The Failed Search for the Perfect Analogy: More Reflections on the Unusual Case of John Moore

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INTRODUCTION

Historically, developments in medical technology have required parallel developments in the law. Techniques and technologies producing medical breakthroughs lead to legal questions concerning their appropriate use. For example, both the ability to transplant human organs and the development of technology that "artificially" prolongs life created a number of ethical and legal dilemmas that continue to generate controversy.¹

The unusual case of Moore v. Regents of the University of California² opens a new chapter in this tradition. Made possible only through advances in genetic engineering, the dispute in Moore poses the unique question "should an individual profit from the unique genetic characteristics of his own cells?"

This Note criticizes courts and commentators that have attempted to answer this novel question by the application of existing law. To provide context the Note first reviews the Moore case.³ Next, the Note specifically questions the propriety of using existing law relating to the disposition of human tissue, the right of publicity, and an individual's right to privacy, as bases for molding new law⁴ and concludes that all are ill suited to the task of deciding whether an individual is entitled to profit from the commercial use of his unique biology.

Additionally, the Note argues that while public policy considerations should provide guidelines for creating new law to govern

³ See infra notes 7-25 and accompanying text.
⁴ See infra notes 29-61 and accompanying text.
this area, the California Supreme Court’s public policy arguments, offered in Moore, are flawed. The Note concludes that legislatures are more appropriate forums for evaluating these questions and urges that they accept this responsibility.

I. Moore v. Regents of the University of California

In October of 1976, John Moore (Moore) received treatment for hairy-cell leukemia at the UCLA Medical Center. In the course of treatment, Moore’s attending physician, Dr. David W. Golde (Golde), determined that Moore’s cells possessed unique properties and were of potentially great value. Golde did not, however, inform Moore of his appraisal, nor did he reveal his interest in harnessing the cells’ properties for commercial exploitation.

To slow the progress of Moore’s disease, Golde removed Moore’s spleen. Prior to surgery, Golde and research associate Shirley G. Quan (Quan), both employees of the University of California, arranged to obtain portions of the removed organ.

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5 See infra notes 62-76 and accompanying text.
6 See infra notes 77-78 and accompanying text.
7 Hairy-cell leukemia is a form of cancer that typically affects the host’s bone marrow, spleen, liver, and peripheral blood. See Dorland’s Illustrated Medical Dictionary 914 (27th ed. 1988).
8 During Moore’s hospitalization, “blood, blood serum, skin, bone marrow aspirate, and sperm” were withdrawn from his body. See Moore v. Regents of the Univ. of Cal., 793 P.2d 479, 481, 271 Cal. Rptr. 146, 148 (1990), cert. denied, , 111 S. Ct. 1388 (1991).
9 Moore v. Regents of the Univ. of Cal., 249 Cal. Rptr. 494, 503 (Cal. Ct. App. 1988), rev’d, 793 P.2d 479, 271 Cal. Rptr. 146 (1990), cert. denied, , U.S. , 111 S. Ct. 1388 (1991). Moore’s cancerous blood cells had features of T-lymphocytes. Such an occurrence has been reported previously only once in the world’s medical literature. 88 Annals of Internal Medicine 323, 325 (1978). Normally, such cells have morphologic features of B-lymphocytes. W. Williams, Hematology 999 (3d ed. 1983). “A T-lymphocyte is a type of white blood cell. T-lymphocytes produce lymphokines, or proteins that regulate the immune system. Some lymphokines have potential therapeutic value. If the genetic material responsible for producing a particular lymphokine can be identified, it can sometimes be used to manufacture large quantities of the lymphokine through the techniques of recombinant DNA.” Moore, 793 P.2d at 481 n.2, 271 Cal. Rptr. at 148 n.2.
10 Moore did sign a consent form for subsequent tissue extractions. He was never informed, however, of Golde’s commercial interest in his cells. Moore, 793 P.2d at 481-82, 271 Cal. Rptr. at 148-49.
11 Id. at 481, 271 Cal. Rptr. at 148.
12 Id., 271 Cal. Rptr. at 148.
Golde and Quan wanted the excised tissue as a source from which a cell line replicating Moore's DNA could be produced.\textsuperscript{13}

Golde and Quan continued their research, and Moore, who remained unaware of the ongoing commercial research, returned to UCLA several times over the next seven years at Golde's direction.\textsuperscript{14} During each visit, Golde took additional tissue samples, including "blood, blood serum, skin, bone marrow aspirate, and sperm."\textsuperscript{15} As with the splenic tissue, Golde and Quan used these substances to develop the commercial potential of Moore's unique cells and eventually established a cell line from Moore's T-lymphocytes in August of 1979.\textsuperscript{16} Labeling it the "Mo" cell line, a reference to its source, Moore, and listing Golde and Quan as inventors, the Regents of the University of California\textsuperscript{17} patented the cell line.\textsuperscript{18} Golde and the Regents then entered into commercial agreements with Genetics Institute and Sandoz Pharmaceuticals.\textsuperscript{19} The potential value of products derived from the patented cell line has been estimated to exceed three billion dollars.\textsuperscript{20}

