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THE HUMAN PROPERTY GAP*

I. INTRODUCTION

The body is the one thing that is truly and uniquely one's own. The law acknowledges this by creating penalties for interfering with another person's body and by permitting individuals to decide how, when, and for what purpose their bodies may be used. Individuals may recover in tort if their names, images, or likenesses are used for commercial profit without their consent.¹ They may also be compensated for their mental and physical labors. The law even allows people, to a limited extent, to "sell" their bodies in exchange for financial remuneration.² However, that seems to be the extent of how a human body may be legally "sold."

On July 9, 1990, the California Supreme Court decided the appeal of *Moore v. Regents of the University of California*.³ In his majority opinion, Justice Panelli wrote that a patient may have a cause of action for breach of a physician's fiduciary duty to inform a patient of all the material facts which would affect the decision to undergo medical treatment.⁴ This duty to obtain the patient's informed consent requires the physician to inform the patient of any research or economic interests the physician may have in the patient's cells.⁵ The court held that Dr. Golde, Moore's physician, breached this fiduciary duty to inform his patient and obtain consent on that basis.⁶ However, the majority found Moore's property or ownership interests in his excised cells insufficient to support a second cause of ac-

* The author gratefully acknowledges and thanks Professor June Carbone of the Santa Clara University School of Law for her help and advice in writing this comment.

1. Mary Taylor Danforth, Comment, *Cells, Sales, and Royalties: The Patient's Right to a Portion of the Profits*, 6 YALE L. & POL'Y REV. 179, 193 (1988).

2. Jennifer Lavoie, Comment, *Ownership of Human Tissue: Life After Moore v. Regents of the University of California*, 75 VA. L. REV. 1363, 1368-69 (1989). See *infra* note 107.

3. *Moore v. Regents of the Univ. of Cal.*, 793 P.2d 479 (Cal.), *cert. denied*, 111 S. Ct. 1388 (1990).

4. *Id.* at 483.

5. *Id.* at 485-86.

6. *Id.*

tion for conversion.⁷ In addition, the court held that Moore could not have a property interest in the Mo cell line⁸ which was developed from his cells and patented by Dr. Golde and another researcher, since the cell line they developed changed the character of the cells and was the product of the inventive effort of the holders of the patent.⁹ Justice Panelli limited his decision by stating only that there was an insufficient property interest in excised human cells to support a cause of action for conversion under California law,¹⁰ implying that Moore may have retained enough of an ownership or property right to constitute some other cause of action in property.¹¹ Such a cause of action might involve a bailment or a license.¹²

This comment will address the nature and extent of an individual's property interest in his or her cells and the products developed from them, assuming the Court's decision regarding the property issue in *Moore* is wrong. It will discuss the reasonableness of allowing doctors, hospitals and research institutes to claim commercial property interests in human tissues when the persons from whom those cells were obtained have no such rights under California law.¹³ It will also discuss the issue of a patient's right to withhold consent to use his or her body in medical research and the legal consequences of that action.¹⁴ Cell lines are valuable commodities in the commercial market because they are difficult to obtain¹⁵ and often produce abnormally high amounts of substances that are useful in medical research.¹⁶ The effectiveness of proposed solu-

7. *Id.* at 492.

8. *Id.* The Mo cell line was developed from the cells of John Moore. Its products include interferon, neutrophil migration inhibition factor, granulocytemacrophage colony stimulating factor, and macrophage activating factor. These products are proteins that are useful in the treatment of cancer and AIDS. Lavoie, *supra* note 2, at 1366 n.21. See George J. Annas, *Whose Waste is it Anyway? The Case of John Moore*, HASTINGS CENTER REPORT, Oct.-Nov. 1988, at 37. See Danforth, *supra* note 1, at 195.

9. *Moore*, 793 P.2d at 479.

10. *Id.*

11. *Id.*

12. See *infra* notes 180, 183.

13. See *infra* notes 93-133 and accompanying text.

14. See *infra* notes 134-46 and accompanying text.

15. Lavoie, *supra* note 2, at 1367-68.

16. Lavoie, *supra* note 2, at 1367-68. "A cell line is a group of identical cells that have been derived from a single human or animal cell and are capable of replicating outside the human (or animal) body." Lavoie, *supra* note 2, at 1363

tions to the problem of compensation for the use of an individual's cells or body parts, including licensing, bailment, and patent participation, will be addressed in relation to the *Moore* decision.¹⁷

