A QUESTION OF PROPERTY RIGHTS IN THE HUMAN BODY

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I. INTRODUCTION

> Uncomfortably for the lawyer, the nature of humanity, the organization of society and the very persistence of civilization are now profoundly and increasingly affected by the scientist and the mathematician. Lawyers clinging to familiar civil, political and economic rights, substantially defined before the scientific revolution of recent decades, run the risk of failing to address urgent problems . . . simply because these are so complex, controversial or unfamiliar.[1]

As biotechnology opens new doors to improve the quality of human life, the legal community must expand the existing legal framework to accommodate them. For the first time, medical research has forced society to address such formidable issues as the patentability of new life-forms, the transplantation of fetal tissue into human beings and the existence of property rights in the human body — key issues which require explicit definition of our society's moral and ethical principles. Growth of the legal framework is imminent, but if allowed to come about on an *ad hoc* basis, determined by case law, the resulting structure will be makeshift and riddled with faults. Thus, it is essential that the legal community study this situation in depth and plan for the future; only such planning will ensure that these changes will come about by design rather than by crisis.

One area of biotechnology that has recently placed intense pressure on the legal community centers around the commercialization of medical research involving the use of human tissue. Whereas, prior to the commercialization of medical research, human tissue was determined to be worth only a few dollars, the massive profit potential realized from medical technology has elevated the monetary worth of human tissue to incalculable levels. This monetary pressure is causing the public to demand that the legal community create avenues of remuneration that will compensate justly the donors of human tissue, while maintaining society's moral and ethical standards — a difficult, if not impossible, request. At the same time, property rights in the

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[1] M. Kirby, *Human Rights and Technology: A New Dilemma* (1988) 22 U.B.C. L. REV. 123 at 123.

products of such research must be clearly defined to ensure that biotechnological companies will be able to secure the fruits of their labour.

This paper will focus on how the legal system is beginning to explore possible avenues to balance these demands. One suggested avenue places great emphasis on remunerating the donor of tissue through the recognition of property rights in human tissue and bodily substances.[2] It is reasoned that if people hold property rights in their bodies, they will be allowed to sell or protect their tissue to the full extent of the law. At first glance this seems like a reasonable way in which a person could receive a share of the profit in return for their contribution. However, after exploring many of the ramifications that could result, it will become obvious that property rights must not be recognized in human tissue.

The recent California decision of *Moore* v. *Regents of the Univ. of California* will serve as an ideal case upon which to reflect, as it brings to light many of the key issues and ramifications that could result from recognizing property rights in the human body.[3] This case involved the non-consensual use of the plaintiff's cancerous spleen cells to develop pharmaceutical products of enormous commercial value through the use of recombinant deoxyribonucleic acid (DNA) technology. The crux of this case revolved around the question of whether the plaintiff held personal property rights in the tissue and substances of his body and, if so, whether these rights were breached when the defendants converted his tissue for commercial profit.

The Canadian legal community has not yet had to respond to the types of issues that will arise with the commercialization of medical research involving human tissue. If a *Moore* type of scenario arises, will this community choose to recognize property rights in the human body? It is important for Canada's common law and civil law jurisdictions to speculate as to how they would address this issue. As a result of such speculation, the Canadian legal systems could define their positions with respect to the imminent question of recognizing property rights in the human body and begin drafting blueprints to plan for the future.

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[2] *See* P.D.G. Skegg, *Human Corpses, Medical Specimens and the Law of Property* (1975) 4 ANGLO-AM. L. REV. 412; L.B. Andrews, *My Body, My Property* (1986) 16 HASTINGS CENTER REP. 28; R. Hardiman, *Toward the Right of Commerciality: Recognizing Property Rights in the Commercial Value of Human Tissue* (1986) 34 U.C.L.A. L. REV. 207; M.Y. Danforth, *Cells, Sales, and Royalties: The Patient's Right to a Portion of the Profits* (1988) 6 YALE L. & POLICY REV. 179; P.M. Parker, *Recognizing Property Interests in Bodily Tissues* (1989) 10 J. OF LEGAL MEDICINE 357.

[3] *Moore* v. *Regents of the Univ. of California*, 249 Cal. Rptr 494 (Ct App. 1988) [hereinafter *Moore*].

II. *MOORE* v. *REGENTS OF UNIVERSITY OF CALIFORNIA*

The facts of this case were as follows. Moore was diagnosed to be suffering from hairy cell leukemia, a disease of faulty differentiation and uncontrolled proliferation of white blood cells which infiltrated his spleen and grossly enlarged it.[4] Treatment was suggested and consented to at the UCLA Medical Center. The plaintiff's consent was obtained only for the surgical removal of the cancerous spleen and therapeutic necessities; the consent neither allowed for, nor forbade, any research or experimental use of this excised tissue. Moore had his spleen removed, successfully underwent cancer therapy and appeared to recover fully.

However, unknown to Moore, it was discovered that his cells were producing unusually high concentrations of certain rare and valuable proteins, one of the phenotypical reflections of this cancer.[5] In order to have had such a high rate of protein synthesis, a high concentration of RNA must have been produced. Therefore, the plaintiff's cancerous cells were generating high concentrations of RNA for each of the valuable proteins.

The plaintiff alleged that, following his splenectomy, the defendants established a cell-line from his cancerous spleen, from which they derived nine valuable pharmaceutical products.[6] After establishing the cell-line, the defendants isolated the RNA from some of these cells and used them as templates to synthesize new DNA. This synthetic DNA was then integrated into bacteria, where its numbers were greatly multiplied, thereby allowing the defendants to begin working toward production of these proteins on an industrial scale.[7]

In addition to the use of the plaintiff's cancerous spleen cells, the defendants, on a number of subsequent occasions, withdrew blood

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[4] R.W. Ruddon, CANCER BIOLOGY (New York: Oxford University Press, 1981) at 15.

[5] It should be pointed out that these proteins are not unique to Moore in that they are found in smaller quantities in all human spleens.

[6] *Supra*, note 3 at 501: (1) Colony-Stimulating Factor (CSF), (2) Erythroid-Potentiating Activity (EPA), (3) Immune Interferon (Type II), (4) Neutrophil Migration-Inhibiting Factor (NIF-T), (5) T-cell Growth Factor (TCFG, Interleukin II), (6) Macrophage-Activity Factor (MAF), (7) Factor-Stimulating Fibroblast Growth, (8) Factor- Stimulating Human Pluripotent Hematopoietic Stem Cell (may be EPA), (9) Factor-Stimulating Human Leukemic Cells *in vitro* (may be CSF or EPA).

[7] It should be emphasized that the synthetic DNA that gave rise to the resulting RNA was not an exact copy of the DNA found within the plaintiff's spleen. As is sometimes required, the message in the plaintiff's RNA was further edited before it could be used in the biosynthesis of a functional protein. Therefore, in actuality, the synthetic DNA was not identical to the naturally occurring DNA of Moore's spleen cells but, rather, was closer to being only a general image of his RNA. Due to these human-made changes, brought about by the effort of the defendants, it was considered unique property and, therefore, patentable by the U.S. Patent Office.

from the plaintiff to check his progress. The defendants then utilized the plaintiff's blood cells to further their research. On one occasion the plaintiff consented to having his blood used for research purposes but, on a subsequent visit for additional blood withdrawal, he expressly refused to allow his blood to be so used.

In 1984, the defendants obtained a patent on the cell-line and the nine products derived therefrom.[8] The market potential for the products derived from this cell-line has been estimated to be three billion dollars by 1990.[9]

Once the plaintiff discovered that his body tissue had been used for purposes other than his cancer therapy, he brought an action for damages — both punitive and for loss of profit — and declaratory relief. His action at the trial level was based on twelve separate causes. The only cause of action that the Court addressed was based on the tort of conversion. The Court first addressed the issue of conversion as it claimed that all subsequent actions were dependent upon the success of the conversion claim.[10] Moore's action was dismissed at the trial level as a result of a successful demurrer by the defendants. The plaintiff appealed from this decision.

The majority of the Court of Appeal held for the plaintiff on the basis that Moore owned, and continued to own, his cancerous cells and that the defendants had converted his personal property by establishing a cell-line therefrom with their recombinant DNA research.[11] This decision established, for the first time, that one holds property rights in one's own body, the ramifications of which could be far-reaching. The decision was not unanimous, however, and an examination of the reasoning on both sides of the issue will suggest that there is a lack of solid legal argument to justify creating property rights in the human body.

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[8] United States Patent 4438032 issued 20 March 1984 titled *Unique T-Lymphocyte Line and Products Derived Therefrom*. *See* OFFICIAL GAZETTE OF THE UNITED STATES PATENT OFFICE, Vol. 1040 at 1222.

[9] *Supra*, note 3 at 499.

[10] The other causes of action were as follows: lack of informed consent, breach of fiduciary duty, fraud and deceit, unjust enrichment, quasi-contract, breach of an implied covenant of good faith and of fair dealing, intentional infliction of emotional distress, negligent misrepresentation, interference with prospective advantageous economic relationships, slander of title and accounting.

[11] The questions of abandonment and the scope of the plaintiff's consent were also addressed in the judgment. The majority held that failure to claim one's tissue after surgery did not constitute intention to abandon. The requisites for abandonment are outlined in *Martin* v. *Cassidy*, 307 P.2d 981 (Cal. Ct App. 1957); the question of consent was correctly addressed by the majority; *see* M.A. Somerville, *Structuring the Issues in Informed Consent* (1981) 26 MCGILL L.J. 740; there is no doubt that the defendants met the requisites for conversion of tissue established in *McKibben* v. *Mohawk Oil Co.*, 667 P.2d 1223 at 1228 (Alaska 1983).

A. *Personal Property Rights in Human Tissue*

In general, it is conceivable that most future cases involving commercialized medical research employing human tissue will turn on whether the donor's contribution of bodily tissue warrants the receipt of a portion of the financial windfall. In order to lay claim to this contribution via a tort of conversion action, the donor must be able to claim property rights in his or her bodily tissue, property rights that were not recognized prior to *Moore*.

