financial gain".[33] These exclusions accordingly would include reimbursements to "reasonable expenses" incurred by donors and compensation in cases of "undue damage",[34] both of which can be provided through different compensation schemes depending on the national laws of a country, as will be seen through certain examples in the next section.

Therefore, despite the non-binding nature of the declarations and the WHO Guiding Principles, the working of these instruments hand-in-hand can still provide guidance into how certain terms should be interpreted, or the very least, reduce the margin of error in how certain ethical principles could be interpreted and applied at a national level. In the case of the exclusions made in relation to the prohibition of financial gain, it is worth noting that these exclusions have in fact had an influence in the drafting of regional legal instruments, particularly within Europe, as it led to an outlined definition of the term "financial gain" in the Council of Europe Convention against Trafficking of Human Organs and the Convention on Human Rights and Biomedicine,[35] where the latter instrument will be discussed further in the following section.

European legal instruments:

As stated earlier, considering that the current international legal instruments that provide guidance on bioethical standards are not binding or enforceable, there is still a need for legal binding instruments that protect the rights of donors and allow the progression of medical research even if only at a regional or national level. With that in mind, when it comes to bioethical standards and binding regulations at a regional level, the EU marks itself as a prime

[32]Kshitij Kumar Singh, "HUMAN GENOME AND HUMAN RIGHTS: AN OVERVIEW." *Journal of the Indian Law Institute* 50, no. 1 (2008): 67-80. Accessed on: April 09, 2021. http://www.jstor.org/stable/43952133, 79.

[33] "The prohibition on sale or purchase of cells, tissues and organs does not preclude reimbursing reasonable and verifiable expenses incurred by the donor.", Principle 5, WHO Guiding Principles on Human Cell, Tissue and Organ Transplantation (2010), World Health Organization, Available on: www.who.int/transplantation/Guiding_PrinciplesTransplantation_WHA63.22en.pdf

[34] "Guide for the Implementation of the Principle of Prohibition of Financial Gain with Respect to the Human Body and Its Parts from Living or Deceased Donors," Council of Europe (Council of Europe, 2018), https://rm.coe.int/guide-financial-gain/16807bfc9a, 7. Accessed on: April 03, 2021

[35] Article 21, Convention on Human Rights and Biomedicine (CETS No. 164), Available on: www.coe.int/en/web/conventions/full-list/-/conventions/treaty/164. See also, Council of Europe Convention against Trafficking in Human Organs (CETS No. 216) Available on: www.coe.int/en/web/conventions/full-list/-/conventions/treaty/216, and Article 21 of the Additional Protocol concerning Transplantation of Organs and Tissues of Human Origin (CETS No. 186) Available on: www.coe.int/en/web/conventions/full-list/-/conventions/treaty/186

candidate for analysis, since leading conventions and directives in the field of bioethics have been drafted and adopted within that region and consequently have also had an impact on the policies of the signatory Member States. Of utmost importance and relevance to this paper are Article 21 and 22 of the European Convention on Human Rights and Biomedicine of 1996, which is commonly also referred to as the Oviedo Convention and was drafted by the Council of Europe. Additionally, Article 12 of Directive 2004/23, also known as the Human Tissue Directive, and Article 3 of the Charter on Fundamental Rights of the EU also play a significant role in prohibiting "financial gain" that rises from human body parts.[36][37] While Article 53 of the European Patent Convention is also pertinent as it provides a fundamental exclusion to approving patent applications, which relies essentially on the grounds of public order and morality.[38]

Though, this exclusion has spurred more criticism than support for numerous reasons, first of which is since it is rarely applied, despite the discretion that the European Patent Office has in assessing ethical issues through the use of either the balancing approach or the light-touch approach. Another reason behind the scrutiny is that the European Patent Office has also appeared to allot the burden of assessment on the opponents of a patent, where they would be required to provide "conclusive evidence" that the patent violates Article 53 and would be immoral or against public policy, instead of the European Patent Office partaking to make such assessments by itself.[39] While the final reason, that has more bearing to this paper, is also that per Article 53 of the convention, the European Patent Office should not consider a patent that gives

[36] Directive 2004/23/EC on setting standards of quality and safety for the donation, procurement, testing, processing, preservation, storage and distribution of human tissues and cells, *OJ L* 102, 7.4.2004, p. 48–58. Available on: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32004L0023 Accessed on: March 10, 2021

[37] Article 3, Charter of Fundamental Rights of the European Union, OJ C 326, 26.10.2012, p. 391–407. Available on: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A12012P%2FTXT

[38] Article 53, European Patent Convention (2007), Available on: https://www.epo.org/law-practice/legal-texts/epc.html

[39] Justine Pila, "Adapting the Ordre Public and Morality Exclusion of European Patent Law to Accommodate Emerging Technologies," *Nature Biotechnology* 38, no. 5 (May 11, 2020): pp. 555-557, https://doi.org/10.1038/s41587-020-0504-5, 555.

rise to "commercial exploitation" to be in violation of the convention or contrary to "public order", if the only reason is that it is prohibited by the national laws of the contracting states.[40]

Hence, the incoherency in the approach that has been used by the European Patent Office when applying Article 53 has led to some scholars to recommend a revision to the provision and include an alternative risk assessment scheme that allows for a better collaboration between the European Patent Office and the national patent offices.[41] Thus, enabling all the patent offices to increase the ethical threshold and still assess the risks of the patent applications in a more efficient manner.

Moreover, in connection with the discussion on the principle of non-commercialization that began earlier, this principle appears to be applied in the EU through the Charter on Fundamental Rights of the EU and several directives that have entered into force over the years, where Article 3 of the Charter explicitly prohibits the use of the human body as a source of "financial gain" as part of an individual's right to the respect of their physical and mental integrity.[42] Similarly, EU directives, such as Directive 2004/23 and Directive 2010/45/EU have also stipulated that procurement of human body parts should only be done voluntarily and not promoted for any financial incentives.[43] Though the scope of the directives does not include research purposes, and as such, does afford a wide margin of discretion for Member States to decide on the standards of protection applied when biological materials are procured for research purposes.

On the other hand, while the Oviedo Convention covers the same principle of non-commercialization as stipulated in Articles 21, the convention is still considered to be more comprehensive and thorough as it implicitly covers additional ethical challenges, such as the disclosure of an economic interest when obtaining the consent of a donor. Though this principle

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[40] *Supra* note 38, Article 53 (a), "commercial exploitation of an invention shall not be deemed to be contrary to ordre public or morality merely because it is prohibited by law or regulation in some or all of the Contracting States."
[41] *Supra* note 39, pp. 556. See also, European Patent Office, "World's five largest patent offices agree on joint task force for emerging technologies and AI," EPO, 13 June 2019, https://www. https://www.epo.org/news-events/news/2019/20190613a.html
[42] *Supra* note 33
[43] *Supra* note 30, pp. 5-6. See also, Directive 2010/45/EU of the European Parliament and of the Council of 7 July 2010 on standards of quality and safety of human organs intended for transplantation, OJ L 207, 6.8.2010, p. 14–29. Available on: https://eur-lex.europa.eu/legal-content/en/ALL/?uri=CELEX%3A32010L0053
OJ L 207, 6.8.2010, p. 14–29

is not explicitly stated in the convention, Article 22 does stipulate that when human body parts are extracted, they can only be stored and "used for other purposes", if these purposes conform with the "appropriate information" that was disclosed during the consent procedures, which "could be interpreted" as a requirement to disclose the economic interest in a research.[44] Hence why the convention is still praised and considered to be a cornerstone on bioethical guidelines established in Europe, even though it provides only a "possible" level of protection not a "due protection" as such, contracting states are still urged to raise the standards set by the convention through h their national laws.[45]