II. BACKGROUND

A. History

The development of property rights in the human body has roughly paralleled that of biotechnology.¹⁸ As medical and technological advances have been made, the law has adapted. Early English common law did not recognize a property interest in dead bodies.¹⁹ In the late eighteenth century, with the advent of "medicine" and the appearance of medical schools, dead bodies became more valuable for research purposes.²⁰ At that time, both the American and English courts began to recognize a quasi-property right in dead bodies which stemmed from the religious concept of retaining human dignity.²¹ This new right either mandated that the institution which last had control over the body to bury or dispose of it in a proper and dignified manner, or that the relatives of the deceased or a designated party be permitted to direct the burial.²² This quasi-property interest is presently an integral part of the limited property rights in human bodies which are currently recognized under modern law.²³

Thus, one cannot have complete property rights in either his own or another person's body.²⁴ The time when human bodies were freely alienable in the United States passed with

n.4.

17. See *infra* notes 176-96 and accompanying text.

18. Roy Hardiman, Comment, *Toward the Right of Commerciality: Recognizing Property Rights in the Commercial Value of Human Tissue*, 34 UCLA L. REV. 206, 208 n.1 (1986). Biotechnology is "the collection of industrial processes that involve the use of biological systems. For some industries, these processes involve the use of genetically engineered microorganisms." ROBERT C. KING & WILLIAM D. STANFIELD, A DICTIONARY OF GENETICS 44 (3d ed. 1985).

19. Thomas McKendree Chattin, Jr., Note, *Property Rights in Dead Bodies*, 71 W. VA. L. REV. 377 (1969).

20. *Id.* at 378.

21. *Id.* at 379.

22. *Id.* at 379 n.20, 381.

23. Lavoie, *supra* note 2, at 1371.

24. Lavoie, *supra* note 2, at 1373.

the adoption of the Thirteenth Amendment to the Constitution of the United States.²⁵ A live human body cannot be bought and sold as a commercial commodity.²⁶

California law currently allows: (1) a quasi-property right in dead bodies for the purposes of burial;²⁷ (2) a dispositional right to provide the "services" of donating blood, sperm, and various other tissues;²⁸ and (3) the dispositional right to donate one's whole body or bodily organs²⁹ to medical science for the purposes of education, research or transplant.³⁰ A person may be paid for a donation of blood or sperm, but for purposes of tort law these are considered to be services and not sales.³¹ Under the California Health and Safety Code, organs are defined as nonregenerative tissues which are usually removed from dead bodies. Tissues are defined as regenerative body parts which can be safely removed from a live person on a continuous, but limited, basis.³² According to these definitions, kidneys, livers and eyes are organs;³³ blood, sperm, bone marrow, and skin are tissues.³⁴

The Uniform Anatomical Gift Act,³⁵ which has been adopted by all fifty states prevents individuals from selling

25. "Neither slavery nor involuntary servitude, except as a punishment for crime whereof the party shall have been duly convicted, shall exist within the United States, or any place subject to their jurisdiction." U.S. CONST. amend. XIII, § 1.

26. It is "unlawful for any person to knowingly acquire, receive, or otherwise transfer any human organ for valuable consideration for use in human transplantation if the transfer affects interstate commerce." National Organ Transplant Act, 42 U.S.C. § 274e (1988).

27. Lavoie, *supra* note 2, at 1370. See also *Sinai Temple v. Kaplan*, 127 Cal. Rptr. 80 (Ct. App. 1976).

28. Lavoie, *supra* note 2, at 1372.

29. Unif. Anatomical Gift Act, 8A U.L.A. 15 (1991). See also Cal. Penal Code § 367(f) (Deering 1985).

30. Unif. Anatomical Gift Act, 8A U.L.A. 15 (1991).

31. Lavoie, *supra* note 2, at 1372-73. See, e.g., OFFICE OF TECHNOLOGY ASSESSMENT, NEW DEVELOPMENTS IN BIOTECHNOLOGY: OWNERSHIP OF HUMAN TISSUES AND CELLS (1987) [hereinafter new developments].

32. CALIFORNIA HEALTH AND SAFETY CODE § 1635(c) (tissues); CALIFORNIA PENAL CODE § 367(f)(c)(1) (West 1987) (organs); Danforth, *supra* note 1, at 194-95; 42 U.S.C. § 274(e) (Supp. 1985); 5 Rep. No. 382, 98th Congress 2d Sess. 16-17.

33. 42 U.S.C. § 274e (1988).