At common law, "property" refers to the collection of legal rights recognized in an object, not to the object itself. These legal rights are usually defined by the courts and, thus, are subject to continual refinement. In novel situations, such as is the case with biotechnology, the law can create and define new property rights where they did not previously exist. Since property rights in human tissue and bodily substances have never been clearly defined, the judges in the *Moore* case had great difficulty in obtaining guidance from previous case law to formulate their decision.

Rothman J.A., speaking for the majority, began his argument by stating that there was no reason in law nor in statute that barred the plaintiff from holding a personal interest in his own body. Rothman J.A. adopted the following definition of personal property rights in one's body:

> "[P]roperty" refers not to a particular material object but to the right and interest or domination rightfully obtained over such object, with the unrestricted right to its use, enjoyment and disposition. . . [t]he rights of dominion over one's own body, and the interests one has therein, are recognized in many cases. These rights and interests are so akin to property interests that it would be a subterfuge to call them something else.[12]

Basing the concept of property on this definition, the majority concluded that the plaintiff definitely enjoyed an unrestricted right to use, enjoy and dispose of his spleen and, thus, held property rights in his body.

In his dissenting opinion, George J.A. was not persuaded by the majority's reasoning, asserting that while there was nothing in law nor statute that barred the plaintiff from having personal property rights in his own body, this question had never been decided in the affirmative. He claimed that the majority made an unsupported presumption that property rights did exist in the plaintiff's body. In addition, George J.A. uncovered an error in the majority's reasoning when he stated that "[i]t is plaintiff's burden to establish that his bodily substances constituted "personal property" at the time they allegedly were con-

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[12] *Supra*, note 3 at 504-05.

verted by defendants."[13] A plaintiff always has the burden of proof when asserting personal property rights in an object that has been converted.[14]

The majority also cited the case of *Venner* v. *State* to support its position that property rights can exist in the human body.[15] The crux of this case was whether narcotics found in the defendant's feces, in his hospital bedpan, were illegally seized by the police; the legality of the seizure depended upon whether the defendant had property rights in his feces. Quoting from the *Venner* judgment, the majority stated that "[i]t could not be said that a person has no property right in wastes or other materials which were once a part of or contained within his body, but which normally are discarded after their separation from the body."[16] Unfortunately, the majority failed to mention that this case went on to conclude that the Court in *Venner* found the seizure to be legal. This implied that if property rights did exist, they were so weak that they failed to allow an illegal seizure defence based on prior ownership rights in the feces.

The majority also cited from *Bouvia* v. *Superior Court* that "a person of adult years and in sound mind has the right, in the exercise of control over his own body, to determine whether or not to submit to lawful medical treatment".[17] Rothman J.A. inferred from this decision that since Bouvia had the right to control her body, ownership rights exist within one's body. However, was it reasonable for the majority to extend the right to exercise control in one's body to the creation of actual property rights in Moore's spleen, which was already excised from his body following his consent?

Rothman J.A. also cited a series of cases that dealt with the rights that next of kin have in a relative's dead body.[18] These cases do appear to have created a form of quasi-property rights in a dead body. Unfortunately, Rothman J.A. failed to enunciate that these "property rights" were limited only to the next of kin and only to the extent of granting to the next of kin the possessory rights required to dispose properly of the dead body.

Rothman J.A.'s judgment further attempted to support his opinion that the plaintiff did indeed have personal property rights in his spleen by referring to the case of *Lugosi* v. *Universal Pictures*.[19] This case considered whether the persona of a movie actor was a proprietary right that could be passed on to his heirs. The Court in *Lugosi* held that there did exist a right to an actor's name and likeness but that

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[13] *Ibid.* at 533.

[14] *See Chartered Bank of London* v. *Chrysler Corp.*, 171 Cal. Rptr 748 (Ct App. 1981).

[15] 354 A.2d 483 (Md 1976).

[16] *Ibid.* at 498.

[17] 225 Cal. Rptr 297 at 300 (Ct App. 1986), quoting from *Cobbs* v. *Grant*, 104 Cal. Rptr 505 (1972).

[18] *O'Donnell* v. *Slack*, 55 P. 906 (Cal. 1899); *Enos* v. *Snyder*, 63 P. 170 (Cal. 1900); *Cohen* v. *Groman Mortuary Inc.*, 41 Cal. Rptr 481 (Ct App. 1964).

[19] 603 P.2d 425 (Cal. 1979).

this right did not survive the actor. The majority in *Moore* interpreted the *Lugosi* decision to support the claim that if a person's persona has a degree of personal property rights attached to it, and if this physical persona (ignoring environmental effects) is merely a phenotypic expression of that person's genes, then the property rights attached to a person's persona must also apply to that person's genetic material. Therefore, it was inferred that, as long as the plaintiff in *Moore* was alive, he should be able to enjoy a form of proprietary right in his genes, including the genetic material utilized by the defendants.

The idea of using the *Lugosi* case to support the recognition of property rights in one's bodily material had previously been suggested in support of granting a limited right of commerciality in one's body parts. It has been proposed that there should be:

> [A]n analogy to the property right known as the "right of publicity" that protects the pecuniary value of a public figure's name, voice, and appearance. Like the right of publicity, the right of commerciality would recognize only the commercial value of the body, preventing the misappropriation of that value by others and prohibiting their unjust enrichment. . . . By comparison, the value protected by the right of commerciality originates in the inheritance of genetic traits or the chance infection by some agent that increases the commercial value of one's cells. One could argue that the essence of one's identity is the genetic information of one's cells.[20]

Unfortunately, both the majority and the legal doctrine failed to explore the alternative approach of viewing the *Lugosi* decision. In spite of the fact that a weak link between *Moore* and *Lugosi* can be established on a superficial level, careful examination demonstrates that a major distinction exists between the uniqueness created by the sum total of genetic material versus the non-uniqueness of the individual parts of that genetic material. The important fact that must be considered is that the uniqueness of Lugosi's persona was created by the expression of his particular pattern of genetic material, though each gene was in itself typical for a human gene. In other words, though the parts were all the same, the way in which they were collected together made the sum-total unique.

If this alternate interpretation of the genetic basis for Lugosi's uniqueness is applied to the *Moore* case, one comes to the conclusion that Moore can lay no personal claim to the uniqueness of his cancerous cells. The genetic material that the plaintiff was claiming as uniquely his own is in fact identical to the genetic material found in all human spleens. The only difference was that Moore's RNA was being expressed at a higher concentration due to the cancer. Moore claimed that his cancerous cells were unique to him, and therefore were his personal property.[21] However, Moore can lay no personal claim to

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[20] Hardiman, *supra*, note 2 at 258, 260.
[21] *Supra*, note 3 at 499.

hairy cell leukemia (which gives rise to the unusually high concentrations of RNA), nor to the information contained within his RNA molecules that were cloned for profit.

Thus, it is questionable whether the argument expounded by the majority in the *Lugosi* case should have been applied to the *Moore* decision because Moore's genetic material was not unique on the level of the individual gene — the level at which it was commercially exploited. This is in contrast to the *Lugosi* decision where the sum total of Lugosi's genetic material created a persona that was unique.

B. Conclusion of Moore

It is interesting to note that the majority concluded that the plaintiff did enjoy personal property rights in his excised spleen but never cited any case law that extended property rights in human tissue to this degree.

The defendants have already indicated that they plan to appeal to the California Supreme Court.[22] If the Supreme Court dismisses the appeal, the case would then go back to the Trial Division to hear the remaining causes of action. By doing so, however, the Supreme Court will be in agreement with the Court of Appeal that property rights can be recognized in one's tissue and bodily substances. As will be discussed in a subsequent section, the negative ramifications of this decision could be far-reaching.

Should the Supreme Court of California overturn the decision, not only will the concept of property rights in human tissue remain in a state of confusion, but none of the other actions enunciated at the trial level will be adjudicated upon. This, in itself, would be unfortunate if one feels that Moore should be remunerated for his exploited tissue because some of the remaining causes of action may have been a better mechanism by which to award damages to the plaintiff.[23]

From the preceding discussion, it is evident that this area of law is still in its infancy, yet growth is imminent due to the commercialization of medical technology. Canadian courts could very well be faced with a scenario similar to that faced by the California courts in *Moore* as the Canadian research community delves further into the field of commercial biotechnology.[24] In addition to the stimulation of medical research caused by the recent 1987 amendment to the *Patent Act*,[25] the

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[22] *See* R. Weiss, *Private Parts = Private Property?* (1988) 134 SCIENCE NEWS 68. Petitions for review of respondents granted, 10 November 1988, 763, P.2d 479, 252 Cal. Rptr 816.

[23] *See supra*, note 10 for other possible causes of action.

[24] *See Pioneer Hi-Bred Ltd* v. *Commissioner of Patents*, [1989] 1 S.C.R. 1623, 60 D.L.R. (4th) 223.

[25] *Patent Act*, S.C. 1987, c. 41, s. 15, *amending* R.S.C. 1985, c. P-4. *See also* M. Chromecek, *The Amended Canadian Patent Act: General Amendments and Pharmaceutical Patents Compulsory Licensing Provisions* (1988) 11 FORDHAM INT'L L.J. 504.

federal government's announcement that 1.3 billion dollars will be granted for centers of scientific excellence will increase the possibility of a *Moore* scenario occurring in Canada.[26]

III. How Would Canadian Law Deal With a *Moore* Scenario ?

Canada is composed of two distinct legal communities: one based in common law, the other in civil law. Therefore, each type of legal system must be examined independently of the other when determining how each community would view the possibility of allowing property rights to exist in the human body.

A. *Common Law Canada*

The common law jurisdictions in Canada exist in nine of the ten provinces as well as the two territories. How would a *Moore* scenario be adjudicated in the context of the current Canadian common law? Given that the *Moore* case centered on the question of property rights within the human body, the Canadian common law would address property rights from the point of view of both case law and legislation. Where provincial statutes have been enacted, the statutes from the province of Ontario will be used as examples.[27]

1. *Property Law*

At common law, property can be either real or personal. Personal property can be either corporeal or incorporeal. Corporeal property is tangible or physical in nature, while incorporeal property exists only as a legal right. Property rights are generally seen as "the unrestricted and exclusive right to a thing; the right to dispose of a thing in every legal way, to possess it, to use it, and to exclude every one else from interfering with it".[28] In legal terms, the word "property" does not refer to the actual thing but rather to the group of legal rights recognized in the thing. This general definition should be kept in mind when reviewing how the common law has dealt with property rights in human tissue and bodily substances: do all of these rights exist?