Nevertheless, while the value of the text of the convention cannot be undermined, the Council of Europe has not established an independent judicial body that can ensure the compliance of the signatory states with the convention, despite the reference made to the ECtHR in Article 29, which allows national courts to request an advisory opinion from the ECtHR regarding the interpretation of the Oviedo principles.[46] In fact, the ECtHR has even on few occasions made a reference of the Oviedo Convention through its judgements in cases such as in the *Evans v United Kingdom* case and the *Costa and Pavan v Italy* case.[47] Where even though in both cases the main claims were focused on the infringement of the rights provided in the ECHR, such as Article 8 that protects the Right to private and family life in the latter case, the court still appeared to shine the spotlight on Article 12 of the Oviedo Convention by expanding the scope of Article 8 of the ECHR, as a way of raising the standards of protection of human health.[48]

Therefore, while the EU directives and the Charter on Fundamental Rights of the EU are considered sources of EU law and as such could rely on the competence of the Court of Justice

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[44] *Supra* note 33, Article 22

[45] Thomas Faunce, "Bioethics and Human Rights," *Handbook of Global Bioethics*, 2013, pp. 467-484, Accessed on: April 02, 2021 https://doi.org/10.1007/978-94-007-2512-6_98, 471-472. See Also, Oktawian Nawrot, "The Biogenetical Revolution of the Council of Europe - Twenty Years of the Convention on Human Rights and Biomedicine (Oviedo Convention)," *Life Sciences, Society and Policy* 14, no. 1 (2018): pp. 1-24, https://doi.org/10.1186/s40504-018-0073-2.

[46] "The European Court of Human Rights may give, without direct reference to any specific proceedings pending in a court, advisory opinions on legal questions concerning the interpretation of the present Convention", Article 29, Convention on Human Rights and Biomedicine (CETS No. 164), Available on: https://www.coe.int/en/web/conventions/full-list/-/conventions/rms/090000168007cf98

[47] *Evans* v. *the United Kingdom* ECHR 2007-I 353 and *Costa and Pavan* v. *Italy* App no 54270/10 (ECtHR, 28 August 2012).

[48] Francesco Seatzu, "The Experience of the European Court of Human Rights with the European Convention on Human Rights and Biomedicine," *Utrecht Journal of International and European Law* 31, no. 81 (2015): pp. 5-16, https://doi.org/10.5334/ujiel.da, 10-11.

of the EU to examine any violations of the principles enshrined in EU law sources that are committed by EU Member States. The same enforcement scheme unfortunately is not applied towards the Oviedo Convention or the European Patent Convention, since both conventions rely on the national courts of the signatory states to ensure the compatibility of the states with the conventions. Though when it comes to the Oviedo Convention, the principles can still possibly be implemented if the contracting state of the ECHR has also signed and ratified the Oviedo Convention, considering the significant overlap between both conventions that allows, in certain cases, the ECtHR to reference and interpret the principles of the Oviedo Convention along with the ECHR.[49]

Interestingly though, there are currently 12 EU Member States and members of the Council of Europe that have foregone the idea of signing and ratifying the Oviedo Convention. In fact, what is noteworthy is that Germany, a leading country in the biotechnology industry, has neither ratified or signed the convention along with Belgium and the United Kingdom.[50] So, in light of these facts, the following section will look into the national laws of these three states and of the Kingdom of Spain since it is a signatory member of Oviedo Convention and an EU Member State.

National legal instruments:

This chapter has so far evaluated the guidance that supranational laws and declarations provide when determining whether the exploitation of the human body and its parts could be considered ethical and permitted by the law. So, this final section will explore the extent of the influence that these legal instruments had on the domestic laws of the states mentioned earlier, especially since matters pertaining to health care are also within the competence of EU Member States. So, the following domestic laws represent both legal systems, starting with the laws of Belgium, Germany and Spain, i.e., civil law jurisdictions, and concluding with the laws of the United Kingdom, a common law jurisdiction.

Looking into the Belgian system, it is worth noting that the Kingdom of Belgium is the only EU Member State to incorporate the principles of the EU's Human Tissue Directive into domestic

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[49] *Supra* note 48, pp. 9

[50] The updated list is available on: https://www.coe.int/en/web/conventions/full-list/-/conventions/treaty/164/signatures?p_auth=ZZ5gB9jT

law and widen the scope of the directive to also include scientific research purposes and not just procurements of tissue cells for "human applications" or medical procedures.[51] It also approaches the use of human body parts through a unique system of setting fixed prices for each biological material at the national biobanks, with the price of organs such as heart valves valued at 3,547 Euros.[52] Therefore, it can be inferred that while the ethical and legal standards of the Belgian healthcare system is high, due to the widened scope provided by national laws, some scholars still believe that this system of regulating the procurement of human tissue cells could encourage "economic gain" and consequently compromise the interests of the public and the safety of the collected and stored biological material.[53]

Meanwhile, though Spain is a signatory member of the Oviedo Convention and its national laws do explicitly reiterate the prohibition of promoting the donation of biological materials for "economic benefits",[54] a contradiction does still exist within the national laws that allow compensation to be paid to egg donors, where the remuneration could range from 600 to 1000 Euros per egg cycle.[55] Now understandably, while this amount is meant to compensate for the discomforts that donors may experience during the donation procedure, nevertheless, it could also still illustrate hidden economic incentive schemes that turn donors into sellers instead.

Moving onto one of the most relevant legal systems in Europe, Germany as the leading European country in biotechnology, has interestingly engrained through its domestic laws and judicial cases the possibility of biological material giving rise to ownership rights when they are extracted from the human body.[56] As such, the process of donations through this line of consideration would mean that a transfer of the ownership rights would occur from the donor to the recipient/researchers. Nevertheless, the German Transplantation Law does still emphasize on

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[51] Christian Lenk and Katharina Beier, "Is the Commercialisation of Human Tissue and Body Material Forbidden in the Countries of the European Union?," *Journal of Medical Ethics* 38, no. 6 (2011): pp. 342-346, https://doi.org/10.1136/jme.2010.038760, 343.
[52] Jean-Paul Pirnay et al., "Human Cells and Tissues: The Need for a Global Ethical Framework," *Bulletin of the World Health Organization* 88, no. 11 (January 2010): pp. 870-872, https://doi.org/10.2471/blt.09.074542, 871.
[53] Ibid, pp. 872
[54] Article 5 (3) of the Law on Assisted Human Reproduction Techniques, No. 14/2006 (27 May 2006)
[55] *Supra* note 51. See, JG Velasco, "Egg donation in Spain. The Spanish point of view. *Focus on Reproduction* 5:26-30. (Newsletter of the European Society of Human Reproduction and Embryology, May 2007) https://www.eshre.eu/Eshre/NotFound.aspx?item=%2fbinarydata&user=extranet%5cAnonymous&site=website
[56] Ibid. German Source also available on: https://link.springer.com/chapter/10.1007%2F978-3-540-69973-6_1

the non-commercialization of organs, despite Germany not being a signatory member of the Oviedo Convention.[57]

Although it is worth noting that even though German laws do clearly outline a prohibition on the commercialization of organs, there is no *general* prohibition enshrined on the commercialization of the human body parts. In fact, while the German Transfusion Law urges donations to be made "gratuitously", the literal phrasing still does not actually prohibit blood donors from receiving "financial rewards" in return.[58] Therefore, while the German legal system does seem to have a unique approach in deeming extracted biological materials as possessed objects, the wording of the national laws does create a loophole that could allow for the commercialization of biological material that are not considered to be organs.