34. Danforth, *supra* note 1, at 194.

35. Unif. Anatomical Gift Act, 8A U.L.A. 15 (1991). See also CAL. PENAL CODE § 367(f) (Deering Supp. 1990).

their organs for valuable consideration.³⁶ The holding in *Diamond v. Chakrabarty*³⁷ is consistent with the policy that the human body should not be sold. The Court stated that it is possible to obtain a patent for organisms that represent the product of human ingenuity, but not for naturally occurring organisms.³⁸ This is the first case that has held that human beings could have a commercial interest in the product of their own cells.³⁹ Yet doctors and hospitals may sell human organs and tissues to medical schools and research facilities.⁴⁰ In fact, much research is performed on human subject matter obtained in this manner.⁴¹ In addition, doctors, hospitals, and research institutes, among others, have been permitted to profit handsomely from the commercial products created from experiments on human tissue.⁴² These products include hormone derivatives and medications used in the treatment of AIDS, Alzheimer's disease and Parkinson's disease.⁴³ In short, everyone seems to receive a portion of the profits except the person from whom the tissue originated. The obvious question is: if the patient does not have a sufficient property interest in the cells taken from his or her own body as well as in their subsequent products to support a cause of action for conversion, how can a property right vest in anyone else?

B. *The Moore Case*

In 1976, John Moore discovered that he had hairy-cell leukemia,⁴⁴ which is a form of cancer of the blood that is fatal

36. Unif. Anatomical Gift Act, 8A U.L.A. 15 (1991).

37. 447 U.S. 303 (1980).

38. *Id.* at 310.

39. *Id.*

40. See Lori B. Andrews, *My Body, My Property*, HASTINGS CENTER REPORT, Oct. 1986, at 28.

41. *Id.*

42. *Moore v. Regents of the Univ. of Cal.*, 793 P.2d 479, 481-82 (Cal.), cert. denied, 111 S. Ct. 1388 (1990).

43. Mark W. Danis, Comment, *Fetal Tissue Transplants: Restricting Recipient Designation*, 39 HASTINGS L.J. 1079 (1988). See also Lance Morrow, *When One Body Can Save Another*, TIME, June 17, 1991, at 56.

44. Lavoie, *supra* note 2, at 1365 n.12.

Hairy cell leukemia, or leukemic reticuloendotheliosis, is a rare form of cancer characterized by the presence of abnormal mononuclear cells in the blood, bone marrow, and other tissues. Other characteristics include destruction of normal blood cells, enlargement of the spleen,

if untreated.⁴⁵ After receiving the initial diagnosis, he went to the UCLA Medical Center where he was hospitalized by Dr. Golde.⁴⁶ The doctor withdrew extensive amounts of blood, bone marrow aspirate, sperm and other bodily substances during the course of Moore's treatment.⁴⁷ Dr. Golde confirmed the initial cancer diagnosis and advised Moore to have his spleen removed. The spleen was enlarged and the doctor believed that immediate removal would slow the progress of the disease.⁴⁸ The operation did have a positive therapeutic effect.⁴⁹ Moore survived.

For the next seven years, Moore periodically visited the UCLA medical center.⁵⁰ On each visit, Dr. Golde removed samples of blood, sperm, bone marrow aspirate, blood serum and skin.⁵¹ Although Dr. Golde obtained Moore's consent to the splenectomy⁵² and to the removal of his tissues, at no time did he inform Moore of his economic and research interests in Moore's spleen and other cells.⁵³ Moore was simply told that these procedures were necessary to his treatment and well-being. In fact, Dr. Golde's reason for removing these samples was to supply them to a researcher for commercial development.⁵⁴

From the beginning, Dr. Golde was aware that Moore's cells had certain unusual properties⁵⁵ which made them espe-

and infiltration of the bone marrow, spleen, and lymph nodes by tumor cells.

Id.

45. Lavoie, *supra* note 2, at 1365.

46. Moore, 793 P.2d at 480.

47. *Id.*

48. *Id.*

49. *Id.* at 486 n.11.

50. *Id.* at 481.

51. *Id.*

52. A splenectomy is the surgical removal of the spleen. *See id.*

53. *Id.*

54. *Id.* *See also The Use of Human Biological Materials in the Development of Biomedical Products: Hearings Before the Subcomm. on Investigation and Oversight of the House Comm. on Science and Technology*, 99th Cong., 1st Sess. 240 (1985) (statement of John Moore) [hereinafter Moore Statement].

55. Moore, 793 P.2d at 481. Moore's T-lymphocytes overproduced certain lymphokines, making the corresponding genetic material easier to identify. *Id.* at 482 n.2.