The common law has a long history of experience with questions of property rights in the human body. Indeed, history has shown that:

> [A] creditor could personally attach a debtor, placing the debtor in "debtor's prison to force payment of the debt". A wife at common law

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[26] J. Douglas, "PM Pledges $1.3 Billion for Research" *Winnipeg Free Press* (14 January 1988) 1, 4.

[27] Other common law provinces such as British Columbia have statutes that are almost identical to Ontario's legislation concerning this area of law.

[28] H.C. Black, Black's Law Dictionary, 5th ed. (St Paul, Minn.: West, 1979) at 1095.

> was technically the property of her husband. Indeed, one commentator suggests that rape was historically a property crime under some legal systems. However, the most disturbing precedent for property rights in living people was slavery. In slavery, the property right amounted to absolute ownership of one man by another, resulting in the deprivation of the slave's liberty. The owner had complete rights to profit from the slave's body. While the specter of slavery is offensive, slavery demonstrates the ease with which the human body may be treated as property. At the same time, slavery provides the basis for moral arguments against property rights in the human body.[29]

Today, the common law continues to reflect the moral abhorrence against recognition of property rights in the human body. In addition, the Kantian philosophical approach of viewing the human body continues to shape the way the legal community views ownership in relation to the human being. One author described this philosophy as follows:

> Natural persons are distinguishable from things, this being a bioethical imperative derived from the prevailing Kantian philosophy that insists that human persons be accorded nothing less than full human dignity and not be relegated to the status of sub-humans or objects. Recognizing free will as the basis of moral right, Kant deduced the right of private property from the fact that the human will must be capable of exercising control over things. Accordingly, we may explain the absence of legal ownership of body materials naturally contained within or upon a living person by concluding that such materials are part of the person.[30]

The modern view that no property rights exist in human tissue is reflected most markedly in the jurisprudence.

2. *Jurisprudence Regarding the Dead Body*

As brought to light in the *Moore* decision, the question of property rights in human tissue has arisen most frequently in circumstances involving dead bodies. In the early English case of *Williams* v. *Williams*, Kay J. stated that "[a]ccordingly the law in this country is clear, that after the death of a man, his executors have a right to the custody and possession of his body (although they have no property in it) until it is properly buried."[31] The American jurisprudence also reflects this notion, as stated in the case of *Pierce* v. *Proprietors of Swan Point Cemetery*:

> Although, as we have said, the body is not property in the usually recognized sense of the word, yet we may consider it as a sort of *quasi* property, to which certain persons may have rights, as they have duties

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[29] Hardiman, *supra*, note 2 at 224.

[30] B.M. Dickens, *The Control of Living Body Materials* (1977) 27 U.T.L.J. 142 at 145.

[31] (1882), 20 Ch.D. 659 at 665, [1881-85] All E.R. Rep. 840 at 844.

> to perform toward it, arising out of our common humanity. But the person having charge of it cannot be considered as the owner of it in any sense whatever; he holds it only as a sacred trust for the benefit of all who may from family or friendship have an interest in it. . . .[32]

This same concept has been reflected in a number of Canadian decisions. In *Hunter* v. *Hunter* the Ontario Supreme Court stated that "it has been repeatedly held that there can be no property in a dead body, but, where there has been a duty to bury, it has been held that there is a right of possession of the body for that purpose".[33] This same principle is affirmed in other Canadian jurisdictions as is evidenced by the Alberta Supreme Court in *Edmonds* v. *Armstrong Funeral Home Ltd.*[34] By and large, this same concept of not recognizing the human body as property has applied equally to body parts that have been removed from corpses.[35]

3. *Jurisprudence Regarding the Living Body*

How has the common law treated the question of property rights in human tissue arising from the living body? Unfortunately, no case law directly addressing this issue exists within the Canadian common law. It appears that the closest a Canadian court has come to approaching this question is in the Supreme Court of Canada's decision of *R.* v. *Dyment.*[36] This decision held that the non-consensual use of a medical blood sample as evidence in an impaired driving charge was a violation of section 8 of the *Canadian Charter of Rights and Freedoms.*[37] Speaking for the majority, La Forest J., in *obiter*, indicated that the Court had not ruled out the possibility of deciding this case in terms of property rights. He stated: "I do not wish to put the matter on the basis of property considerations, although it would not be too far-fetched to do so."[38]

However, the lack of further clarification combined with the fact that this case dealt only with blood gives rise to the issue of whether this decision also applies to property rights in all types of human tissue.[39] Thus, Canadian courts would have to turn to other jurisdictions for further guidance when deciding a *Moore* scenario.

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[32] 14 Am. Rep. 667 at 681 (R.I. Sup. Ct 1872).

[33] (1930), 65 O.L.R. 586 at 596, [1930] 4 D.L.R. 255 at 265 (H.C.), McEvoy J.

[34] (1930), 25 Alta L.R. 173, [1931] 1 D.L.R. 676 (S.C.A.D.).

[35] Skegg, *supra*, note 2 at 412.

[36] [1988] 2 S.C.R. 417, 54 D.L.R. (4th) 503 [hereinafter *Dyment* cited to S.C.R.].

[37] *Canadian Charter of Rights and Freedoms*, Part I of the *Constitution Act, 1982*, being Schedule B of the *Canada Act 1982* (U.K.), 1982, c. 11 [hereinafter *Charter*].

[38] *Supra*, note 36 at 432.

[39] Furthermore, blood may already enjoy statutorily recognized property rights; *see Human Tissue Gift Act*, R.S.O. 1980, c. 210, s. 10.

In other common law jurisdictions, it also appears that virtually no case law exists, other than *Moore*, that addresses the issue of recognizing property rights in living tissue. There are, however, a number of American cases where plaintiffs, knowing that they were not likely to win under a claim based in property rights (though the facts could allow such a claim), based their actions upon the seemingly contrived grounds of mental anguish. This shows that society has recognized the courts' reluctance to establish property rights in human tissue.

The Kentucky Court of Appeals, in the case of *Browning* v. *Norton-Children's Hospital*, rejected the plaintiff's claim of mental anguish suffered after learning four weeks following amputation surgery that his leg had been incinerated.[40] Surely, if property rights were recognized in human tissue prior to this case, Browning could have formulated a stronger argument based on these rights.

In addition, there exists the case of *Mokry* v. *University of Texas Health Science Center at Dallas* which involved the loss of a patient's eyeball down an unprotected sink drain. The Court, in holding for the patient, stated that "Mokry's allegations that he suffered personal injuries in the form of headaches and nervousness as a result of the negligence of employees of the state in the use of tangible property owned by the state recite a valid cause of action. . .".[41] The Court held for the plaintiff, not because of damage suffered from the loss of his personal property, but rather for the mental anguish he suffered in the form of headaches and nervousness. The Court stated that this form of injury constituted a valid cause of action within the state's tort statute. The Court's refusal to recognize property rights in human tissue is strengthened by the fact that Mokry brought his suit under the *Texas Tort Claims Act*.[42] The statute gave the Court the opportunity to address this problem in terms of property rights, as this statute allowed the Court to award money for either property damages or personal injury.[43] The Court chose the latter.

4. *Analysis*

Based on the existing jurisprudence in the common law jurisdictions of Canada, the current case law appears to negate the possibility of establishing property rights in the human body.[44] At best, there seems to be a strong indication that only a limited form of possessory

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[40] 504 S.W.2d 713 (Ky Ct App. 1974).

[41] 529 S.W.2d 802 at 805 (Tex. Civ. App. 1975).

[42] *Ibid.* at 803.

[43] *Ibid.*

[44] The laws concerning abandonment, scope of consent and conversion are similar to those found in the United States: *see Simpson* v. *Gowers* (1981), 32 O.R. (2d) 385, 121 D.L.R. (3d) 709 (C.A.); Somerville, *supra*, note 11 at 788.

rights can exist in human tissue and only when that tissue is of a dead body. With respect to human tissue from a living body, the lack of clear jurisprudence would force Canadian courts to look towards other common law jurisdictions. It is significant that the American common law reflects the notion of barring property rights from existing in human tissue from living bodies.

5. *Legislation*

Ontario has three statutes concerning this area of law.[45] The *Anatomy Act* allows for the use of unclaimed dead bodies for anatomical research that usually involves teaching at the medical school level.[46] Nowhere in this statute does it explicitly allow any property rights to transfer with the dead body. It also requires the institute to provide for proper disposal of the body after it has served its research purposes. Similarly, the *Coroners Act* allows the coroner only to take possession of a body for examination to determine whether an inquest is necessary.[47] Thus, both the *Anatomy Act* and *Coroners Act* do not appear to create any property rights within a human body. A third statute which is relevant is the *Human Tissue Gift Act*.[48] Section 10 reads:

> No person shall buy, sell or otherwise deal in, directly or indirectly, for a valuable consideration, any tissue for a transplant, or any body or part or parts thereof other than blood or a blood constituent, for therapeutic purposes, medical education or scientific research, and any such dealing is invalid as being contrary to public policy.[49]

The general thrust of this section indicates that human tissue is not to be sold. Given the definition of property discussed above, "the right to dispose of a thing in every legal way"[50] is a fundamental property right. Since living tissue has been statutorily barred from this fundamental right, it can be logically inferred that no property rights can exist in such tissue. However, closer inspection of section 10 indicates that its general thrust is not so clear.[51] First, section 10 does allow blood or blood constituents to be traded for valuable consideration. Is this to imply that property rights exist in one's own blood, as the right to dispose of an object in every legal way has been statutorily

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[45] *See supra*, note 27.
[46] *Anatomy Act*, R.S.O. 1980, c. 21, s. 4.
[47] *Coroners Act*, R.S.O. 1980, c. 93, s. 15(1).
[48] *Human Tissue Gift Act*, R.S.O. 1980, c. 210.
[49] To date s. 10 has not been judicially considered.
[50] *Supra*, note 28.
[51] For a possible alternative interpretation, *see* Dickens, *supra*, note 30 at 168. Dickens argues that this statute may not cover bartering for insurance arrangements and thus may be interpreted as barring only trading in human tissue for valuable consideration.

granted, and given that the right to sell is one form of the right to dispose? Second, it is not clear whether property rights exist in the blood or its constituents before alienation occurs or whether these rights are created upon alienation. Do property rights spring into existence only when valuable consideration is exchanged? If no property rights exist before valuable consideration is exchanged, could not this exchange be viewed as payment for services rendered?[52] Finally, it is not clear whether dealing in blood for valuable consideration applies to any use in general, or only to therapeutic, medical, educational or scientific research purposes.[53] Obviously, judicial interpretation is required to answer these questions.