Finally, moving towards analyzing the distinctive laws of the United Kingdom, as it stands to be a former EU Member State and a common law jurisdiction, the UK is neither a signatory member to the Oviedo Convention nor is it an EU Member State anymore. Therefore, the national laws would no longer have to be in conformity with the EU directives or the Oviedo Convention until the UK signs and ratifies the convention. Surprisingly though, while there has yet to be any significant updates to the national laws post-Brexit, the current English laws such as the Human Tissue Act of 2004, still have a significant impact on how biological materials are handled in the UK, but do not actually provide property rights to individuals over their bodies.[59] As a result, considering the context of this paper, there are mainly two sections of the Human Tissue Act, section 8 and section 32, that should be taken into consideration.

Section 8 prohibits the use of donated biological materials outside of the "qualifying purposes" that include research purposes, transplantation, and obtaining medical information.[60] Meanwhile, though the non-commercialization principle is enshrined in section 32, which prohibits the commercialization of biological materials that are intended for transplantation.[61] Section 32 still does not have a general scope of application, since it excludes reproductive materials such as

[57] Section 17, The German Transplantation Law (Transplantationsgesetz, TPG)
[58] Section 10, The German Transfusion Law
[59] Nils Hoppe, *Bioequity - Property and the Human Body* (Farnham, Surrey: Ashgate Publishing Ltd, 2009), 92-99.
[60] Section 8, The Human Tissue Act (2003)
[61] Ibid, Section 32

gametes and embryos, and biological materials that have been "worked on" and as such considered proprietary objects by virtue of patents.[62]

Thus, while it is currently unclear how Brexit will affect the regulation of human body parts in the field of biotechnology and medicine within the UK, the current laws do still seem to be incomprehensive and insufficient in providing an exhaustive list of all the prohibited activities. Instead, they appear to mainly focus on permissible conditions, which could still lead to unethical uses of biological materials under the guise of the "qualified purposes", such as research purposes for instance. Nonetheless, the pragmatic effects of the UK's approach to property rights and the commercialization of the human body will still be further analyzed in the next chapter.

In conclusion, this chapter has attempted to look into the influence of certain philosophical theories on the concept of the human body giving rise to property rights and has consequently, led to establishing the concept of "bundled rights" as an optimal alternative to the unitary concept of ownership. Additionally, the light impact of the international legal instruments was also evident, despite the difficulties arising from enforcing them, through the constant appearance of ethical principles such as the principle of non-commercialization amongst European legal instruments and national laws. Some inconsistencies, nevertheless, were still witnessed within the national laws of certain states and as such call for the exploration of how these laws are applied in reality by courts, as will be seen in the upcoming chapter.

2- Analysis of selected case law that illustrate the current legal approaches used to determine property rights in the human body

As previously stated in Chapter 1, one of the main issues that rise from attempting to determine if individuals have any property rights to their human body is the lack of clear and coherent statutes and other legal instruments that outline clearly a prohibition or admissibility to the concept of human body parts as proprietary objects. In fact, it was mainly due to the vast judicial

[62] *Supra* note 59, pp. 127

decisions, published from various legal systems, that the concept of the human body as a proprietary object and the ability to commodify it became prominent.[63]

Therefore, this chapter will look into the current legal approaches that can protect an individual's rights over their body through a selection of cases and examples from different judicial systems that demonstrate the use of different areas of law, such as the use of property law, privacy law and contract law that aid in providing regulatory frameworks for the human body. The analysis of the selected case law will also provide a better understanding of the courts' unique reasoning and 'inclination' towards certain legal approaches over others.

Furthermore, the prevalence of the subject matter in certain jurisdictions, the following selected cases will be outlined through a chronological and jurisdictional order, starting with cases from the United States, and including cases from the UK, Germany and a recent case decided by the ECtHR, to uncover the evolution of the law's stance over the years and from different legal systems.

2.1- The application of the legal approaches in Common Law Jurisdictions:

The Property Law Approach:

Moore v. *Regents of the University of California (1990)*

When looking into how the US judicial system has managed to handle issues related to the use of biological material and bodily autonomy, the controversial decision of the Supreme Court of the State of California in the *Moore* case is brought up, as it has arguably set itself as a legal precedent for the inability of individuals to claim ownership rights over their bodies in the United States.[64] The facts of the case involve the plaintiff, Moore, a leukemia patient who sought the medical assistance of the physicians at the UCLA medical center, the defendant, after discovering that he had a rare type of cancer known as "hairy-cell" leukemia. Moore was then hospitalized at UCLA and his blood and other biological materials were withdrawn from his body to confirm his diagnosis.

[63] *Supra* note 59, pp. 85

[64] *Moore* v. *Regents of the University of California*, 51 Cal. 3d 120, 271 Cal. Rptr. 146, 793 P.2d 479, 15 U.S.P.Q.2d 1753 (1990) https://law.justia.com/cases/california/supreme-court/3d/51/120.html

Once confirmed, the next course of action recommended was the removal of Moore's Spleen, which Moore agreed to by signing a written consent form for the removal surgery. However, while Moore believed that the consent form was solely for the purpose of performing the surgery and providing medical care, the medical center was covertly also interested in researching on the excised spleen.[65] This interest became clear when the medical center applied to patent the cells from Moore's extracted Spleen, which were valued by court for 3 Billion dollars in the year 1990.

It is imperative to note in this case that the consent form regarding the waiver of all rights over the cells was only provided to Moore after the medical center has applied for a patent, and Moore only found out about the patent application through his attorney after seeking legal advice on the second consent form. Therefore, throughout his visits to the medical center, Moore believed that the physicians at UCLA were providing treatment and medical care as part of their duty, when in reality their economic interest in the cells could have led to a conflict of interest, and as Moore later claimed, a breach of the fiduciary duty they had towards him.[66]

However, while Moore brought several claims against UCLA to court, of utmost relevance to this paper are the claims for conversion and the lack of informed consent that Moore raised, as the first claim focuses on the fact that the medical center excised the spleen for commercial purposes rather than the therapeutic purposes, and has consequently failed to "share the profits" generated from this endeavor with the 'main owner'. While the second claim focuses on the fact that Moore has undergone several medical "treatments" years after the recommended surgery was performed, without actually being informed about their purpose. Therefore, when looking at how these claims were considered throughout all the levels of courts in the State of California, it is interesting to find that while initially the Superior Court of Los Angeles County dismissed the case, in favor of the UCLA medical center, on the grounds that Moore does not have any "property rights" to his own biological materials. The Court of Appeal astonishingly reversed the lower court's decision, on the grounds that there are "no legal or biological justifications" that

[65] Radhika Rao, "Genes and Spleens: Property, Contract, or Privacy Rights in the Human Body?," Journal of Law, Medicine & Ethics 35, no. 3 (2007): pp. 371-382, https://doi.org/10.1111/j.1748-720x.2007.00161.x, 372
[66] Rohini Nott, "The Embryo Project Encyclopedia," Moore v. Regents of the University of California (1990) | The Embryo Project Encyclopedia (Arizona State University, November 18, 2020), https://embryo.asu.edu/pages/moore-v-regents-university-california-1990. Accessed on: April 20, 2021

should prevent Moore from having a property interest pertaining to his own biological materials.[67]

Thus, astoundingly this decision seems to assert the concept of bodily autonomy and would have likely given rise to the obligation of sharing the "profits" or commercial benefits that are generated from the use of an individual's bodily materials, depending on whether a jury would deem the collected materials to either have been "abandoned property" after extraction or "improperly converted" as Moore claimed to be in his case. Nevertheless, the Court of appeal's decision did not completely hold up at the Supreme Court of California, since the Supreme Court rejected the claim that Moore had any property interest over the extracted and patented cells, while asserting that the lack of informed consent was still evident.[68] The Court's reasoning for rejecting the claim of conversion was partly due to the fact that the court believed that the patented cells were different from the cells that remained inside Moore's body.