In September of 1984, Moore sued Golde, Quan, the Regents, Sandoz, and Genetics asserting thirteen causes of action.\textsuperscript{21} Among

\begin{itemize}
\item \textsuperscript{13} Id., 271 Cal. Rptr. at 148. Created through genetic engineering, a cell line produces cells capable of continuous culture, immortalizing the rare and valuable qualities of a particular cell. For a discussion of the technology for doing so, see generally United States Congress, Office of Technology Assessment, \textit{New Developments in Biotechnology: Ownership of Human Tissues and Cells—Special Report}, OTA-BA-337, at 31-46 (1987) [hereinafter OTA].
\item \textsuperscript{14} Id., 793 P.2d at 481, 271 Cal. Rptr. at 148.
\item \textsuperscript{15} Id., 271 Cal. Rptr. at 148.
\item \textsuperscript{16} Id., 271 Cal. Rptr. at 148.
\item \textsuperscript{17} Id., 271 Cal. Rptr. at 148.
\item \textsuperscript{18} It is established policy that Universities obtain the patents for inventions of their research staff. The patent was issued on March 20, 1984 (U.S. Patent No. 4,438,032 (Mar. 20, 1984)). \textit{Moore}, 793 P.2d at 482, 271 Cal. Rptr. at 149.
\item \textsuperscript{19} \textit{Moore}, 793 P.2d at 482, 271 Cal. Rptr. at 149.
\item \textsuperscript{20} Under the agreement with Genetic Institute, Golde "acquired the rights to 75,000 shares of common stock." Genetics Institute agreed to pay Golde and the Regents 'at least $350,000 over three years, including a pro-rata share of [Golde's] salary and fringe benefits, in exchange for ... exclusive access to the materials and research performed' on the cell line and products derived from it." On June 4, 1982, Sandoz was added to the agreement, and compensation "to Golde and the Regents was increased by $110,000." Id., 271 Cal. Rptr. at 149.
\item \textsuperscript{21} \textit{Moore} sought redress under theories of (1) conversion, (2) lack of informed consent, (3) breach of fiduciary duty, (4) fraud and deceit, (5) unjust enrichment, (6) quasi-contract, (7) breach of an implied covenant of good faith and fair dealing, (8) intentional inflictions of emotional distress, (9) negligent misrepresentation, (10) interference with prospective advantageous economic relationships, (11) slander of title, (12) accounting, and (13) declaratory relief. \textit{Id.} at 482 n.4, 271 Cal. Rptr. at 149 n.4.
\end{itemize}
other things, Moore contended that the unauthorized use of his cells was a conversion. While the trial court declined to accept this novel suggestion, the California Court of Appeal was more receptive. Holding that Moore's excised cells were his personal property, the court found no reason to reject his conversion claim. The California Supreme Court, however, reversed the appeals court on this point and held that while Moore's complaint stated a cause of action for breach of physician's disclosure obligations, it did not state a cause of action for conversion under existing law, nor did it warrant expanding the tort to remedy Moore's unique situation.

II. APPROACHES TO THE QUESTION

INTRODUCTION

In the wake of the California Supreme Court's decision, one thing is clear: A patient must be fully informed of any commercial interest his physician has in his tissue, and the patient must have

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22 Conversion is "[a]n intentional exercise of dominion or control over a chattel which so seriously interferes with the right of another to control it that the actor may justly be required to pay the other the full value of the chattel." RESTATEMENT (SECOND) OF TORTS § 222A (1965). Conversion is defined alternatively as "a distinct act of dominion wrongfully exerted over another's personal property in denial of or inconsistent with his title or rights therein, ... without the owner's consent and without lawful justification." 18 AM. JUR. 2D Conversion § 1 (1985).

23 Moore, 249 Cal. Rptr. at 494. The trial court sustained the defendants' motions to dismiss. The remaining causes of action that incorporated the alleged conversion were rejected as well. Id.

24 Id. at 503-07. Additionally, Moore invited the appeals court "to fashion a new remedy to prevent the breach of duties and deceptions alleged in the Complaint from being rewarded with commercial profit." Id.