Therefore, if a *Moore* scenario occurred in common law Canada, it would be statutorily possible to find a form of property rights in the plaintiff's body, but only to the extent that the action was based on the wrongful conversion of the plaintiff's blood or blood constituents and that the courts chose to interpret section 10 of the *Human Tissue Gift Act* liberally. As no valuable consideration was exchanged for the blood withdrawn in the actual *Moore* case, it is unknown whether property rights would even be created under the *Human Tissue Gift Act*. Regardless, it must be remembered that the possibility of having property rights in human tissue could only occur if the human cells were obtained from the blood. If a dispute arose as to whether an organ such as a spleen could be sold for valuable consideration, the *Act* would specifically forbid this transaction.

B. Civil Law Canada

The province of Québec is the only jurisdiction in Canada having its basic legal structure founded not in common law, but rather in the *Civil Code of Lower Canada*.[54] In addition to the basic legal framework established in the *C.C.L.C.*, there are provincial statutes which govern specific areas of law and, of course, a limited body of law created by the judiciary.

In Québec, the rights a person possesses are held within that person's patrimony, a legal creation that holds most of the rights and obligations of either a physical or moral person.[55] The *C.C.L.C.* defines what rights a person can exercise and what obligations a person is bound to fulfill.

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[52] Treating the exchange of valuable consideration for blood as payment for services rendered is a commonly taken legal stance, as it avoids the necessity of addressing the question of property rights in the blood; *see, e.g., Perlmutter* v. *Beth David Hospital*, 123 N.E.2d 792 (N.Y. Ct App. 1954).

[53] Scientific research has been reported to extend to both the academic and commercial fields, including research by pharmaceutical companies; *see* Dickens, *supra*, note 30 at 166.

[54] *Civil Code of Lower Canada (1866)* [hereinafter *C.C.L.C.*].

[55] J.L. Baudouin, LES OBLIGATIONS, 2e éd., Cowansville, Qué., Yvon Blais, 1983.

Additionally, the rights held in a person's patrimony can be either real, personal or intellectual.[56] Real rights exist between a person and a thing. These rights are typically thought of as property rights. They apply to both immoveable and moveable things. Personal rights are those existing between persons rather than between a person and a thing. For example, the right to collect on an obligation owed is a personal right. Intellectual rights attach themselves to intangible property. These rights typically apply to incorporeal property and thus operate similarly to real rights.

Besides patrimonial rights, there are a limited number of rights that can exist outside the patrimony and that are aptly referred to as extra-patrimonial rights. Extra-patrimonial rights are "hors commerce" and are thus not capable of being subjected to the practices of commerce.[57] They are owned by all physical persons but administered by the Crown. In addition, extra-patrimonial rights can relate to both corporeal or incorporeal things. Typical examples of this type of rights are the human rights enjoyed under the *Canadian Charter of Human Rights and Freedoms*. As will be discussed shortly, the rights that the civil law recognizes in cadavers are extra-patrimonial in nature.

One additional reality of the civil law that must be articulated is that, when interpreting the *C.C.L.C.*, each article, chapter and book is read in light of the overall spirit of the *C.C.L.C.* and the civil law in general. There is little room for the creation of new rights on an *ad hoc* basis as often happens in the common law. This point is crucial when hypothesizing possible judicial outcomes of a *Moore* scenario based on the current state of the law in Québec.

How would the Québec courts decide a case given the facts present in *Moore*? As in the common law, the crux of the case would turn on whether or not the plaintiff's spleen was property. Therefore, it is necessary to examine the civilian concepts of property law to determine whether rights in the human body or part thereof are patrimonial in nature.[58]

1. *Property*

In the civil law, property law is concerned with the kinds of relationships a person may have with things, involving either the full rights of ownership or some modification of these rights. The three

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[56] *Ibid.* at 24.

[57] Examples of these rights are the right to physical integrity, the right to privacy and the right to dignity.

[58] The questions of abandonment, scope of consent, and accession (conversion) also exist in Québec. Intentional abandonment can be presumed under Art. 593, *C.C.L.C.*; consent is usually contractual in the civil law and transfer of property could be implied in the contractual relationship between the patient and the doctor under Art. 1024, *C.C.L.C.* Art. 434, *C.C.L.C.*, dealing with accession (conversion), establishes the solutions available when one person's moveable property is transformed by another.

elements in ownership are the *usus*, *fructus*, and *abusus*. The modifications of ownership are defined in the *C.C.L.C.* as being rights of usufruct, servitude, and emphyteusis.[59]

In order to determine whether the human body, or a piece thereof, is capable of having some form of ownership rights attached to it, one must first examine the concepts of property and ownership as defined in the *C.C.L.C.*

Property is a thing that is owned. Article 374 stipulates that, "[a]ll property, incorporeal as well as corporeal, is moveable or immoveable." Surely a human body, or a piece thereof, could be classified as a corporeal moveable thing. The *C.C.L.C.* further articulates in article 399 that, "[p]roperty belongs either to the crown, or to municipalities or other corporations, or to individuals." The word "belongs" implies that a right of ownership exists in all property and that property must be owned by one of the entities stipulated in article 399. Failure to meet these criteria would result in the classification of any such rights over a thing as extra-patrimonial in nature.

When determining what constitutes ownership, article 406 states that, "[o]wnership is the right of enjoying and of disposing of things in the most absolute manner, provided that no use be made of them which is prohibited by law or by regulations." In order for ownership rights to exist in human tissue, this tissue must be capable of being enjoyed and disposed of in the most absolute manner. The only exceptions to this are found in the modifications of ownership rights held in property such as a usufruct, servitude, or emphyteutic lease. Therefore, the rights of an owner in a thing he or she owns constitute ownership.

How do the *C.C.L.C.* and statutory provisions address the question of ownership in human tissue? The *C.C.L.C.* does not directly raise the question of ownership in human tissue *per se*, but rather addresses the question of rights in dead bodies and the right to dispose of some parts of one's own body *inter vivos*.

2. *Dead Bodies*

Article 2217 of the *C.C.L.C.* views dead bodies as being sacred by their very nature.[60] Additionally, it is implicit under article 1486 that things which by their nature are "hors commerce" (such as sacred

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[59] For a more complete explanation, *see* W. de M. Marler, THE LAW OF REAL PROPERTY: QUEBEC (Toronto: Carswell, 1932) at 31.

[60] Art. 2217 reads:

> Sacred things, so long as their destination has not been changed otherwise than by encroachment, cannot be acquired by prescription.
>
> Burial-grounds, considered as sacred things, cannot have their destination changed, so as to be liable to prescription, until the dead bodies, sacred by their nature, have been removed.

things) cannot be objects of trade and commerce.[61] Things "hors commerce" are thus incompatible with one of the basic qualities of ownership: the right to dispose of things in the most absolute manner. The *C.C.L.C.* thus implies that no ownership rights will be attached to dead bodies.

How does the case law enlighten the question of ownership rights in human bodies? The Québec courts have traditionally held that dead bodies are not property and thus cadavers are not subject to the ownership rights found in article 406 of the *C.C.L.C.*

Most case law concerning human tissue addresses a relative's concern in the cadaver of a late family member. The landmark case of *Phillips* v. *Montreal General Hospital* held that a widow did not have property rights in her late husband's body but merely had a paramount right of control over the remains and its burial.[62] The subsequent decision of *Religieuses Hospitalières de l'Hôtel-Dieu de Montréal* v. *Brouillette* similarly stated that no ownership rights exist in a deceased relative's body except to the extent of allowing the next of kin to dispose properly of the body.[63]

Since a dead body is something that is not capable of being owned, the rights in a dead body must be extra-patrimonial in nature.[64] Given this fact, the courts in the above cases appear merely to have granted the relatives a fictitious form of possessory right under article 2192 of the *C.C.L.C.*, allowing them to exercise an extra-patrimonial right as a real right while they dispose of their relative's body.[65] Once this task is complete, the possessory right is extinguished. This notion is reflected in article 2217 of the *C.C.L.C.* which bars cemeteries from asserting prescriptive possession due to the sacred nature of the dead bodies contained within. Given the fact that extra-patrimonial rights in things can never be owned, the logical result follows that any prescriptive attempt to do so is futile.

How do Québec statutes deal with this question of ownership in dead bodies? Though unlikely, it may be possible that a liberal interpretation of articles 54 and following, of the *Public Health Protection*

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[61] Art. 1486 reads: "Every thing may be sold which is not excluded from being an object of commerce by its nature or destination or by special provision of law."

[62] (1908), 33 C.S. 483.

[63] [1943] B.R. 441. Notwithstanding the case of *Ducharme* v. *Hôpital Notre-Dame* (1933), 71 C.S. 377 at 377-78 which stated: "Il n'y a aucun doute que le cadavre d'une personne demeure la propriété du conjoint et de la famille du défunt . . .", such a *sui generis* form of ownership is nothing more than a fiction that enables relatives to claim for unauthorized or disrespectful acts committed upon the dead body; *see* R.P. Kouri, *The Bequest of Human Organs for Purposes of Homotransplantation* (1970) 1 R.D.U.S. 77 at 85.

[64] Kouri, *ibid.* at 83.

[65] Art. 2192, *C.C.L.C.* reads: "Possession is the detention or enjoyment of a thing or of a right, which a person holds or exercises himself, or which is held or exercised in his name by another."