This distinction was particularly emphasized on, as objects can only be patented if there was an element of invention and not just simply a discovery.[69] Therefore, in Moore's case, the mere discovery of the cells would not have qualified the UCLA medical center to a patent, but rather it was the cell-line that was 'developed' and worked on through the use of the extracted biological materials that was deemed to be an 'invention' and as such, established the patentability of Moore's extracted cells. More importantly, the court also rejected the claim, since the Justices believed that granting property rights to individuals over their bodily parts would hinder the progression of science and consequently also affect the growth market of the biotech industry.[70]

Interestingly enough, this exact reasoning has also been used in the *Greenberg* v. *Miami Children's Hospital* case as 'justification' for the refusal of the court to impose a duty on researchers to disclose their economic interests as part of establishing an "informed" consent.[71] Still, in Moore's case, a clear distinctive element that raised concerns amongst the Justices is the

[67] *Supra* note 66
[68] Ibid
[69] *Supra* note 64, FN 35
[70] Ibid, [51 Cal. 3d 145]
[71] *Greenberg* v. *Miami Children's Hospital Research Institute*, 264 F. Supp. 2d 1064 (S.D. Fla. 2003).
https://law.justia.com/cases/federal/district-courts/FSupp2/208/918/2563184/

fact that the only clear consent form that was provided to Moore and would fit the 'informed consent' criteria, was the consent form concerning the removal surgery.

Therefore, in the eyes of the law, since the purpose, benefits and risks of the latter 'treatments' that Moore had undergone post-surgery were not disclosed to him clearly, especially since a conflict of interest existed, as such, the court could not deem that Moore has provided his informed consent. It is worth noting that the court did not impose the disclosure of interests as a fixed criterion for all medical procedures, but rather it is more of a variable condition that should mostly be enforced whenever there is a conflict of interests that could jeopardize the duty that medical practitioners have towards their patients.[72]

Thus, despite the disappointing and controversial verdict regarding the ability of Moore to exercise his property rights over his biological materials, the silver lining that could be considered beneficial as persuasive authority, is the significance that California's Supreme Court placed on ensuring that research and economic interests are disclosed as part of an 'informed consent', when a conflict of interests exists in a case. The emphasis placed on this element is also mainly due to the fact that, as discussed in Chapter 1, the disclosure of commercial interests is interestingly not considered a mandatory ethical norm in several legal systems. Therefore, it would seem that this requirement could only be applied at the discretion of physicians and in rare cases, at the discretion of courts, as seen in the Moore case, which will be differentiated from in the following case.

Greenberg v. Miami Children's Hospital (2003)

Following Moore's case, there was a rise in the debate over the concept of considering the human body as a proprietary object, and while the "no-property" rule established in the Moore case was still maintained in cases such as, *Greenberg* v. *Miami Children's Hospital,* the *Greenberg* case still provides a different perspective on how property rights were granted to researchers rather than the individuals that provided the biological parts.

In the *Greenberg* case, the plaintiffs were 'donors' who sought out the assistance of medical researchers after discovering that their children were diagnosed with a rare genetic disorder that

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[72] *Supra* note 64, [51 Cal. 3d 130]

mostly occurs within certain ethnic Jewish families. The plaintiffs provided their biological material and even supported the researchers financially, with the expectation and understanding that if/when a cure is developed, the research on the genetic disorder and the cure would be shared with the public and accessible at an affordable rate. However, when the medical researcher, Dr. Matalon, managed to identify and isolate the gene that is responsible for the disease, he opted to patent the 'discovery', where he was declared as the 'inventor'.[73]

The first distinction that needs to be witnessed here between the facts of the *Greenberg* case, so far, and the facts of the *Moore* case, is that while in both cases the biological materials that were provided were patented for the purpose of acquiring the ownership rights, in Moore's case the court emphasized on the fact that the cell-line that was patented was developed by the medical center and therefore, was not 'purely' similar to the materials extracted from Moore. While, in the *Greenberg* case, the medical researcher succeeded in patenting an isolated gene that was not 'developed' by him, but rather merely 'discovered'.[74] Therefore, when the existence of the patent was brought to the Greenbergs' attention, they also went to court and raised several claims, including the same claims for conversion, lack of informed consent and breach of fiduciary duty that Moore raised in the previous case. However, in this case, the district court rejected the aforementioned claims, on the grounds that the plaintiffs were informed about the purpose of the research and that Dr. Matalon was not acting as a physician with the duty to provide medical care, but rather was acting only as a researcher.[75] Therefore, there was no breach of fiduciary duty, and as such, the obligation to disclose the economic interest that was required in the *Moore* case could not be extended and imposed on Dr. Matalon as a medical researcher, since it would hinder the progression of science and medical research.

Additionally, the claim for conversion was also rejected in this case, since the donation of biological material would also mean a 'transfer' of the ownership rights that individuals might have had over their bodies. So, retaining property rights after their extraction and donation would not be possible. In fact, the only claim that the court allowed to proceed and be heard was the claim for unjust enrichment, however, interestingly enough, both parties ended up agreeing to a settlement, whereby the plaintiffs would drop any further legal action against Miami Children's

[73] *Supra* note 65, pp. 373
[74] Ibid, pp. 374
[75] *Supra* note 65, pp. 374

Hospital, and in return the Hospital would allow the free use of the patented gene to further the research and increase the chances of finding a cure for the genetic disease.[76]

It is worth noting that the success of the settlement agreement between the parties could be considered as a form of a contractual agreement that allowed for the 'official' transfer of the property rights from the 'donors'/plaintiffs to the hospital. Thus, while the verdict of this case did not allow for the ultimate retention and protection of the property rights, it still acknowledged the possibility of the existence of limited property rights over the human body. Moreover, the facts of the case also lead to an understanding that property rights can also be determined and protected through the use of contractual agreements that could be protected by the principles of contract law then. This inference however does not imply that the commercialization of the human body is fully permitted, but rather it is merely an understanding that while US statutes, such as the Uniform Anatomical Gift Act, do prohibit the commercialization of the human body, the scope of prohibition is only limited to transplantation procedures and against 'therapeutic' purposes.[77]

Therefore, in essence, the law does not 'actually' prohibit the commercialization or sale of human body parts in other contexts, such as in a form of a contractual agreement with biotech companies or research centers, opening the room for the use of contract law as an alternative legal approach in establishing ownership rights over the human body. As such, the following example will provide further insight on how the contract law approach was applied in practice.