25 Moore, 793 P.2d at 493, 271 Cal. Rptr. at 160. The essence of the court's fiduciary breach holding was that in order for a patient to make an informed consent, he must be aware of all the factors that might motivate the physician to recommend a given procedure. Id. at 483, 271 Cal. Rptr. at 150. The underlying fear is that a physician who could profit from a patient's tissue may be tempted to recommend procedures that are unnecessary or harmful. "Certainly a sick patient deserves to be free of any reasonable suspicion that his doctor's judgment is influenced by a profit motive." Id., 271 Cal. Rptr. at 150 (citing Magan Medical Clinic v. California State Bd. of Medical Examiners, 57 Cal. Rptr. 256, 263 (Cal. Ct. App. 1967)). "The possibility that an interest extraneous to the patient's health has affected the physician's judgment is something that a reasonable patient would want to know in deciding whether to consent to a proposed course of treatment." Id. at 484, 271 Cal. Rptr. at 151. The court also held, "Even if the splenectomy had a therapeutic purpose, it does not follow that Golde had no duty to disclose his additional research and economic interests." Id. at 486, 271 Cal. Rptr. at 153.
the power to veto the use of his tissue for any purpose of which he does not approve.\textsuperscript{26} This position also had been taken by the California Court of Appeal. Even Dr. Golde implicitly acknowledged its validity by arguing not that Moore had no right to object to the use of his tissue, but that Moore's consent to use for scientific research could fairly be construed as including research for commercial purposes.\textsuperscript{27}

The question, which continues to generate controversy, is whether a source is entitled to share in profits derived from the commercial exploitation of his own body.\textsuperscript{28} This question has been debated thoroughly by commentators and the courts. This section of the Note examines some of the approaches taken in addressing this question and criticizes some of the imaginative attempts to apply existing law by analogy.

A. Applying Existing Law by Analogy

Confronted with a truly novel dilemma, the parties and courts searched for existing law to apply to the unique facts presented by Moore v. Regents of the University of California. Human tissue, property, publicity, and privacy law all have been applied through analogy. While some of these analogies initially are appealing, close scrutiny indicates that their relevance is limited.

1. Human Tissue Law

In rejecting Moore's claim to a property right in his cells, the California Supreme Court directed attention to statutes governing the disposition of human tissue, stating, "It is these specialized statutes, not the law of conversion, to which courts ordinarily should and do look for guidance on the disposition of human biological materials."\textsuperscript{29} Having made this sweeping observation,

\begin{itemize}
  \item \textsuperscript{26} Moore v. Regents of the University of California, 793 P.2d 479, 485, 271 Cal. Rptr. 146, 152 (1990), cert. denied, ___ U.S. ___, 111 S. Ct. 1388 (1991).
  \item \textsuperscript{28} The term "source" is used in this Note to mean the person whose cells are being used.
  
  After Moore, at least in California, a patient has no right to share in any commercial return generated by the use of his cells. Damages arising from the breach of a physician's fiduciary duty are the only compensation a source can expect. See Moore, 793 P.2d at 479, 271 Cal. Rptr. at 146.
  \item \textsuperscript{29} Id. at 489, 271 Cal. Rptr. at 156. The word "tissue" is used in this Note to mean any part of or substance derived from the human body.
\end{itemize}
the court did little to explain why these statutes should control.\(^{30}\) The underlying rationale can be inferred, however, from two statutes cited in the opinion’s footnotes.

The first is the Uniform Anatomical Gift Act (UAGA), which permits “any competent adult to make a gift to take effect upon death—of all or any part of his body for purposes such as medical education, research, and transplantation.”\(^{31}\) The court noted that

\(^{30}\) In the body of the opinion itself, the court applied only one human tissue statute, which declares, “Notwithstanding any other provision of law, recognizable anatomical parts, human tissues, anatomical human remains, or infectious waste following conclusion of scientific use shall be disposed of by interment, incineration, or any other method determined by the state department to protect the public health and safety.” \(\text{Id. at 491, 271 Cal. Rptr. at 158.}\) The court went on to say that despite the fact that the statute was not written to cover a situation such as Moore’s, “[O]ne cannot escape the conclusion that the statute’s practical effect is to limit, drastically, a patient’s control over excised cells. By restricting how excised cells may be used and requiring their eventual destruction, the statute eliminates so many of the rights ordinarily attached to property that one cannot simply assume that what is left amounts to ‘property‘ or ‘ownership‘ for purposes of conversion law.” \(\text{Id. at 491-92, 271 Cal. Rptr. at 158-59 (citing CAL. HEALTH & SAFETY CODE § 7054.4 (West 1970 & Supp. 1991)).}\) The court seemed relieved that slavish adherence to the technical requirements of this regulation would preempt any further consideration of the issue. Oddly, the court undermined the strength of its own argument by acknowledging that the “[l]egislature did not specifically intend this statute to resolve the question of whether a patient is entitled to compensation for the nonconsensual use of excised cells.” \(\text{Id. at 491, 271 Cal. Rptr. at 158.}\)