Act, could imply that ownership rights exist in dead bodies. This statute allows certain dead bodies to be delivered to universities for use in teaching and research.[66] Once the university has possession, can it be inferred that ownership rights are created in the dead body because the possessory period for teaching and research purposes can be indefinite? Does not unlimited possession amount to *de facto* ownership? This is possible, but a university's rights would more likely be viewed as being perpetually possessory in nature, as ownership rights in dead bodies are prescriptively barred under article 2217 of the *C.C.L.C.* This latter interpretation would be more in line with the public policy issues reflected in the *C.C.L.C.* Given that the civil law is usually interpreted in view of the overall spirit reflected in the *C.C.L.C.*, this latter interpretation is the more likely one.

3. *Inter Vivos Transactions*

The laws that govern transactions involving human tissue generated *inter vivos* are more permissive than those dealing with dead bodies. This is evidenced by the fact that organ transplantations are condoned and even encouraged by the legal system, as they are seen as positive aspects of society. Article 20 of the *C.C.L.C.* directly addresses this issue in stating that:

> A person of full age may consent in writing to disposal *inter vivos* of a part of his body or submit to an experiment provided that the risk assumed is not disproportionate to the benefit anticipated.
>
> . . .
>
> The alienation must be gratuitous unless its object is a part of the body susceptible of regeneration.
>
> The consent must be in writing; it may be revoked in the same way.

The primary thrust of this article is to allow for therapeutic *inter vivos* transplantations of non-regenerative human tissue such as organs. The alienation of all non-regenerative tissue must be gratuitous in nature. However, if the tissue is regenerative, article 20 permits a person to sell his or her body parts. This latter provision definitely reveals the Québec legislature's willingness to recognize real rights in certain parts of the human body.[67] The types of regenerative tissue that article 20 was originally intended to cover were body parts such as skin and bone, as well as blood.[68]

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[66] *Loi sur la protection de la santé publique*, L.R.Q., c. P-35, arts. 54-64.

[67] It is interesting to note that this article is more permissive, in terms of possibly creating real rights in human tissue, than legislation in any Canadian common law jurisdiction; *see Human Tissue Gift Act*, R.S.O. 1980, c. 210, s. 10.

[68] W.F. Bowker, *Experimentation on Humans and Gifts of Tissue: Articles 20-23 of the Civil Code* (1973) 19 McGILL L.J. 161 at 183.

In light of recent technological advances in medicine, there is cause for concern that this permissiveness could lead to the creation of a limited body parts market. For example, it may become possible to transplant part of one's liver, a regenerative tissue.[69] Under article 20, a person would be allowed to dispose of his or her liver for monetary gain. The negative ramifications that could result from allowing such a market to exist will be discussed in due course.

It is not clear whether ownership rights would even be recognized in parts of the body susceptible of regeneration. Article 20 implies that regenerative tissue can be alienated for some contractual cause but does not explicitly state that in doing so this tissue becomes subject to full ownership rights.[70] Hence, this regenerative provision raises an interesting question.

How would a *Moore* scenario be dealt with if the cancerous cells and genetic material were obtained only from a regenerative tissue such as a patient's blood? The relevant RNA and the patented cell-line could have been isolated from white blood cells and thus the spleen would not have been needed.

If ownership rights exist in one's regenerative tissue prior to alienation, then a plaintiff in a *Moore* scenario could possibly obtain remuneration for his or her alienated tissue. The crux of the case then would be refocussed on whether a valid contract existed that would legalize the transfer of ownership rights in the tissue. This would require that an objective cause be found that would legalize a contractual relationship. If such a contractual cause were found, the physician would hold full ownership rights in this blood/RNA. Only if improper disclosure of the intended use of the blood amounted to an illicit cause would the contract be vitiated and ownership rights remain with the donor. Alternatively, if no contractual cause were found, ownership rights would remain with the donor.

However, if ownership rights are created only upon alienation of the tissue under contractual agreement having an objective cause, a plaintiff in a *Moore* scenario would probably not obtain remuneration for his or her tissue beyond the objective cause agreed to in the contract. In the actual *Moore* case, there was a gratuitous exchange of regenerative tissue; during a subsequent visit, Moore consented to the use of his blood in medical research. Thus, it could be argued that no ownership rights were created by the extraction of the blood and that any rights in the blood remained extra-patrimonial.

In summary, given the structure of the civil law in Québec, it is clear that no property rights can be created in dead bodies nor in nonregenerative tissue of the living, such that the human body cannot

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[69] *See* G. Kootstra, *Will There Still Be an Organ Shortage in the Year 2000?* (1988) 20 TRANSPLANTATION PROCEEDINGS 809 at 811.

[70] An objective (contractual) cause in civil law is equivalent to consideration in common law.

be made a marketable commodity. However, in respect of tissue susceptible of regeneration, it is unclear whether article 20 of the *C.C.L.C.* creates property rights in such tissue or merely allows for property rights to be created upon alienation of that tissue. The willingness of the Québec legislature to allow the sale of all regenerative tissue could open a dangerous avenue leading towards a limited body parts market.

IV. Possible Ramifications of the *Moore* Decision

Due to the tremendous profit potential of commercialized medical research, some lawyers are beginning to state that property rights should be recognized in human tissue and bodily substances, at least to a limited extent, to allow for remuneration of the donor. In California, following the recent Court of Appeal decision of *Moore*, property rights are now recognized to exist in human tissue. However, we must ask whether this action increased the possibility of creating an open market for body parts? Due to the structure of society's present legal and economic framework, it will be argued that recognizing such property rights has set a very dangerous precedent — one that could lead to an open market for human tissue and bodily substances.

If the decision in *Moore* is upheld, it may open up the litigation floodgates, financially crippling a highly technological industry and delaying the delivery of the great medical benefits that this technology promises. This is a disturbing thought if one considers that biotechnology has been predicted to affect us more than the electronic (microchip) revolution[71] and that "[a]dvocates praise its technology as the boldest advance since the Industrial Revolution", prophesying that "it will produce miracle drugs and an end to world hunger."[72]

A. *Open Market Problems*

Some arguments have arisen, predominantly in the legal doctrine, calling for the recognition of property rights in human tissue and bodily substances. However, once property rights are established in an object, this object typically becomes a commodity on an open market. In fact, one author referred to these rights as the "right of commerciality", and described them as follows:

> Under the right of commerciality, a person would have intangible rights in the commercial potential of his or her own body. This right would complement the quasi-property rights already recognized and would not vest an absolute right of possession in the physical object, the human

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[71] *See* D.M. Stotland, *Patenting Novel Life-Forms; The Scope of the Abitibi-Price Decision* (1984) 1 Can. Intell. Prop. Rev. 250 at 250.

[72] Hardiman, *supra*, note 2 at 208.

> tissue. . . . To require that the right be exercised during an individual's lifetime for survivability would be unfair to the patient's estate because the tissue may often be removed from a person shortly before or after death. . . . The right of commerciality would be transferable, devisable, and part of a decedent's estate. There is no requirement that the right be exercised during the individual's lifetime.[73]

In further support of the right of commerciality, it has been suggested that this right would not apply to the use of human tissue for non-commercial research, but that if and when the commercial application of the research proves fruitful, the donor's rights would be preserved.

Would "commercial application" extend to include a company offering a service such as organ transplantation?[74] The same proponents of the right of commerciality state:

> Finally, the right of commerciality would appease those offended by the notion of selling the human body or its parts. Unlike the sale of a commodity, the right of commerciality would focus on negotiations and contracts defining the relative proportion of each party's financial stake in a new product. Most people would probably feel more comfortable with these images than with the image of a salesman bartering off a human kidney. While the reality may not be very different, public acceptance would be vastly simplified.[75]

Many arguments arise against recognizing any form of property rights in the context of human tissue and bodily substances. In fact, the possibility of a market opening up for human body parts was the major reasoning behind a public policy to ban statutorily all sales of human tissue.[76] It is feared that should a market arise for human body parts, their availability will become subject to the typical market pressures of supply and demand. This consideration raises feelings of discomfort and uneasiness especially given that the socially and economically deprived citizen could physically suffer as a result of scientific and medical advances.

In spite of laws in many countries banning the sale of human organs, a new breed of traders in human tissue is emerging. Oftentimes the living donors supplying tissue for transplants are destitute and/or from the Third World, as their financial situation makes them particularly vulnerable to the solicitous methods of traders. For example, Count Ranier René Adelmann von Adelmannsfelden, a tissue broker in West Germany who has just announced plans to expand his business into Britain, claims to have recruited some 800 potential donors within

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[73] *Ibid.* at 258, 261.

[74] *See* B.M. Dickens, *Legal and Ethical Issues in Buying and Selling Organs* (1987) 4:2 TRANSPLANTATION/ IMPLANTATION TODAY 15.

[75] Hardiman, *supra*, note 2 at 262-63.

[76] *See, e.g.*, *Human Tissue Gift Act*, R.S.O. 1980, c. 210, s. 10. *See also* Bowker, *supra*, note 68 at 181.

two months by offering them as much as $43,000 for a kidney.[77] His solicitous letter which was sent to West Germans whose names appeared in public bankruptcy records, graphically illustrates the types of manipulative tactics used by many organ traders:

> Dear Bankrupt Person,
>
> I have obtained your name from court documents. Your bankruptcy is a matter of public record, as is the fact that no one should do business with you, that no one can grant you credit, that the police probably have a file on you, and, finally, that anyone who associates with you places himself under suspicion . . . as soon as you donate your kidney you will receive the money from the association treasury. (You can also donate a kidney belonging to your wife or your relatives.) You will be able to work again at once. Your life will be saved, and the loss of a kidney is consolable.
>
> —Count Adelmann von Adelmannsfelden[78]

If the Count is paying up to $43,000 for a kidney, it is interesting to speculate as to how much a buyer, who is not in a very good position to bargain, must pay in order to receive this life-saving transplant. It also raises the question of which people and how many people are in a position to benefit from this supply of organs.