The Contract law Approach:

Considering the 'failed' attempts witnessed from the previous cases in protecting the use of the human body through property rights, some individuals have considered opting to use the open interpretation of the Uniform Anatomical Gift Act, in the United States, to establish their ownership of their bodies through contractual agreements. A Notable example was when a family known as, the Terrys, have discovered that their children have inherited a rare genetic disorder, and with that knowledge and further research on other individuals affected by the same disorder, the Terrys were able to build a biobank with their own biological materials and extracted samples from the other individuals. Through the establishment of this 'biobank', the

[76] Ibid

[77] *Supra* note 64, [51 Cal. 3d 177]

Terrys and other affected individuals also formed a non-profit organization known as, PXE International, which allowed researchers an access to the preserved biological materials, only after the conclusion of contractual agreements that would explicitly entail the shared ownership and profits of any research performed using the preserved biological samples. So, when the gene responsible for the diseases was finally identified and isolated, the patent on the gene included one of the Terrys as a 'co-inventor'.[78] Thus, the use of the contract law appeared to allow individuals to retain and protect their ownership rights over their bodily material, while also still maintaining the progression of medical research.

It is worth noting though that while contract law does seem to be an optimal choice in safeguarding the rights of individuals over their bodies, there are several factors that determine the probability of success through this approach. In the PXE example, the Terrys relied on the rarity of a genetic disease and the fact that they possessed the genes contributing to the disease within their bodies, which allowed them to gain more negotiating power, based on the market value of their genes.[79] The other two relevant factors that should also be considered include, firstly is the fact that the Terrys managed to gather groups of individuals possessing the same genetic code of the disease, and convinced them to also supply their biological materials to the created biobank. Secondly, the Terrys were also aware of the possibility to form contractual agreements concerning samples of their bodily materials.[80]

Therefore, a layman that lacks the knowledge of forming contracts and is not in possession of bodily parts of significant market value, or was unable to amass numerous biological samples and preserve them, might not be able to benefit from this approach to assert and protect their rights over their bodies.

Yearworth v. North Bristol NHS Trust [2009]

As introduced earlier in this paper, in many jurisdictions such as the United Kingdom, judicial decisions have made more strides on the concept of bodily autonomy than legislative measures. So, when looking into the legal approaches applied in the UK, it is worth remembering that the

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[78] Matt Fleischer, "Patent Thyself," The American Lawyer, June 21, 2001, at 84-100. https://www.law.com/almID/900005523062/?slreturn=20210322231314 Accessed on: April 20, 2021

[79] Ibid

[80] *Supra* note 65, pp. 378

UK has interestingly been adamant about enforcing the "no-property rule" over the years, as evident in the decisions of the cases referenced earlier, such as the *Haynes'* case (1614) and the *Dobson and Dobson* v. *North Tyneside Health Authority and Newcastle Health Authority* (1996).[81] In fact, it is only rarely when a deviation occurred from this rule, as seen in the *Yearworth* v. *North Bristol NHS Trust* case, where the plaintiffs agreed to preserve their sperms prior to undergoing chemotherapy, to ensure that their ability to reproduce is not hindered by the treatment. However, the equipment that was present at the NHS Trust was not regularly maintained and consequently led to the damage and loss of the preserved sperms.[82]

Upon being informed about the loss of their sperms, the plaintiffs raised claims for compensation on the grounds that the loss should either be considered as a personal injury or a damage to property, both of which were dismissed by the first instance court on the account that the loss of the sperms could neither be considered as a "personal injury", since the damage occurred to "extracted" biological materials, nor could it be considered as property. The court's reasoning at this initial point was mainly driven by the "non-property rule" that has been consistently applied by the judiciary over the years.[83] Therefore, when considering the reason behind the Publicity that the Court of Appeal's decision stirred in this case, it is worth stating that the plaintiffs positively managed to claim compensation for the damage of their preserved sperms at the Court of Appeal, on the grounds of damage occurring to property instead of personal injury. Since, while the court reiterated, at that stage, that the damage had occurred to "expelled" biological parts and as such could not have ties to the essential body of an individual to constitute as a personal injury.[84]

Nevertheless, the decision was still considered unique and unprecedented, as it was the first judicial instance in the UK when a biological material was considered to be the property of the individual from whom it was extracted and preserved externally, and where ownership rights were considered as a bundle instead of a unitary concept, with a focus on the freedom and right of the owner to use the proprietary object at their own discretion.

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[81] *Supra* note 1 and note 3
[82] Yearworth and others v. North Bristol NHS Trust [2009] EWCA Civ 37
[83] *Supra* note 59, pp. 113
[84] *Supra* note 82, para. 22

Interestingly enough, the legal representatives of the plaintiffs also referenced the judicial decision of a German legal case that was closely similar to the facts of this case, and which will be analyzed further in the following section. However, the Court of Appeal still had to the distinguish this case from the German case on the account of the difference in the legal systems, despite deciding, similarly, in favor of the plaintiffs and their claim for compensation.[85] Though, contrarily, only through the use of the property approach in this case. Therefore, the following civil case in Germany will illustrate how 'personality rights' were considered in protecting an individual's biological material.

2.2- The use of the legal approaches by Civil Courts and the ECtHR:

The Privacy law Approach:

9 November 1993, BGHZ 124, 52:

While the previous section has focused on the legal approaches used in common law jurisdictions such as the US and the UK, this section will provide comparatively an insight on how additional areas of the law, other than property and contract law, can provide an individual with more legal rights over their body. This section will specifically focus on the previously referenced German case, since as observed in the previous chapter, the German legal system does generally recognize excised body parts as proprietary objects that could give rise to property rights for individuals. However, what is distinctive about case BGHZ 124, 52 is that despite the general 'liberal' stance of the German legal system towards considering biological materials as property, this case actually approaches the protection of the biological material through 'personality rights', which are essentially also known as 'privacy rights' in the common law jurisdictions.[86]

The facts of the case, as mentioned earlier, are closely similar to the facts in the *Yearworth* case, where the plaintiff also had his sperm preserved prior to undergoing a medical procedure at a clinic that negligently caused the loss of his sperm later. Similarly, in this case, the plaintiff also had his case quashed by both the First Instance Court and the Court of Appeal, since both courts believed that the damage and loss of the sperm was not considered a breach of the 'personality

[85] Ibid, para. 22-25

[86] Thierry Vansweevelt, "Personality Rights," | Personal Rights and Property Rights | University of Antwerp (University of Antwerp, 2021), https://www.uantwerpen.be/en/research-groups/personal-rights-and-property-rights/research-programme/personality-rights/. Accessed on: April 25, 2021

rights'. This reasoning was justified though, as both courts believed that the scope of the personality rights was limited to protecting an individual's 'personal integrity', and as such, could not extend to the issue of the loss of preserved sperm, as it was deemed to be an activity that falls outside of the scope of personality rights.[87]

Fortunately, when the case was referred to the Supreme Court, the court disagreed with the previous courts' decisions and considered the courts' interpretation of the scope to be 'narrow'. It also considered the damage and loss of the preserved sperm to actually amount to" physical injury" and as a tortious act within the meaning of sections 823 and 847 of the German Civil Code. It is worth noting that this case was handled by examining the scope of personality rights instead of property rights, because of the purpose behind the extraction of the biological material, which in this case was for the sperm to be reimplanted into the plaintiff in the future.[88] So, essentially, since the preserved sperm was still tied to the body of the plaintiff, through its intended function, the court believed that it should fall within the scope of personality rights and be considered as a personal injury, as a way of protecting a person's bodily integrity.