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

cially attractive for research.⁵⁶ He was also aware of the substantial commercial value that exclusive access to these cells would provide.⁵⁷ Unknown to Moore, Dr. Golde arranged for the commercial development of the cell line and its derivative products before the splenectomy.⁵⁸ Dr. Golde was highly compensated by Genetics Institute and Sandoz Pharmaceutical Company for obtaining exclusive access to Moore's cells and for his help in developing the Mo cell line.⁵⁹ This cell line pro-

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.

Id. (citations omitted).

Inside the cell, a gene produces a lymphokine by attracting protein molecules, which bond to form a strand of "messenger RNA" (mRNA) in the mirror image of the gene. The mRNA strand then detaches from the gene and attracts other protein molecules, which bond to form the lymphokine that the original gene encoded.

In the laboratory, scientists sometimes use genes to manufacture lymphokines by cutting a gene from the chromosome and grafting it onto the chromosome of a bacterium. The resulting chromosome is an example of "recombinant DNA," or DNA composed of genetic material from more than one individual or species. As the bacterium lives and reproduces, the engrafted gene continues to produce the lymphokine that the gene encodes.

It can be extremely difficult to identify the gene that carries the code for a particular lymphokine. Since the amount of DNA in a human cell is enormous compared to the amount present in an individual gene, the search for any single gene within a cell is like searching for a needle in a haystack. As the Regents' patent application explains, the significance of a cell that overproduces mRNA is to make the difficult search for a particular gene unnecessary. If one has an adequate source of mRNA—the gene's mirror image—it can be used to make a copy, or clone, of the original gene. The cloned gene can then be used in recombinant DNA, as already described, for large-scale production of lymphokines. *Id.* at 490 n.29 (citations omitted). While the genetic code for lymphokines does not vary from individual to individual, it can nevertheless be quite difficult to locate the gene responsible for a particular lymphokine. Because T-lymphocytes produce many different lymphokines, the relevant gene is often very difficult to locate.

Id. at 482 n.2 (citing NEW DEVELOPMENTS, *supra* note 31, at 31-46).

56. *Id.* at 481.

57. *Id.*

58. *Id.*

59. *Id.* at 482. Golde received at least \$330,000 from Genetics Institute over a three year period, acquired the rights to 75,000 shares of their common stock, and an additional \$110,000 from Sandoz when that company was added to the agreement. *Id.*

duced lymphokines from Moore's T-lymphocytes, the white blood cells that produce the proteins that regulate the immune system.⁶⁰ The derivative Mo cell line was subsequently patented. Dr. Golde was listed as an inventor on the patent along with Dr. Quan, the major researcher for Genetics Institute.⁶¹ Dr. Golde was permitted to benefit twice from Moore, once through the payment of medical expenses, and again from the sale of his cells and the patented cell line they created.

When Golde offered to pay for the transportation required for Moore's visits to UCLA Medical Center, Moore began to suspect that something was amiss.⁶² He became increasingly suspicious when Golde presented him with additional consent forms, one of which he signed.⁶³ When Moore refused to sign the second form and inquired why he was required to sign additional consent forms, Golde evaded his patient's inquiries regarding his treatment and denied that he had ulterior motives for continuing to treat Moore.⁶⁴ Finally, Moore sued. Golde had never offered to compensate Moore for the use of his cells or his spleen.⁶⁵

The Uniform Anatomical Gift Act prohibits individuals from selling their organs.⁶⁶ Also, although blood and sperm can be sold to blood or sperm banks in California, donating blood is considered to be a service rather than an exchange of property.⁶⁷ Because Dr. Golde failed to disclose his economic interests in Moore's cells, the court found that Dr. Golde had failed to meet the requirements of full disclosure. Complete disclosure of all the material facts which might have influenced a patient's decision to undergo treatment is required by law.⁶⁸

60. *Id.* at 483 n.2. Some lymphokines have potential therapeutic value. See New Developments, *supra* note 31, at 31-46.

61. *Moore*, 793 P.2d at 482.

62. *Moore* Statement, *supra* note 54, at 241-43.

63. *Lavoie*, *supra* note 2, at 1366.

64. *Id.*

65. See generally *Moore*, 793 P.2d 479 (Cal. 1990).

66. *Moore v. Regents of the Univ. of Cal.*, 793 P.2d 479, 489 n.22 (Cal. 1990) (gift of an organ is not a sale); see also Unif. Anatomical Gift Act, 8A U.L.A. 15 (1991); *infra* note 107.

67. *Moore v. Regents of the Univ. of Cal.*, 793 P.2d 479, 489 n.23 (Cal. 1990) (blood is a service); see also *Lavoie*, *supra* note 2, at 1372. See also Office of Technology Assessment, *New Developments in Biotechnology: Ownership of Human Tissues and Cells* 56, 76 (1987). See also *infra* note 107.