Proponents of a body parts market believe that this market would be a good means for the poor to escape their desperate situation. One such proponent states:

> Even then there is concern that allowing payment for body parts could unduly coerce the poor to donate. The strongest argument against paying donors is that people in dire straits will consent to debilitating surgeries out of a desperate need for money. But banning payment on ethical grounds to prevent such scenarios overlooks one important fact: to the person who needs money to feed his children or to purchase medical care for her parent, the option of not selling a body part is worse than the option of selling it.[79]

However, it is argued that this option should never be created. One must wonder if our society is capable of finding a better way of helping the poor feed their children, other than a *short term* payment of money for their body parts. If the poor were to receive money for their body parts, would society then expect that they no longer needed to find a solution for this problem? The very fact that the majority of the organ donors come from the poor, rather than the economically secure, demonstrates that the sole driving force for such organ donations is a desperate need for money. Persons from both sectors of

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[77] L. Beyer, "Chilling Tales of the Flesh Trade" *Time* (20 February 1989) 26.

[78] E. Rabin, "Count Dracula Makes an Offer" (1989) No.3 *Harper's Magazine* 23.

[79] L.B. Andrews, *supra*, note 2 at 32.

society would like to receive a lump payment of $43,000, yet only the destitute are willing to mutilate their bodies for money. Is our society really going to encourage such an avenue for acquisition of money?

If a market for human substances emerged, one would expect a decrease in the quantity of organs or other substances that are presently donated. The advancement of scientific medical research absolutely depends upon the availability and free exchange of experimental tissue, especially in the non-profit university research community. In addition, non-profit organizations such as the Red Cross or organ donation systems rely upon the altruistic nature of donations to worthy causes. Financial pressure could sway patients into selling their organs rather than donating them, thereby eliminating the supply to people desperately in need of replacement organs but who are not in a position to pay high prices to obtain them. This pressure has the potential to aggravate an already critical shortage of donated organs.[80]

Furthermore, the pressure of demand will often result in a drop in the quality of the substance available. Persons wanting to sell tissue for financial gain may cover up facts regarding their lifestyle in order to qualify.

Commercial biotechnology makes use of both diseased and healthy bodily substances for developing and testing its products. Therefore, it is easy to envision that companies would begin to open their own clinics, staffed with their own physicians, for the purpose of obtaining human tissue. In terms of the best medical treatment for the patient, this situation undoubtedly creates a conflict of interest. Should not the goal of the legal community be to construct a system that will ensure the integrity of the patient/physician relationship? Future concerns have been expressed aptly such that, "[n]o one should be expected to visit a hospital or medical center worrying as to whether the doctor is there to promote health or rather to mine bodies in order to obtain substances that are commercially lucrative even if those substances are of little or no use to the patient."[81] A situation may develop in which people would be forced to make a decision between being treated by either a doctor affiliated with a commercial institution seeking financial gain, or a doctor practising on a non-profit basis as currently exists.

Another reality of the open market is that a person supplying tissue would sell to the highest bidder. Thus in terms of organ transplantation, a market for organs may result in competitive bidding between patients for organs in low supply, with the result that the highest bidder will receive the organ. Recently, Presbyterian Hospital in Pittsburg, Pennsylvania, was accused of allowing money to play an

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[80] *See* A.L. Caplan, *Blood, Sweat, Tears, and Profits: The Ethics of the Sale and Use of Patient Derived Materials in Biomedicine* (1985) 33 CLINICAL RESEARCH 448.

[81] *Ibid.* at 450.

undue role in hospital policy when it placed sixty-one wealthy, foreign patients to the top of its kidney transplant list, ahead of less wealthy patients who had been waiting a longer time.[82] In addition, if persons with diseased organs or tissue begin to take the time to search out the highest price, this delay may place the patient's financial well-being ahead of his or her physical health. Surprisingly, such scenarios are seen by some as beneficial. For example, one author stated:

> By recognizing the patient's rights in his or her cells, market mechanisms would set a fair price and promote the maximum use of resources. For example, if the attributes of the patient's cells are fairly common, the researcher could go elsewhere for similar cells, thus prompting the patient to settle for correspondingly less consideration. If the attributes are extremely rare, however, the patient could hold out for a higher price.[83]

The same author suggests that creating a market in human organs would actually help reduce the chronic shortage of organs that are currently available for transplantation — that is, people who would normally retain their organs would decide to sell them. A situation may develop in which financial pressures on the poor will encourage them to sell their organs to the rich, resulting in unacceptable risks of death for a pecuniary profit. Indeed, it has been reported that a British citizen offered one of his kidneys to any needy Arab who would give him $68,000; the money was needed to pay for his house mortgage.[84] It is unfortunate that this has been seen as a possible bonus for the potential donor in financial need:

> In biotechnology, royalties on a billion-dollar drug could be very significant. If the poor were to sell their tissue, the monetary gains could make them wealthy. The poor would not be unfairly exploited, but would profit handsomely from their contribution.[85]

In terms of donating bodily substances while the person is alive but terminally ill, the prospect of financial benefit unfortunately has been defended as a means of giving a purpose to the patient's tragedy:

> If a patient has a potentially fatal cancer, in addition to the sense of helping others, it may be comforting to know that even if the disease is fatal, his or her family will receive some compensation for the loss. If the disease is not fatal, he or she at least has gained financially, as caused by the tragic disease.[86]

The goal should be to ensure the integrity of the patient/physician relationship and not to undermine it with the financial pressures of an

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[82] *Supra*, note 74 at 15.
[83] Hardiman, *supra*, note 2 at 230; *see also* Andrews, *supra*, note 2.
[84] *Supra*, note 30 at 165, n. 123.
[85] Hardiman, *supra*, note 2 at 239.
[86] *Ibid.* at 235.

open market. Will a patient faced with a potentially fatal disease be pressured to sell his or her tissue as opposed to exploring other possible methods of medical treatment?

If people are allowed to sell their tissue or bodily substances while living, a court one day may decide that people should be allowed to sell such substances upon death and pass the money on to their heirs. As stated earlier, the ability to sell one's bodily material after death, with the profit becoming part of a decedent's estate, has already been proposed in legal doctrine.[87] In addition, the creation of an international brokerage in cadaver organs has been proposed with the idea of using economic motivation to induce others to make their organs available posthumously.[88]

B. Medical Research Problems

Early responses to the decision in *Moore* have been naive as to the impact that this decision could have on the academic and commercial biotechnological communities. Indeed, George Annas, a bioethicist with Boston University, predicted minimal impact of this decision on medical research when he stated that, "[t]he worst that will happen is that researchers will add a new line to the consent form, which will say you give up all your rights to anything that is developed from your blood or your urine or whatever."[89] Annas unfortunately forgot that almost all the current research is being done with human tissue for which proper consent has not been obtained. The scientific process does not allow researchers simply to switch the source of tissue from one day to the next. Most research involves years of work and often millions of dollars with one source of human tissue, characterizing and manipulating this source before beneficial medical results can be achieved.

The information generated by universities, hospitals and other non-profit research organizations is freely published for the benefit of all. This information is used by commercial research institutes to develop their techniques and products. Since non-profit research institutions generate information used by profit-oriented companies, should such non-profit institutions also be required to pay for the human tissue that gives rise to this information? If all medical research institutions (commercial and non-profit) were required to purchase human tissue in order to carry out their research, what would be the effect upon the already exhorbitant cost of medical research? This would likely result

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[87] Many European states have alternatively established an assumed consent solution where the state assumes that it can take the organs of anyone who dies while in the hospital. *See* F.S. Chapman, "Put Price on Organs; It Will Increase Supply" *USA Today* (16 January 1989) A8; *see also* Hardiman, *supra*, note 2 at 258, 261.

[88] *See supra*, note 74 at 16.

[89] *Supra*, note 22 at 68.

in higher prices for drugs and medical therapy. Scientists and doctors may also need to become involved in business transactions. It has been speculated that:

> [R]ecognizing a patient's property rights in his or her body could result in high transaction costs. The potential for hospital-bed negotiation sessions involving the doctor, the patient, and their attorneys is significant. High transactions costs could impair scientific advancement.[90]

Quite frequently, the only way to begin studying a malady such as a neurological disorder is to examine human autopsy tissue in order to find clues as to what caused the disorder, and possibly devise a cure. Another rapidly growing field of research that is already benefiting mankind is fetal tissue research. Previous studies on fetal tissue to gain understanding of the pituitary gland, which controls the thyroid gland, has led to Québec's program of mandatory screening at birth for thyroid function, which saves many babies from severe mental retardation. Fetal tissue research also played a key role in producing the polio vaccine. It is claimed that it may aid in conquering viral diseases, birth defects, cancer and coronary heart disease as well as many causes of mental retardation.[91]

In recent years, scientists have become increasingly involved in the abortion controversy, as they search to extract raw materials from aborted foetuses in order to generate a variety of biochemical cures. A cure for Parkinson's disease — a debilitating neurological disorder that affects 1.5 million individuals in the United States alone — is high on the list of possible benefits from this type of research. It has also been estimated that nearly 2 million diabetics, 2 million sufferers of Alzheimer's disease, 300,000 victims of spinal injuries and more than 10,000 individuals each for hemophilia, muscular dystrophy and Huntington's disease, are also potential beneficiaries of such procedures.[92]

If the sale of tissue or other bodily substances is allowed, will women also be allowed to sell their aborted foetuses? Regarding the present trend in commercial biomedical research, the economic implications of fetal research are enormous. In fact, it has been reported that, "Hana Biologics estimates that the potential market in treating diabetes and Parkinson's disease through the use of fetal tissue from induced abortions exceeds $6 billion. . .[t]hus a vast, new and lucrative market would be created for fetal tissue from induced abortion."[93]

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[90] Hardiman, *supra*, note 2 at 241.

[91] *See supra*, note 30 at 152.

[92] *See* R. Weiss, *Forbidding Fruits of Fetal-Cell Research* (1988) 134 SCIENCE NEWS 296.

[93] *Ibid.* at 297. Proof of a growing market in other types of human tissue is evidenced in the recent trials of five Floridians who were accused of scavenging corneas from corpses and selling them as far away as Saudi Arabia; *see* Chapman, *supra*, note 87.

Could a biological father whose sperm has fertilized a woman's egg succeed under a tort of conversion if the woman chooses to abort the fetus? Based on the *Moore* decision, the male donor may still retain property rights in that fetus and have legal grounds for damages. This would only add to the already explosive abortion issue.