The court offered one other objection to Moore’s claim, under existing law. The court said, “[T]he subject matter of the Regents’ patent—the patented cell line and the products derived from it—cannot be Moore’s property,” because they were “both factually and legally distinct from the cells taken from Moore’s body.” \(\text{Id. at 492, 271 Cal. Rptr. at 159.}\) The essence of the court’s argument was that federal law prohibits the patenting of naturally occurring organisms. Only organisms that are the product of “human ingenuity” are patentable. \(\text{Id., 271 Cal. Rptr. at 159 (citing Diamond v. Chakrabarty, 447 U.S. 303, 309-10 (1980) (first case to allow patenting of genetically engineered bacterium). The California Supreme Court viewed the patent as an “authoritative determination that the cell line is the product of invention” and thus implicitly distinct from Moore’s cells. Id. at 493, 271 Cal. Rptr. at 160. Such deference to a governmental agency is reminiscent of A Miracle on 34th Street, in which a judge, terrified by the likely political consequences of declaring the lovable Macy’s Kris Kringle a fake, jumped at the opportunity to rule that the defendant must be Santa Claus because the U.S. Post Office delivered him Santa’s mail!}\)

The court specifically declined to follow the dissent’s suggestion that the court expand Congress’ definition of “joint inventor” \((35 \text{ U.S.C. § 116 (1952)) to include the donor of human source biological materials. Moore, 793 P.2d at 493 n.37 271 Cal. Rptr. at 160 n.37 (quoting Id. at 511-12, 271 Cal. Rptr. at 178-79 (Mosk, J., dissenting)). The court noted that exclusive power to change patent law lies with Congress and the federal courts. Id. at 493 n.37, 271 Cal. Rptr. at 160 n.37 (citing U.S. Const. art. I, § 8, cl. 8; 28 U.S.C. §§ 1295, 1338 (1982)).}\)\(^{11}\)

\(^{11}\) OTA, supra note 13, at 75 (discussing 1968 version of UAGA) (emphasis added). \(\text{See also UAGA §§ 1, 6 (1987) (enacting similar language).}\)

Not mentioned in the footnotes is the NOTA, supra note 1, that also “prohibits the sale of a human kidney, liver, heart, lung, pancreas, bone marrow, cornea, eye, bone, and
the California version of the UAGA does not permit the donor to receive “valuable consideration” for this transfer.\textsuperscript{32}

The other statute, Section 1606 of the Health & Safety Code, regulates transactions relating to human blood, declaring, “The procurement, processing, distribution, or use of whole blood, plasma, blood products, and blood derivatives for the purpose of injecting or transfusing the same . . . is declared to be, for all purposes whatsoever, the rendition of a service . . . and shall not be construed to be, and is declared not to be, a sale . . . for any purpose or purposes whatsoever.”\textsuperscript{33} The implication that can be drawn from the Court’s reference to these statutes seems to be that since human tissue statutes prohibit sales of human tissue, and cells are human tissue, cells may not be sold (and if Moore received compensation for his tissue it amounted to a sale). While the logic is straightforward, its mechanical application ignores the policy reasons underlying these statutes and produces an unnecessarily harsh result.

The use of tissue for the creation of cell lines can be distinguished from other uses of tissue, such as for organ transplantation.\textsuperscript{34} The distinguishing factors can be broken into two groups: those affecting potential organ recipients and those affecting potential organ donors. The social policy used to justify prohibiting the sale of human organs highlights these differences. In the first group, the fear is that permitting the sale of organs would “undermine the nation’s system of voluntary organ donation,”\textsuperscript{35} and result in an inability of the poor to procure organs.\textsuperscript{36} In the second group, the concern is that the poor, desperate for money, would jeopardize their health by selling their own body parts.\textsuperscript{37}

While these fears are not unjustified, they have no application to the cell line setting. A “cell line” is not a “body part” that can

\begin{itemize}
\item \textsuperscript{32} OTA, \textit{supra} note 13, at 75. “This prohibition does not apply to sales of human tissues and cells for research, commercial, or other non-transplantation purposes.” \textit{Id.}
\item \textsuperscript{33} \textit{Moore}, 793 P.2d at 489 n.22, 271 Cal. Rptr. at 156 n.22.
\item \textsuperscript{34} \textit{Id.} at 489 n.23, 271 Cal. Rptr. at 156 n.23 (citing \textit{CAL. HEALTH & SAFETY CODE} § 1606 (West 1990)).
\item \textsuperscript{35} There are also practical reasons that these statutes do not apply to a cell source. The UAGA only governs gifts of tissue at death. Additionally, the chairman of the UAGA’s drafting committee has indicated that the UAGA was intended neither to encourage nor to prohibit sales. See Statson, \textit{The Uniform Anatomical Gift Act}, 23 \textit{Bus. Law.} 919, 927 (1968).
\item \textsuperscript{36} OTA, \textit{supra} note 13, at 76.
\item \textsuperscript{37} \textit{Id.}
\end{itemize}
be utilized by one person alone. The ability to reproduce indefinitely outside of the body is the cell line’s defining characteristic.\textsuperscript{38} It is a mechanism that creates biological material for scientific research.\textsuperscript{39} While cell lines may have individual sources, they do not go to individual “recipients.” Products derived from a cell line can be used to treat a potentially unlimited number of patients.\textsuperscript{40} Consequently, any fear of pitting rich against poor in competition for limited tissue is misplaced.