Therefore, under difference circumstances and within the German legal system, the right to personal integrity and personality could possibly also influence and give rise to an individual's ownership rights over their body. However, in cases when establishing certain elements, such as a proof of "pecuniary" loss is not possible, as in this present case, raising a claim for damage to property would likely fail.[89] As such, the presence of a legal alternative approach, such as through claims to personality/privacy rights, is of great importance, despite its limited scope of application, as it could still provide considerable protection to vulnerable individuals, and this will also be apparent in the following ECtHR case.

Elberte v. Latvia [2015]

Moving towards the end of this chapter, it is crucial to finally examine the unique position that the ECtHR has taken recently in the case of *Elberte* v. *Latvia* through the use of the privacy law

[87] Bundesgerichtshof, 9 November 1993, BGHZ 124, 52

[88] Ibid, For English version see: Irene Snook, tran., "9 November 1993, BGHZ 124, 52," German Law Archive (Gerhard Dannemann, 2015), https://germanlawarchive.iuscomp.org/?p=157. Accessed on: April 25, 2021
[89] *Supra* note 88

approach, pursuant to Article 8 of the ECHR, as it demonstrates how effectively the ECHR could be used to protect the rights of individuals over their bodies. Interestingly enough, and as will be seen in this case, where the plaintiff had raised claims against the Latvian government for the unlawful extraction of her deceased spouse' tissue cells, the scope of protection provided by the ECHR could also be extended to even encompass the possible rights retained by the relatives of the deceased.[90]

So, when looking into the *Elberte* case, the facts of this case mainly revolve around the spouse of a deceased Latvian citizen, the plaintiff, who brought up several claims against the Latvian government for the illegal extraction of tissue cells and biological materials from her husband's buried corpse.[91] Of relevance to this paper, the two main claims that the plaintiff raised were violations of both, Article 3 and Article 8 of the ECHR, the first of which is concerned with the "prohibition of degrading and inhuman treatment", while the latter concerns itself with the right of an individual to "a private and family life".[92] Still, when examining these claims, there were several elements that were considered that were pertinent to the ECtHR's decision in this case.

The first of the elements is the fact that the plaintiff was only notified about the extraction of her spouse's biological materials two years after his burial and only due to the criminal inquiry that was instigated by the local police. In fact, a second inquiry was also brought up years after, since the prosecution believed that the case no longer had substance after discovering that the Latvian legal system allows for extraction of biological material under 'presumed consent' not an informed consent. Therefore, based on the existence of an 'opt-out' system, the first inquiry was suspended 3 years after its development.[93]

Furthermore, while it is interesting to note that the second inquiry was also suspended despite finding 150 more similar incidents, the lack of agreement and common understanding of the relevant Latvian laws was also apparent within different authoritative departments, and as such, prompted the plaintiff to approach the ECtHR in resolving the existing conflict of understanding

[90] Elberte v Latvia, no. 61243/08, ECHR 2015.
[91] Ibid
[92] Council of Europe, European Convention of Human Rights (1950), Article 3 and Article 8
[93] *Supra* note 90. See also, Stefano Biondi, "Property on Bodily Parts, Dignity and Sovereignty: Some Comparative Reflections on the English and Italian Law of Organ Transplantations," *Acta Juridica Hungarica* 54, no. 1 (2013): pp. 90-105, https://doi.org/10.1556/ajur.54.2013.1.7, 101-103. Where it has been noted that Italy also shares the same 'opt-out' system as Latvia.

and enforcing these laws. Thus, the level of ambiguity that was discovered in the national laws, such as the Law on Protection of the Body of a Deceased Person, brought forth another relevant element that aided the ECtHR in providing a decision in favor of the plaintiff.[94]

The final element that the ECtHR had also taken into consideration was the fact that the plaintiff's spouse was buried with his legs tied to one another, after the extraction that occurred without the knowledge of the plaintiff. In fact, it was due to this specific element that the ECtHR considered the claim on the breach of Article 3 of the ECHR, and further determined that the manner in which the deceased spouse was handed to burial qualified in itself as a legitimate cause of emotional distress to the plaintiff, and a form of degradation of the body, even after death.[95]

Similarly, the first two elements also presented sufficient grounds for the ECtHR to agree on the existence of a violation of Article 8 of the ECHR, since an arbitrary interference in the plaintiff's private life occurred when the authorities and medical practitioners failed to consider her wishes as the spouse of the deceased person, and had no clear reference on the deceased spouse's consent/wishes either. This interference could not be justified or considered to be in accordance with the law, since the provisions in the Latvian laws that 'allowed' for the extraction of biological materials from deceased persons, were not drafted in a clear manner that provided safeguards against any arbitrariness in enforcement.[96]

This line of reasoning means then, that while an 'opt-out system' could be a reasonable way of obtaining consent, the lack of a proper regulatory mechanism found in the law and a vaguely outlined scope of obligation, could leave an individual's private and family life in a vulnerable state, as it blurs the scope of discretion that the authorities and medical experts would have in matters related to the extraction and use of biological materials.

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[94] Rajam Neethu, "ELBERTE v LATVIA: The To Be or Not to Be Question of Consent," *Medical Law Review* 25, no. 3 (December 23, 2016): pp. 484-493, https://doi.org/10.1093/medlaw/fww028, 487-489.
[95] Ibid.
[96] *Supra* note 94, pp. 488. See also, Edward S. Dove et al., "Elberte v. Latvia: Whose Tissue Is It Anyway – Relational Autonomy or the Autonomy of Relations?," *Medical Law International* 15, no. 2-3 (2015): pp. 77-96, https://doi.org/10.1177/0968533215618853.

As such, this final case illustrated not only another relevant example of the use of the privacy law approach, but rather also indicated that the scope of application of the privacy rights provided in legal instruments such as the ECHR, can include not only the rights provided to living individuals, but can also, in certain situations, be extended to consider deceased persons. Additionally, the case also provided a rather illustrative example of how the ECHR can influence the change of national laws, even if it does not directly regulate matters concerning bodily autonomy and bioethics.

Nevertheless, despite the final verdicts of some of the aforementioned cases concerning an individual's property interest in their bodily parts, it is still evident from the main claims discussed within this chapter that there is a clear tendency for individuals to request the protection of their biological materials through property law rather than privacy rights or contractual agreements, since the latter approaches do not seem to provide the same scope and level of protection, at all times to individuals, as property law does through ownership rights.

However, it is imperative to note that the use of the alternative approaches appears to mostly be due to the lack of effective and comprehensive national laws on property rights, and also due to the evident tendency of judicial systems in favoring capitalist markets and commercial parties that "aid" in the progression of science and the growth of a state's economy. Hence, since the use of the property law approach could be utilized in a manner that appears to be inequitable towards an individual/donor, the next and final chapter will explore how the use of the law of equity along with property law could provide a more optimal and equitable solution for both donors and recipients of biological materials.

3- Analysis of the Law of Equity as a viable solution

As witnessed in Chapter 2 through the analysis of various judicial cases, there is a higher tendency for individuals to seek protection by claiming ownership rights over their bodies than any other form of legal rights. While this tendency could be attributed to the common sociopolitical perception that individuals may have, nevertheless, considering the hesitant legal stance of many states towards acknowledging biological materials as possible subjects of property law, a more equitable solution is necessary to ensure that individuals are protected and are willingly contributing to the progression of science. Therefore, this final chapter will offer

insight on what is the Law of Equity, by initially introducing the legal concept and the meaning behind it. Then the author will attempt to analyze a proposed solution of applying equity through a hypothetical example, to demonstrate how it can be used concurrently with property law to protect the interests of both the donor of the biological materials as a source, and the recipients of the biological materials, i.e. the biotech companies within the context of this paper.