How would the recognition of property rights in human tissue affect ongoing medical research which largely relies on standard cell-line sources? If researchers extract DNA and/or create cell-lines, much in the same way as was done with Moore's spleen, will donors use the courts to obtain remuneration for their tissue? It is fortunate for the biotechnological community that most human cells currently employed in research have been obtained from the international cell bank, the American Type Culture Collection (ATCC).[94] The ATCC supplies research laboratories with some of the thousands of cell-lines that it stores in its frozen cell bank and the only cost is a small administration fee. Currently, the cell-lines in the ATCC catalogue list the tissue type, source of tissue, date of creation and only a general physical description of the donor. Anonymity of the donor has been maintained, originally to protect the donor's privacy. Now, the anonymity will work in favor of the researchers, keeping potential *Moore*-type plaintiffs or their heirs ignorant of the utilization of their tissue. Anonymity is also maintained in the medical journal where the cell-line was originally published. From the point of view of the biotechnological community, this anonymity is a godsend as it prohibits the opening of the floodgates to litigation. If patients do not know that their tissue has been utilized for commercial purposes, then no action can be initiated. This may be seen as unethical, but if an infant medical research industry is to be protected from major financial and legal set backs, this policy of anonymity must be maintained in order to prevent future claims of property rights arising in previously collected tissue, such as was the case in *Moore*.

In terms of remunerating Moore, the law may have moved in the wrong direction by allowing him to succeed under the tort of conversion, an action which requires the recognition of property rights in human tissue. Not only will this action allow for the creation of a body parts market but it will be inadequate compensation for the plaintiff, as the tort of conversion awards damages only for the worth of the object before conversion. In *Moore* the value of the spleen and the blood were minimal.[95] Therefore, if Moore is entitled to a damage

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[94] R. Hay *et al.*, eds, AMERICAN TYPE CULTURE COLLECTION CATALOGUE OF CELL LINES AND HYBRIDOMAS, 5th ed. (Rockville: American Type Culture Collection, 1985).

[95] As the dissent in *Moore* pointed out, remuneration for conversion of tissue in which the plaintiff was deemed to hold property rights would be minimal: *see supra*, note 3 at 537.

award, an action for misrepresentation may be a better means of compensation, as the defendants did not obtain proper consent for utilizing the plaintiff's spleen and some of his blood for their research.[96]

In support of the decision in *Moore*, there is much legal doctrine suggesting that donors should be remunerated when their tissue is used in profit-generating research.[97] This doctrine proposes that unjust enrichment of biotechnological companies would be prevented by requiring them to pay donors for tissue. However, this proposed commercial transaction is not compatible with society's moral and ethical standards for the treatment of the human body and its substances. Therefore, if we wish to maintain these standards, we cannot allow any money to be paid for human tissue and substances regardless of whether a company will profit from research on this tissue. This approach may seem unfair, but it is absolutely necessary in order to prevent the creation of an open market in human body parts.

The fact that the donor is not rewarded financially may be seen by some as an infringement of the donor's rights and even a form of exploitation. However, in reality, this tissue is not being given at the expense of the donor for it is no longer of any value to the donor. It is only of value to an institution that is capable of transforming it, through technology, into a substance beneficial to human beings.

It is obvious that if research institutions are required to pay for human tissue, medical research costs will increase greatly. Most non-profit research is supported by tax-payers' money, and much more would be required to pay for human tissue. The result would be that taxpayers in general would be paying the few individuals who decided to sell their tissue. In addition, society in general would have to pay more for pharmaceuticals produced as a result of commercialized medical research, as the cost of producing these products will increase. Thus, it is argued that our goal should be to benefit the majority, rather than the minority, of human beings.

V. Possible Solutions to the Problem

Due to the relatively recent advances in medical technology, humans are, for the first time, faced with the concept that some of their tissue may be transferred to other human beings or may be employed in research for profit. In order to prevent mistreatment of the human body, yet allow for the advancement of medical research, the law must build a framework that will recognize the complex moral and ethical issues surrounding research involving human tissue. A solution must be found that will prevent the creation of property rights in human tissue, and yet will allow those who have invested their time and money into scientific experimentation to harvest the fruits of their

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[96] *See* note 10 for other possible causes of action.

[97] *See* note 2.

labour. Additionally, we must also be realistic about the enormous power of economic motivation. A "black-market" in body tissue will continue to exist to some extent. However, the legal community's goal should be to utilize the law to make the best of the situation. Lon Fuller reflected this notion when he stated:

> But there is no way open to us by which we can compel a man to live the life of reason. We can only seek to exclude from his life the grosser and more obvious manifestations of chance and irrationality. We can create the conditions essential for a rational human existence. These are the necessary, but not the sufficient conditions for the achievement of that end.[98]

Thus, another goal of the legal community is to prevent the creation of an open market while at the same time setting up safeguards within the professional community to limit the black market.

One partial solution is for the legal community to ensure that the researchers obtain proper, informed consent prior to commencing their studies.[99] In addition, donors should have access to legal recourse if their tissue is used without their informed consent. Thus, it is suggested that the *Patent Act* be amended to require all patent applications involving the use of human material at any stage of the research to prove that proper informed consent was obtained for the use of that material. Therefore, all donors of human material would have to be disclosed in a patent application. Improper consent would still allow the patent application to proceed, but the patent office would inform donors of the non-consensual use of their tissue and thus give them the option of exercising their legal rights.[100]

Given this proposed structure, how would the *Moore* case have been decided? The splenectomy was performed for therapeutic reasons and with informed consent. However, after studying the spleen, it was discovered that it could be cultivated for commercial research purposes. Before research on the spleen was begun, informed consent should have been obtained; it was not. When the patent application was filed, the appropriate consent forms would have been required. Hence, the patent officials would have notified Moore as to the research. At this point, Moore could have sued under an action such as lack of informed consent. In addition, the defendants, knowing the value of Moore's blood before they withdrew it and failing to inform him of their use of his blood or to obtain proper informed consent, would have been additionally liable for either negligent or fraudulent misrepresenta-

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[98] L. Fuller, THE MORALITY OF LAW, 2d ed. (New Haven: Yale University Press, 1964) at 9.

[99] Somerville, *supra*, note 11.

[100] *See* note 11 for other possible causes of action that may be better avenues for compensating persons whose tissue has been used for research without their consent.

tion.[101] These actions would have allowed the plaintiff to be compensated justly without creating property rights in his bodily substances.[102]

It was stated earlier that the solution must also allow the medical research community to secure its investment in its labour. However, if property rights do not exist in the research material, how can a company claim rights to the finished product?

In terms of ensuring that the medical research community is allowed to profit from its research with human tissue, the following structure is suggested. This structure takes into account the degree of information contained within the tissue or bodily substance at the stage in which it is to be exploited.

There are three distinct levels of classifying substances that constitute human beings. These levels may be distinguished on the basis of uniqueness. The first level, the person and the persona, enjoys all rights bestowed by the courts. The second level, functional bodily units such as a person's organs, blood or other tissues, can be transferred to another person and carry out their function in the same capacity that they did in their originator. The third classification focusses on the information contained within the genetic material of the cells. Cells, unlike organs, do not have value as a collection. This information belongs to Nature alone and is shared by all humans once it is divulged. At this level, the material somehow must be transformed to be useful, such as through the creation of cell-lines or the cloning of its DNA. A claim of ownership lies in the cultivation of this information.

A. The First Level

Recently, the law has stated that it is willing to recognize some limited form of property rights in the human body. Indeed, the rights associated with the pecuniary value of one's name and personal features are an exercise of one's "right of publicity".[103] This level represents the most complex sum of the parts and cannot be attained by any of the parts independently. As long as the individual's parts remain within the person, they serve the function of the person and, hence, fall under the classification of property rights in that person. One critical distinction is that, at this level, each person can claim personal rights in his or her body as a whole (though the parts would be common to humanity) because the collection of the parts is unique to that person.

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[101] In fact, during a subsequent visit, Moore expressly withheld his consent for the use of his blood in research: *see supra*, note 3 at 501.

[102] Unfortunately, this system would not stop the medical research community from benefiting from non-consented tissue if it chose not to patent its products but rather chose to protect itself under trade secrets.

[103] D. Himelfarb, *"What's in a Name?" If You Are a Star. . .Plenty!* (1985) 2 BUS. & L. 30.

This concept of property rights in the whole person is reflected in both civil law and common law.[104]

However, once a part is removed from the whole in such a way that it can no longer functionally serve its original possessor, it is no longer unique to that person and it falls within the second level of classification.

B. The Second Level

The second level of classification requires that any human bodily material removed from a person is deemed to be *res nullius*. It would become a corporeal movable under the ownership of nobody. Both civil law and common law regimes have recognized the concept of *res nullius*.[105]

A person is in possession of body tissue but is not the owner of this tissue. Permanent removal of human tissue renders the tissue *res nullius*. If the removal is for the purpose of transplantation into another person, the tissue loses its *res nullius* status and becomes the possession of the recipient once the transplant is complete.[106]

One obstacle to deeming excised human tissue *res nullius* is that, under the classical definition of *res nullius*, ownership is acquired by the first person who takes possession of the tissue.[107] For the purposes of transplantation, the legal system would have to deem those in possession of the excised tissue, such as physicians, nurses or organ transporters, as being possessors "in trust" of the tissue until the transplant is completed.[108] The organ would become trust *res nullius*; a thing owned by no one but held in trust for the recipient.

A further categorical distinction must be made between tissue that is removed permanently from the body and tissue that has been

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[104] For the civil law, *see* P.A. Molinari, *Le droit de la personne sur son image en droit québécois et français* (1977) 12 R.J.T. 95. For the common law, *see* D. Vaver, *What's Mine Is Not Yours: Commercial Appropriation of Personality Under the Privacy Acts of British Columbia, Manitoba, and Saskatchewan* (1981) 15 U.B.C. L. REV. 241 and *Athans* v. *Canadian Adventure Camps Ltd* (1977), 17 O.R. (2d) 425, 80 D.L.R. (3d) 583 (H.C.).

[105] For the civil law, *see Tremblay* v. *Boivin* (1960), 98 C.S. 235. For the common law, *see* R.A. Brown, THE LAW OF PERSONAL PROPERTY, 3d ed. (Chicago: Callaghan, 1975) at 13.