The second fear, that an organ source will injure himself to make money, is equally inapposite in the case of cell lines. Unlike organ transplantation, which necessarily preempts any future use of the organ by the source, cell lines often can be created from wholly replenishable bodily tissue (e.g., blood).\textsuperscript{41} Consequently, the removal of a sample, necessary for development of the cell line, often poses no health risk to the source. Also, in Moore’s case, the cell line was developed from splenic tissue that, although not replenishable, was diseased and removed for therapeutic reasons.\textsuperscript{42}

In sum, while it is understandable that a court might want to use existing law governing the transplant of organs as a starting place, close scrutiny reveals that complete reliance is inappropriate. The social policies that support these laws—the desire not to undermine the nation’s voluntary system of organ donation and the desire to prevent impoverished individuals from selling their organs—are not served by placing the same restrictions on tissue used to create cell lines. Not only are the benefits derived from cell lines not limited to a single individual; the process for procuring the tissue poses little risk to the source.

2. Publicity Law

While those that oppose allowing sources to profit from their cells have focused on existing human tissue law,\textsuperscript{43} those that support allowing sources to profit have suggested that such a right is the logical extension of the right of publicity. This extension suffers, however, from the same flaw that undermines the use of

\textsuperscript{38} See id. at 33.
\textsuperscript{39} Id. at 35.
\textsuperscript{40} Id.
\textsuperscript{41} Id. at 33.
\textsuperscript{42} Moore, 793 P.2d at 486 n.11, 271 Cal. Rptr. at 153 n.11.
\textsuperscript{43} See supra notes 29-42 and accompanying text.
human tissue law: the social policy justifying the existence of the right is not advanced by its extension to cell lines.

The right of publicity "recognizes the commercial value of the picture or representation of a prominent person or performer, and protects his proprietary interest in the profitability of his public reputation or 'persona.'" The term, "right of publicity," was coined by the court in *Haelan Laboratories v. Topps Chewing Gum, Inc.* The court stated that separate from the right of privacy,

a man has a right in the publicity value of his photograph, [and]

... it is common knowledge that many prominent persons (especially actors and ball players), far from having their feelings bruised through public exposure of their likenesses, would feel sorely deprived if they no longer received money for authorizing advertisements, [which] popularized[ed] their countenances. . . .

The California Court of Appeal adopted the novel outlook that Moore had an interest in his genetic material similar to the right of publicity. In support of this contention the court cited *Motshchenbacher v. R.J. Reynolds Tobacco Company* and *Lugosi v. Universal Pictures.* These cases supported "an individual's proprietary interest in his own identity," and involved the unauthorized use of another's likeness for profit. The California Court of

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45 202 F.2d 866, 868 (2d Cir. 1953), cert. denied, 346 U.S. 816 (1953).
48 498 F.2d 821 (9th Cir. 1974).
50 Motshchenbacher v. R.J. Reynolds Tobacco Co., 498 F.2d 821, 825 (9th Cir. 1974). While these cases protected a proprietary interest in one's own identity, both courts, relying on Prosser, considered any dispute over the appropriate label for such an interest "pointless." Lugosi v. Universal Pictures, 603 P.2d 425, 428, 160 Cal. Rptr. 323, 326 (1979) (citing Prosser, *Privacy*, 48 Calif. L. Rev. 383, 406 (1960)). The *Motshchenbacher* court stated, "We need not decide whether [California Courts] would [protect such an interest] under the rubric of 'privacy,' 'property,' or 'publicity'; we only determine that they would recognize such an interest and protect it." *Motshchenbacher*, 498 F.2d at 825-826. The court in *Lugosi* similarly "avoided determining whether the interest of Bela Lugosi in his name, face, likeness and Count Dracula persona, . . . was 'property.'" *Moore*, 249 Cal. Rptr. at 508 (discussing *Lugosi*, 603 P.2d 425, 160 Cal. Rptr. 323 (1979)).
51 In *Lugosi*, the widow and son, as heirs of Bela Lugosi, alleged that four years after the actor's death in 1956, Universal Pictures began entering into "licensing agreements with
Appeals reasoned that because DNA is the source of all individual characteristics, which are protected by cases such as Motshchenbacher and Lugosi, the source itself must be protected as well.\textsuperscript{52} The court argued:

Plaintiff's cells and genes are a part of his person. Putting aside the effect of environment, "[a]n individual's genotype contains all of the genetic instructions essential for human development, growth, and reproduction . . . . All human traits, including weight, strength, height, sex, skin color, hair texture, fingerprint pattern, blood type, intelligence and aspects of personality (for example, temperament), are ultimately determined by the information encoded in the DNA." If the courts have found a sufficient proprietary interest in one's persona, how could one not have a right in one's own genetic material, something far more profoundly the essence of one's human uniqueness than a name or a face.\textsuperscript{53}

\textsuperscript{52} Moore, 249 Cal. Rptr. at 508. In the alternative, the defendants argued that even if Moore's spleen were his personal property, its surgical removal constituted an abandonment. \textit{Id.} at 509. The court, in response, emphasized that the "essential element of abandonment is the intent to abandon," and also observed, "The owner of the property abandoned must be 'entirely indifferent as to what may become of it or as to who may thereafter possess it.'" \textit{Id.} (citing Martin v. Cassidy, 307 P.2d 981, 984 (Cal. Dist. Ct. App. 1957). The court held that consent to surgical removal of a diseased organ "does not necessarily imply an intent to abandon," and noted Moore's contention that had he "known of defendants' intentions regarding the spleen, he would not have consented to its removal." \textit{Id.} The court went on to say, "While it may be true that many people under such circumstance would be entirely indifferent to the disposition of removed tissue, we cannot assume plaintiff shared this state of mind." \textit{Id.} As to the plaintiff's expectations, the court stated, "In California, absent evidence of a contrary intent or agreement, the reasonable expectation of a patient regarding tissue removed in the course of surgery would be that it may be examined by medical personnel for treatment purposes, and then promptly and permanently disposed of by interment or incineration." \textit{Id.} The court concluded that "simple consent to surgery does not imply a consent to medical research on the patient's tissues unrelated to treatment nor to commercial exploitation of the patient's tissues." \textit{Id.} at 510. Additionally, "If the defendants used the spleen, or part of it, for a purpose beyond plaintiff's consent, then there has been a conversion." \textit{Id.} at 511.

\textsuperscript{53} Id. at 508 (citation omitted) (quoting G. EELIN, GENETIC PRINCIPLES—HUMAN AND SOCIAL CONSEQUENCES 406-07 (1984)).
This sentiment is echoed by numerous commentators,\textsuperscript{54} including one that has gone as far as labeling this extension of the right of publicity the "right of commerciality":\textsuperscript{55}

Like the right of publicity, the right of commerciality would protect the individual from the unauthorized exploitation of traits that are unique to the individual. Both rights protect purely pecuniary values in the human body; however, the right of publicity deals with the body's appearance while the right of commerciality is concerned more with the body's physical attributes.\textsuperscript{56}

While this analogy is extremely appealing, it is defective in much the same way as the prior analogy to organ transplants: the underlying social policy that courts have used to justify the existence of the right of publicity is not furthered by its extension to genetic material. The public policy underlying the right of publicity is society's desire to reward and encourage the development of talent.\textsuperscript{57} "The development of performing skills and the implementation of creative ideas often requires a substantial investment of time, energy and money. The greater the possibilities for personal profit, the more likely people are to pursue these creative, socially beneficial activities."\textsuperscript{58}

In obvious contrast to developed talent is the purely inherited cell. A cell's source cannot increase the value of his cells. Thus, earnings, which in the case of the right of publicity are incentive and reward, are simply windfall in instances where purely genetic characteristics are exploited.\textsuperscript{59}

3. Privacy Law

Some have suggested that privacy law should provide a remedy for someone like Moore. Because there is agreement that a source

\textsuperscript{54} See, e.g., Danforth, Cells, Sales, and Royalties: The Patient's Right to a Portion of the Profits, 6 YALE L. & POL'Y REV. 179 (1988); Howard, Biotechnology, Patients' Rights, and the Moore Case, 44 FOOD DRUG COSM. L.J. 331 (1989).

\textsuperscript{55} Comment, Toward the Right of Commerciality: Recognizing Property Rights in the Commercial Value of Human Tissue, 34 UCLA L. REV. 207 (1986).

\textsuperscript{56} Id. at 260.

\textsuperscript{57} 63A AM. JUR. 2d Property § 8 (1984).


\textsuperscript{59} The California Supreme Court also faulted the wrongful-publicity analogy on what it characterized as a misconception of the nature of the research and products involved. Moore, 793 P.2d at 490, 271 Cal. Rptr. at 157. The court argued that the end product of Golde's work was the manufacture of lymphokines, which, "unlike a name or a face, have the same molecular structure in every human being and the same, important functions in every human being's immune system." Id. at 490, 271 Cal. Rptr. at 157.
should have the right to veto use of his tissue, this body of law would apply only if cells were used over a source's objection. However, even in that situation, privacy law seems a poor tool for redress.