3.1- What is the Law of Equity?

Considering the abstract nature of law in its essence, it would be improbable to expect the law to always cater to all members of society equally and justly. This inherent flaw as such, does create a need for a system that can balance out any unfairness observed during the application of the law, and as witnessed in certain jurisdictions such as England and Wales, this existing system is referred to as the Law of Equity. In fact, while the law of equity does currently exist as an auxiliary legal system in these jurisdictions, its philosophical conception can be traced back to discussions brought up by renowned legal philosophers such as Aristotle and Thomas Aquinas, who believed that equity should be used as a tool to rectify any gaps or errors witnessed in law.[97]

So, when observing the application of the law of equity, some of the key general principles/maxims that are worth noting include, the maxim where the law of equity can only be sought by individuals who also acted in an equitable manner, and the law of equity must also place both parties on an equal footing.[98] Additionally, the courts would then also have to look beyond the abstract nature of the law, when applying the law of equity, and would have to consider the intention of the drafters rather than the literal form of the law, and accordingly provide a fair outcome, as an alternative to the previous interpretation of the law.[99]

Though, while this process could appear to allow judges to use their discretionary powers when assessing claims and interpreting the law, nevertheless, considering that the system is only applied on individual cases and is meant to balance out the 'occasional' unfair judicial outcomes, the benefits of this system would still likely outweigh any 'potential' effect of such judicial discretion. But to understand the benefits of the law of equity, one must look into the historical

[97] Thomas d'Aquin, Brian Davies, and Brian Leftow, *Summa Theologiae: Questions on God* (Cambridge: Cambridge University Press, 2006).
[98] Richard Edwards and Nigel Stockwell, Trusts and Equity (Boston, Massachusetts: Pearson, 2015), 34-38.
[99] *Supra* note 59, pp. 139

development of this system to gain a better understanding on how equity law was established as part of the English and Welsh legal system, and how it could be used to resolve the deficiencies that exist within areas of the law such as property law.

A Historical Overview

As briefly outlined earlier, the law of equity was initially developed as a form of redress to unjust judicial outcomes, before morphing into a form of legal system that exists at the present in certain jurisdictions. However, interestingly, exercising equity was actually originally considered to be part of the king's functions, as only the head of the sovereign state would have the ultimate authority to overrule the outcomes of judicial cases, and apply rules of 'conscience' and reason.[100] Hence, it could be inferred that due to this historical fact and the fact that equity has always been considered to be morally superior, equity law is as such higher on the hierarchy and would prevail over common law, if such a conflict were to ever occur between both systems.[101]

Moreover, what is also worth pointing out is that equity law wasn't only developed and exclusively applied in the English legal system, but rather it also existed as part of the Roman legal history, where it was known as praetorian law, and was similarly, created to balance out the inflexible nature of the Twelve Tables.[102] Therefore, the possibility of the general principles of equity to inherently still exist in civil law jurisdictions and be practiced should not be dismissed quickly, though it could consequently be more difficult, considering the rigid structure of the civil law system compared to the more flexible nature of common law. [103]

Nevertheless, when it comes to the English legal system, equity law is still considered to be a living instrument that can provide clarity in response to a state's hesitant or strict stance on certain proprietary matters. This can be witnessed through numerous historical incidents that date

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[100] George Burton Adams, "The Continuity of English Equity," The Yale Law Journal 26, no. 7 (1917): pp. 550-563, https://doi.org/10.2307/787248, 558-59.

[101] Ibid, pp. 560. Equity also prevails in other jurisdictions such as in British Columbia and Alberta, Canada and also in Malaysia. See, Mary George, "An Overview of Issues in Charity Litigation in Malaysia," International Journal of Not-for-Profit Law, 4(1), (2001) Available at: https://www.icnl.org/resources/research/ijnl/an-overview-of-issues-in-charity-litigation-in-malaysia-2001-2

[102] Maurizio Lupoi, "English 'Equity' and the Civil Law—a Tale of Two Worlds," Trusts & Trustees 26, no. 2 (2020): pp. 176-182, https://doi.org/10.1093/tandt/ttz135s, 179-182.

[103] As seen in Japan's Civil legal system. This is discussed in: Junkichi Koshikawa, *Principles of Equity in the Japanese Civil Law*, 11 INT'L L 307 (1977) Available at: https://scholar.smu.edu/til/vol11/iss2/7

back all the way to the 12th century, one of the examples include, where crusaders would entrust their estates to 'trusted' friends with the understanding that these trusted friends would have to manage the crusaders' lands and use the proceeds to help their families during their absence, and upon their return, the crusaders would have their estates conveyed back to them.[104] However, the issue that arose here was that if/when the 'trustees refused to convey back the estate, then the common law would not consider it a breach, but rather a simple transfer of ownership rights and property, which as such built the need in the crusaders to seek an alternative route, with an equal or higher authority than the courts, that can offer a remedy and acknowledge the verbal promise/understanding that occurred between both parties.[105] Hence, the crusaders were only left with the option of requesting redress from the head of the state by appealing to the conscience of the king individually.

Interestingly, the king was not actually dismissive of hearing about such claims on individual basis, since it expanded and solidified his authority further over the state and its inhabitants. This process went on for centuries and gradually evolved from directing such distinct and individual petitions to the king, to appointing the Lord Chancellor, who had to initially hear the claims, and then to creating a Chancery Court that eventually integrated with common law courts in modern times.[106] Thus, driving all English courts to apply the general principles of fairness and justice that were essentially attributed to the Chancery Court.

Therefore, at the present, when considering the use of equity by judicial institutions, regardless of whether it is in common law or civil law jurisdictions, it is conceivable that principles such as fairness and reason that are derived from equity, are/should (be) applied in courts as a legal standard. So, how can equity provide an 'innovative' solution to issues pertaining to property rights in the human body? - This question will be delved into further in the following and final section of this paper.

[104] Sarah Worthington, *Equity* (Oxford: Oxford University Press, 2006), 63.
[105] Ibid, pp. 64
[106] *Supra* note 104. This integration was clear in both the Supreme Court of Judicature Act 1873 and the Supreme Courts Act 1981.

3.2- Equitable property and (Bio)equity: Law of Equity in practice

As observed in the previous section, the law of equity has organically established itself through the various property claims brought forth by the crusaders in the past, so the interference of equity in property matters is/should not (be) a foreign concept. What is however, remarkable about equity, within the context of this paper, is that though it provides an ethical sphere it has scarcely been considered in matters related to the use and extraction of biological materials. In fact, this concept has only been originally introduced and focused on by Nils Hoppe, who has creatively and elegantly suggested developing a new 'property class' that not only acknowledges biological material and human body parts as the property of the individual inhabiting the body, but also deploys the law of equity as a concurrent system. And in cases where common law cannot provide an appropriate remedy, then the law of equity would have to apply exclusively.[107] Hence, rightfully suggesting a stronger reliance on the law of equity as an existing system, to balance out and imbue the gaps within property law.