[106] This is similar to how the law views property rights in a wild animal. A wild animal that is within someone's possession is owned by that person. But, should the wild animal escape or be set free, it becomes *res nullius*. Only when possession of the wild animal is re-established does the animal lose its *res nullius* status: *see* Brown, *ibid.* at 18.

[107] A. Berger, ed., TRANSACTIONS OF THE AMERICAN PHILOSOPHICAL SOCIETY: ENCYCLOPEDIC DICTIONARY OF ROMAN LAW, vol. 43, part 2 (Philadelphia: American Philosophical Society, 1953) at 679.

[108] For a general background in common law trusts, *see* A.H. Oosterhoff & E.E. Gillese, TEXT, COMMENTARY AND CASES ON TRUSTS, 3d ed. (Toronto: Carswell, 1987). For civil law trusts, *see* Arts. 981a-981n, *C.C.L.C.*

removed temporarily for purposes other than transplantation, with the intention that it will be returned to the same person. Temporary removal may arise from either an unintentional event such as the accidental amputation of a limb or by an intentional event such as blood storage for use in future surgery. In these situations, the patient would be both the donor and the recipient; the person in possession during the interim would be the trustee. For example, if a person withdraws blood to be stored for future use in its original capacity, the law will regard the blood as being held in trust.

The benefits of declaring a functional unit of bodily material *res nullius* is that it will continue to serve humanity (for example, organ transplant and blood transfusion) without suffering from the consequences that occur if property rights were deemed to exist in the human body. The lack of property rights in the body will bar the formation of any legal open market in human tissue. As well, classifying tissue as *res nullius* will prohibit donors from claiming rights in their transplanted tissue at a later date.

Human tissue that is permanently removed from a body is *res communes omnium* and is not, therefore, subject to any claims of ownership. Permanent removal of human tissue falls within the third level of classification. In a situation such as *Moore*, nobody would own the spleen or the blood, but they could be used by anyone who possessed them; their status would be identical to that of air or light.

C. The Third Level

The third level of classification is comprised of tissues and substances that are removed permanently from the human body and that are deemed *res communes omnium*. This classification allows human material to be used in conjunction with technology to generate property rights in the product. Only after an object deemed *res communes omnium* is transformed by human endeavor will some form of property rights be created. This is a key distinction between matter that is deemed *res communes omnium* and matter that is deemed *res nullius*. Matter deemed *res nullius* need not be transformed in any way in order to be useful to humanity; rather, it serves its function in much its original form.

At the cellular level, the functional unit being exploited is contained within the individual cells, not in the collection of cells as is the case with an organ or blood. At this level, many types of human cells share much in common with other forms of life and are not even unique to the species *homo sapiens*. In fact, some proteins are so similar in structure that they are identical to those found within other species.[109]

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[109] A. L. Lehninger, PRINCIPLES OF BIOCHEMISTRY (New York: Worth, 1982) at 137.

At this level, the matter must be declared *res communes omnium*, that is, the common property of all humans.[110] Examples of these things are air, flowing water and the high seas. An example of matter at the cellular level which is *res communes omnium* is found in the information contained within the genetic code. Property rights will arise only if the material is transformed in some way, such as by creating a cell-line to multiply the number of cells or by actually extracting the RNA or DNA and cloning the genetic material in bacterial cells.

Never in the history of humankind, have scientists or anyone else been given rights to any pieces of information generated from Nature; they have merely been given credit for finding them. This concept was expounded by the United States Supreme Court in *International News Service* v. *The Associated Press* where it stated that:

> The general rule of law is, that the noblest of human productions — knowledge, truths ascertained, conceptions, and ideas — become, after voluntary communication to others, free as the air to common use. Upon these incorporeal productions the attribute of property is continued after such communication only in certain classes of cases where public policy has seemed to demand it. These exceptions are confined to productions which, in some degree, involve creation, invention, or discovery. But by no means all such are endowed with this attribute of property.[111]

The act of cultivating information ordinarily deemed *res communes omnium* creates intellectual property that can be claimed under the *Copyright Act*.[112] An analogous process occurs every day in the business of news reporting. Property in news matter is recognized to be of a dual character. The substance of the information respecting current events contained in a literary production is not the creation of the writer, but is a report of matters ordinarily deemed *publici juris*. Property rights are created when a person exploits this information by transforming it into written text. The particular collocation of words in which the writer has communicated the information creates property rights by virtue of the *Copyright Act*.[113]

How could the structure of property rights in news matter be superimposed onto the cellular matter of the human body at this third level? There are many parallels that can be drawn between the information contained within the news item, and the information that is contained within genetic material. In the first place, *res communes omnium* has been defined as "things incapable of appropriation, such

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[110] *Supra*, note 107 at 667.

[111] 248 U.S. 215 at 250, 63 L.Ed. 211 at 225 (1918) [hereinafter *International News* cited to U.S.]. Although this is from a dissenting judgment, the majority also accepts this general proposition, 248 U.S. 215 at 233-34.

[112] R.S.C. 1985, c. C-42, *as am.* S.C. 1988, c. 15.

[113] *Supra*, note 111 at 254-55.

as light or air".[114] Similarly, "[w]hen a thing is common property, so that any one can make use of it, it is said to be *publici juris*, as in the case of light, air and public water."[115] Therefore, the judicial pronouncement in *International News* that information is held to be *publici juris* strongly parallels the deeming of information in human tissue *res communes omnium*. Second, the scientists involved in the *Moore* case are claiming ownership in the cell-line and products generated therefrom (originating from the spleen cells and the RNA information contained within) much in the same way a news-gathering agency claims a right in the news it has collected and collocated. Indeed, this notion is well founded in law as further stated in *International News*:

> Not only do the acquisition and transmission of news require elaborate organization and a large expenditure of money, skill, and effort; not only has it an exchange value to the gatherer, dependent chiefly upon its novelty and freshness, the regularity of the service, its reputed reliability and thoroughness, and its adaptability to the public needs; but also, as is evident, the news has an exchange value to one who can misappropriate it.[116]

Thus, in the same way that the information in a newspaper article is held to be *publici juris*, the information contained within the cellular RNA would be deemed *res communes omnium*. Transformation of this information into either a newspaper article or a synthetic piece of DNA, respectively, reduces it to a form of property that is capable of ownership. The newspaper article is held to be property under the *Copyright Act*, whereas the new DNA would enjoy property rights under the *Patent Act*.[117]

It has been demonstrated that there are three distinct levels at which one could classify the substance that constitutes humans, distinguished on the basis of uniqueness. First, there is the level of the unique person, to which each and every individual can lay claim. Next, there is the level of functional human bodily material in which each unit is equivalent from person to person, regardless of race, color, creed, or place of habitation. Finally, there is the level of cellular

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[114] J. Burke, JOWITT'S DICTIONARY OF ENGLISH LAW, vol. 2, 2d ed. (London: Sweet & Maxwell, 1977) at 1556.

[115] *Ibid.* at 1465.

[116] *Supra*, note 111 at 238. This American view of property rights is reflected in the Exchequer Court of Canada decision in *Canadian Admiral Corp.* v. *Rediffusion Inc.*, [1954] Ex. C.R. 382 at 390-91, 20 C.P.R. 75 at 82-83 (T.D.); this applies to both civil law and common law jurisdictions in Canada, as intellectual property is under federal jurisdiction pursuant to ss. 91(22) and (23) of the *Constitution Act, 1867* (U.K.), 30 & 31 Vict., c. 3. *Compare* D. Smith, *Copyright Protection for the Intellectual Property Rights to Recombinant Deoxyribonucleic Acid: A Proposal* (1988) 19 ST MARY'S L.J. 1083.

[117] R.S.C. 1985, c. P-4.

material and its contents, which has equivalent counterparts with other forms of life, and thus is not unique to *homo sapiens*.

Thus, in order to protect the misuse of humankind and its bodily material, it is suggested that this analytical approach be adopted in defining property rights in human tissue and bodily substances. The proposed classifications prevent the creation of a market for body parts and substances, yet allow for the secure growth of commercial biotechnological research.

VI. Conclusion

The commercialization of biomedical investigation has added a new dimension to the field of research. On one hand, it has brought large amounts of money to the field and, thus, stimulated further progress. On the other hand, it has brought with it all the pressures that are common to a free market.

All medical research for humans relies on information gathered through the use of human tissue at some point. Though ideas can be developed employing animal models or cultured cell-lines, initial and ultimate tests must be made with human tissue. Recognizing property rights, even "limited commerciality" rights in human tissue and bodily substances, will subject all medical research to the omnipresent pressures of the marketplace. This would be a grave mistake, for which society would pay the price.

A person who has his or her tissue or bodily substances used by a researcher cannot be allowed to be paid for the use of such material. Recently, in the case of *Moore*, the courts granted property rights in human tissue so as to allow the plaintiff to succeed in a tort action. This could open the door to creating a human tissue and bodily substances market, the full extent of which could rationally extend to the sale of tissue such as foetuses. In addition, and more importantly for the health of our society, financial pressures may coerce people into removing bodily materials, thereby placing their health at risk for a profit.

In the common law jurisdictions of Canada neither case law nor statutes appear to extend any property rights over the human body, except in very limited circumstances. Canadian civil law reflects similar uneasiness when considering whether real rights exist in the human body, as evidenced in both the case law and the *C.C.L.C.* The only willingness expressed by both the common law and civil law jurisdictions to the possibility of allowing property rights in human bodily material concerns highly regenerative substances such as blood. Until either legislators or courts address issues such as those in *Moore*, the Canadian position in this area will remain unclear.

In order to protect the misuse of human tissue and bodily material, while at the same time allowing the research community to flourish, it has been suggested that the legal community analytically classify on

three levels, by degree of uniqueness, the substance that constitutes humans. The first level is recognized as unique to a person; the second level, the level of functional bodily material, is unique to humans; and the third level, the level of cellular material, is unique to life. In order to protect against the exploitation of the latter two classifications for commercial gain, it has been further suggested that the legal community deem the material belonging to the second level *res nullius*, and the material belonging to the third level *res communes omnium*.