It has been stated that the "common law recognizes the individual's exclusive right to use what is inherently personal, and nothing is more personal than one's own genetic material." While this statement is true at one level, at another it is not. It may seem that nothing could be more "personal" than one's DNA, but the right of privacy is a right that deals with one's perceptions, and to that end, one's DNA is much less personal than a name or a face. Unlike a photograph of an individual's face, the molecular structure of an individual's DNA, like a fingerprint, is not recognizable to the public. Also, unlike a diary or love letter, the "publication" of an individual's genetic code is unlikely to be embarrassing.

B. Social Policy

In addition to the application of existing law through analogy, the courts evaluating Moore's claims discussed social policy considerations. The California Supreme Court argued that recognizing a property interest in Moore's cells would inhibit scientific research. The assumptions underlying the public policy arguments offered by the court are unfounded. Additionally, even if those assumptions were correct, other social policy considerations demand that sources be permitted to share in the profits derived from their cells regardless of the label given to such a right.

The court's primary public policy concern was the reach of liability and its effect on scientific research if recovery were allowed. Because conversion is a strict liability tort, the court argued that every time a researcher bought a product derived from a cell line he would "purchase[] a ticket in a litigation lottery." According to the court, fear of legal action would "threaten[] to destroy the economic incentive to conduct important medical re-

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60 See supra note 26 and accompanying text.
61 Danforth, supra note 54, at 193.
62 Moore, 793 P.2d at 493-97, 271 Cal. Rptr. at 160-64.
63 Id., 271 Cal. Rptr. at 160-64.
64 Id. at 495-96, 271 Cal. Rptr. at 162-63.
search," and the "exchange of scientific materials which still is relatively free and efficient, will surely be compromised if each cell sample becomes the potential subject matter of a lawsuit."^66

This argument is unsound for a number of reasons. As Justice Mosk pointed out in his dissent, nothing prohibits a purchaser of products from receiving complete information concerning the limits of the source's consent. Meticulous record-keeping is a prerequisite to scientific experimentation. Also, the danger to the scientific community is grossly overstated. The court's idyllic vision of the current availability of valuable biological materials ignores the fact that the very reason the defendants patented the Mo line was to ensure exclusive use. Since the United States Supreme Court authorized the patenting of biological products, the "free" exchange of scientific materials, for which the majority shows concern, has been inhibited by patent holders' desire to maximize the value of their products by restricting others' access to the materials.

Additionally, this concern will not apply to the great majority of cases in which cell lines or cell line products are purchased.

In the vast majority of instances the tissues and cells in existing repositories will not represent a potential source of liability because they will have come from patients who consented to their organ's use for scientific purposes under circumstances in which such consent was not tainted by a failure to disclose the known valuable nature of the cells.^71

^65 Id. at 495, 271 Cal. Rptr. at 162. The California Court of Appeal rejected the Regents' public policy concerns that "unencumbered access to human tissue for research is essential to progress and public health," declaring, "absent lawful authority, medical researchers are no more free to impose their priorities over the unconsented use of cells than any intruder on any other property." Moore, 249 Cal. Rptr. at 508 (emphasis in original). The court conceded that informed patients might decline to participate in important medical research, but it noted, "[T]he patient [has] that right." Id. at 508-09.

^66 Moore, 793 P.2d at 495, 271 Cal. Rptr. at 162 (citing OTA, supra note 13, at 52).

^67 Id. at 514, 271 Cal. Rptr. at 181.

^68 Id., 271 Cal. Rptr. at 181.

^69 As Justice Mosk pointed out in his dissent, the defendants indicated in their patent specifications, "At no time has the Mo cell line been available to other than the investigators involved with its initial discovery and only the conditioned medium from the cell line has been made available to a limited number of investigators for collaborative work with the original discoverers of the Mo cell line." Id. at 513, 271 Cal. Rptr. a5 180 (Mosk, J., dissenting).

^70 Id., 271 Cal. Rptr. at 180 (Mosk, J., dissenting) (referring to Diamond v. Chakrabarty, 447 U.S. 303 (1980)).

^71 Id. at 504, 271 Cal. Rptr. at 171 (Broussard, J., dissenting).
Strict liability would come into play only in the rare instance in which a patient does not make an informed consent, the patient's cells have considerable value, and the researcher that removes the cells conveys them to a third party.

Beyond the court's exaggeration of the risk is an indifference to the real-world consequences of such broad immunity from conversion liability. Even if there is some merit to the court's strict liability concern, it does not justify denying a conversion recovery from the party that, as in the Moore case, took the cells directly from the patient. As Justice Broussard pointed out in his dissent, "[T]hose policy considerations would not justify the majority's broad abrogation of all conversion liability for the unauthorized use of body parts."