Hoppe's proposal is also strongly supported by the mere fact that the widely controversial case of *Herring* v *Walround* (1682) was also decided through the use of the law of equity. The provocative and horrific facts of the case involve the plaintiff who fathered 'Siamese' twins and had given them to the defendant on a loan for an exhibition called, 'for the life of the twins', and after they died within a month, the defendant then still had them "embalmed and displayed" in this exhibit.[108] Setting aside these gruesome facts, what is worth noting in this case is that the plaintiff brought a claim against the defendant for 'the wrongful use of the body', and relied mainly on the law of equity in his claim.

More importantly, the reason the plaintiff was successful in his claim was not simply for making a claim under equity law, but rather it was for his ability to successfully trace back to the subject of the claim, i.e. the body of the twins, and identify himself as the equitable owner of this misappropriated 'property'.[109] Moreover, the plaintiff was also able to clearly prove the existence of a "fiduciary relationship", between him and the defendant, which consequently, aided in the success of his claim, where the equitable remedy decided by court, was for the defendant to account for all the profits he generated from the misappropriation of the property. Thus, this case

[107] *Supra* note 59, pp. 155
[108] *Herring* v. *Walround* (1682) 22 ER 870; [1681] 2 Chan Cas 110.
[109] Ibid.

proves that equity law can be used in matters related to the misappropriation of the human body, especially as it also helps in establishing an equitable owner when certain conditions are met and can be proven.

Similarly, considering the factors outlined in the *Herring* case and the outcome, this chapter will conclude by re-examining the *Moore* case under the conditions set forth by equity law, as also attempted by many scholars in the past, to illustrate and reaffirm the possibility of using the law of equity as a reliable solution to disputes concerning the misuse of biological material and the lack of property rights in the human body.

(Re)assessing the Moore case as a hypothetical example of the use of (bio)equity:

When attempting to reanalyze the *Moore* case under the system of the law of equity, some of the crucial facts that need to be recalled are: firstly, that out of the several claims that Moore had brought up against the defendant(s), the ones that were considered and not dismissed were (1) the tortuous claim of conversion, (2) the breach of a fiduciary duty, and (3) the lack of an informed consent.[110] Secondly, what is worth remembering is that the claim for conversion was not successful, as it did not meet the conditions set forth by the law. This outcome was primarily due to the fact that Moore could not be considered the owner of his biological material in the eyes of the law, and also the fact that the court was hesitant to consider human body, in their natural state, as proprietary objects/goods that can give rise to property rights.[111] However, it is also crucial to remember that the court still considered the defendants' failure to disclose the economic interest as a wrongdoing that amounted to a lack of an informed consent.[112]

As a result, when looking into these facts under the microscope of equity law, what could be noted, initially, is the fact that the law of equity would have exclusively been applied if this case was tried in England, since the common law would lack the suitable remedies that could be applied in this case.[113] Furthermore, considering the nature of equity and its ability to recognize concurrent/shared entitlements and rights, Moore could have been presumed to have an equitable

[110] *Supra* note 64.
[111] Ibid.
[112] *Supra* note 72.
[113] Gerald Dworkin and Ian Kennedy, "Human Tissue: Rights in the Body and Its Parts," *Medical Law Review* 1, no. 3 (1993): pp. 291-319, https://doi.org/10.4324/9781315194356-29, 312.

entitlement over the extracted material from his body, and as such, this entitlement would have consequently led the court to consider the appropriation of the biomaterial unlawful.

This consideration could have even then qualified Moore to recover the profits that the defendants acquired using his biological material.[114] Lastly, considering the fiduciary relationship between Moore and the defendants, i.e. the physicians, and if Moore's equitable interest in his body would also be taken into consideration, then under the system of law and equity, the defendants would have had to also account for the profits that they generated off of Moore's extracted tissue cells.[115]

Therefore, towards the end of this chapter, it is worth observing that by applying on the *Moore* case the same conditions and considerations that were applied in the *Herring* case, the parameters of the *Moore* case would have led to the same equitable remedy/outcome that was declared in the existing *Herring* case, proving the effectiveness of the law of equity as a system and its potential paramount role in matters related to the commodification and use of the human body.

Conclusion

The purpose of this thesis was to mainly examine if the current legal approaches that determine the property rights in the human body are sufficient in resolving disputes related to the commercialization and use of the human body, through equitable and ethical means. In an attempt to uncover the nature of these legal approaches and the extent of their scope of protection, this paper initially considered the philosophical root of the concept of property, where it was observed that property was mainly understood as a unitary concept, due to the influential nature of the natural rights theory. This understanding though, has evoked the first issue that was considered in this paper, which is the inflexible nature of property law, as a result of the influence of the natural rights theory. As such, a reconsideration of the concept of property was suggested, where the concept could be based on the social constructivist theory, and consequently, would be considered as a 'bundle' of rights that allows the equitable distribution of ownership rights between the donor/source, and the recipient.

[114] *Supra* note 59, pp. 157

[115] Ibid.

The second issue that also became clear, was the fact that certain ethical considerations, such as the prohibition of the commercialization of biological materials, were not upheld in a strict manner, regionally or nationally, likely due to the non-binding nature of certain international declarations, and the lack of enforcement mechanisms for key European Conventions, such as the Oviedo Convention. This issue was also further witnessed when looking into certain national healthcare models that were likely reflecting hidden economic incentives. As such, this issue would already indicate that the legal approaches that are applied in certain states, are not sufficient in completely tackling the unethical use of biological material.

Additionally and more importantly, while analyzing the scope of protection of the property law approach in practice, the selected case law also illustrated a trepidation from courts in acknowledging the human body as a proprietary object owned by the individual inhabiting it. Although, certain ethical standards such as the duty to disclose any economic interest to donors, were still considered crucial in the *Moore* case, despite not giving rise to any proper legal remedies.

Furthermore, through the use of the property law approach, there was also a clear tendency for courts to be partial towards the defendants who represented medical researchers and physicians, though this tendency was justified in the name of allowing the progression of science and the growth of the biotech industry as an emerging market. Still, the property law approach, for the most part, could be rendered inequitable when applied in real-life, since the positive outcome of the *Yearworth* case is unlikely going to break the ‘no-property’ rule that exists within the UK.

Comparatively though, the other two legal approaches have remarkably shown more positive results, despite their limited scope of application, allowing individuals, under similar circumstances, to be able to protect the use of their body parts and tissue cells through either the contract law approach or the privacy law approach. The success of the cases through these approaches could still be attributed to the unusual circumstances that were conveyed and largely due, to either the failure of the State to draft clear and comprehensive regulations, the vague nature of certain legislative acts and the person’s knowledge of interpreting the law. Or else predicated on the damage of an individual’s stored reproductive materials that had to result in an unmitigated loss. Hence, a reliance on these approaches, considering their limited scope of application, is unwise.

What is therefore, primarily suggested in response to the deficiencies witnessed in the property law approach and the limited scope of the privacy and contract law approaches, is the use of the Law of Equity, especially in England and Wales, as it allows individuals to have equitable interests in their biological material, without necessarily impeding the progression of science and the growth of the biotech industry. Furthermore, if applied exclusively, the system of the law of Equity could also expand the scope of protection, through its various equitable remedies that can be applied when the law fails to provide proper legal remedies,

Finally, while this topic has mainly focused on analyzing the parameters of the legal approaches from an ethical and equitable dimension, this topic could also be alternatively assessed from a feminist or an economic perspective, with a focus on the impact of the legal approaches on reproductive rights, organ trading or the future of the biotech industry. And in the event of any legislative changes or political updates, it is also recommended to reassess the position of this paper and the discussed outcomes, to provide updated scholarly publications on the topic, and increase the awareness of the general public.

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