Finally, even if the recognition of a patient's ownership rights in his own cells produces a marginal reduction in the incentive to conduct research, allowing the source to share financially advances other social policy interests that compensate for the theoretical loss. For example, the social policy of ensuring that citizens view our legal system as fair is promoted by not allowing the unjust enrichment of researchers at the expense of donors. While some argue that the sale of human tissue degrades the body by treating it as a commodity, it is important to remember that this is precisely what those that remove and exploit tissue are presently doing. Thus, there is only one real question at this stage: Who

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72 Id., 271 Cal. Rptr. at 171 (emphasis in original). One other factor tends to suggest that the threat to the economic incentive to conduct research is not as great as the majority suggests. Interestingly, the majority's own arguments belitling the source's contribution to the creation of cell lines is the source of this factor. "If, as the majority suggests, the great bulk of the value of a cell line patent and derivative products is attributable to the efforts of medical researchers and drug companies, rather than to the 'raw materials' taken from a patient, the patient's damages will be correspondingly limited, and innocent medical researchers and drug manufacturers will retain the considerable economic benefits resulting from their own work. Under established conversion law, a 'subsequent innocent converter' does not forfeit the proceeds of his own creative efforts, but rather 'is entitled to the benefit of any work or labor that he has expended on the [property] . . .'" Id. at 505, 271 Cal. Rptr. at 172 (citation omitted) (quoting 1 F. HARPER, F. JAMES, JR. & O. GRAY, THE LAW OF TORTS § 2.34, 234 (2d ed. 1986)).

73 OTA, supra note 13, at 132 (citing L.R. Kass, TOWARD A MORE NATURAL SCIENCE (1985) ("If a genetically engineered organism may be owned because it was genetically engineered, what would we conclude about a genetically altered or engineered human being?"). See also Danforth, supra note 54 (citing I. KANT, GROUNDWORK OF THE METAPHYSICS OF MORALS 96 (1964) ("Act so as to treat humanity, whether in thine own person or in the person of another, always as an end, never as a means only.").

74 United States v. Garber, 589 F.2d 843 (5th Cir. 1979), reh'g granted, 589 F.2d 843 (5th Cir. 1979), rev'd on other grounds, 607 F.2d 92 (5th Cir. 1979).
should profit? As Justice Broussard observed, "Far from elevating these biological materials above the marketplace, the majority's holding simply bars plaintiff, the source of the cells, from obtaining the benefit of the cells' value, but permits defendants . . . to retain and exploit the[ir] full economic value . . . ."75 It is difficult to imagine that the public will view this arrangement as just.76 Moreover, the passage of time and further advances in biotechnology are unlikely to soften this perception. As the creation of cell lines becomes more routine and the contributions of the scientist less awe-inspiring, the inequity will seem all the more acute.

CONCLUSION

In assessing the claims of John Moore, the parties and the courts sought support for their arguments in a number of areas of existing law. These attempts are ultimately unpersuasive. While a more appropriate analogy may be advanced in a future case, the efforts thus far have done more to obscure than to enlighten. The question of who may profit from the unique characteristics of an individual's DNA has not been answered adequately by the application of existing law.

Given the undeniably unique character of the legal question posed, it would seem wiser to abandon attempts to analogize and instead simply examine what social policies are advanced by permitting or denying a source this claimed right. To some extent the California Supreme Court did this. Unfortunately, its analysis relied heavily on unproven assumptions and is dubious at best.

For a variety of reasons, legislatures are more appropriate forums for consideration of the general question involved: whether a source should be permitted to share in profits, provided that there is informed consent. The legislative hearing process provides a forum for the testimony of all interested parties. More importantly, legislatures are free to evaluate the policy arguments without being restricted by the peculiar facts of any individual case. Because Moore's tissue was exploited without his consent, many of the

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75 Moore, 793 P.2d at 506, 271 Cal. Rptr. at 173 (Broussard, J., concurring and dissenting) (emphasis in original).
76 "If biotechnologists fail to make provision for a just sharing of profits with the person whose gift made it possible, the public's sense of justice will be offended and no one will be the winner." Id. at 516, 271 Cal. Rptr. at 183 (Mosk, J., dissenting) (footnote omitted) (citing Murray, Who Owns the Body? On the Ethics of Using Human Tissue for Commercial Purposes (Jan.-Feb. 1986) IRB: A Review of Human Subjects Research 5).
arguments in *Moore* focused on the presence of the elements of conversion. Necessarily, this required defining Moore's interest as "property" and resulted in what the supreme court described as an attempt to "force the round pegs of 'privacy' and 'dignity' into the square holes of 'property.'"\(^7\)

One commentator has suggested that legislatures adopt some form of licensing arrangement under which the researcher and the source would share any cell line profits.\(^7\) Whether legislatures adopt this type of arrangement or some other mechanism for distribution of profits, they must ensure that as long as the physician/researcher profits from the unique properties of a cell, the source of that cell is compensated as well. No sound policy arguments suggest otherwise.

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\(^7\) Danforth, *supra* note 54, at 198.