68. *Moore*, 793 P.2d at 483.

Because of the fraudulent nature of this omission, Moore's consent was not an informed one, and the Supreme Court of California allowed him to state a cause of action for Golde's breach of the physician's fiduciary duty to his patients.⁶⁹

Although the majority in *Moore* found insufficient property interests in the actual excised cells to allow Moore to recover,⁷⁰ it did not address the issue of Moore's property interest in the disposition of the cells before they were removed from his body. Before Moore's spleen was removed, Dr. Golde had entered into a lucrative agreement with a research institute which required him to continually deliver enough of Moore's tissue to develop a patentable lymphokine-producing cell line.⁷¹ Although Moore agreed to the splenectomy, which did have a positive therapeutic effect, the follow-up tissue removals were not necessary and served no therapeutic purpose.⁷² Moore was never informed of Golde's use of his cells, nor did he ever agree that his cells could be used in research.⁷³ Nor did Moore donate any of his organs, tissues, or cells to scientific research.⁷⁴ Indeed, if he had been fully informed of Golde's intentions with respect to his cells, Moore may have chosen to negotiate a contract for his cells with the research company himself. Since he possessed exclusive property rights in those cells before they were removed from his body, it follows that he would have had the power to negotiate such a deal.⁷⁵

C. *The Financial Benefits of Research on Human Tissue*

When human tissue is used for medical research, as it was in the *Moore* case, there are numerous opportunities for profit. The first such opportunity for profit from human tissue arises from the sale of the body part or tissue to the researcher. An organ or tissue which is rare or difficult to preserve has a greater value to the researcher. If it were legal to sell human tissues or organs in the United States, the price of a part lacking special properties valuable for research or transplant pur-

69. *Id.*

70. *Id.* at 488.

71. *Id.* at 481; see also Danforth, *supra* note 1, at 179 n.2.

72. *Id.*

73. *Id.*

74. *Id.*

75. *Id.*

poses would command a relatively low price.⁷⁶ However, the price of those same tissues would increase if they could be used in transplant surgery or to create patentable cell lines or medicines. Such organs are presently sold for high prices in India, Asia, Latin America and Eastern Europe.⁷⁷

The second opportunity for profit occurs when the cells are developed into a patentable product. The patent holders own the rights to royalties from the sale and commercialization of the invention, as well as the right to sell the patent for profit.⁷⁸ These are property interests which vest only in the inventors and the subsequent owners of the patent rights.⁷⁹

The third opportunity to profit from the research occurs when the patent is either sold or licensed to a manufacturer who will then produce a commercial product from the results of the research.⁸⁰ That person owns the rights to that product. The final opportunity to profit from research on human tissues arises if the holders of the patent choose to manufacture and market the subject of the patent themselves.⁸¹ If the human subject who made all of this possible has no property claim to the patent, he is excluded from all of the potential commercial profits.⁸² If he may not sell his body parts, the patient is effectively excluded from the vast financial windfall which will be collected by people who appear to have far less of a property claim to his cells than he does. Yet this is exactly what current law promotes.

76. Danforth, *supra* note 1, at 195-97. See also Hardiman, *supra* note 18, at 208 n.1; see, e.g., Andrews, *supra* note 40, at 30-31.

77. *Trading Flesh Around the Globe*, TIME, Jun. 17, 1991, at 61. Organs donated in the People's Republic of China come mainly from executed prisoners. *Id.* In India, the going rates for organs from live donors are kidney, \$1,500; cornea, \$4,000; patch of skin, \$50. *Id.* Presently, Hong Kong, Britain, and Germany have already or are in the process of instituting laws banning all buying and selling of organs. *Id.*

78. 35 U.S.C. § 261 (1992).

79. *Id.*

80. *Id.*

81. *Id.* § 271.

82. *Moore v. Regents of the Univ. of Cal.*, 793 P.2d 479 (Cal. 1990).

D. *Fetal Tissue and Commercial Profit*

Fetal tissue is one type of human body part that is important for bio-medical research since it has several curative properties which can be exploited.⁸³ It includes aborted fetuses, frozen embryos, and placentas. Fetal tissue is a regenerative tissue whose cells affect other cells in a way that makes them act "younger." For this reason, fetal tissue is in great demand for research in the commercial areas of cosmetics, anti-aging products, and pharmaceuticals which are used to treat degenerative diseases, such as Parkinson's disease.⁸⁴ The potential financial benefit in these areas is overwhelmingly large, but according to *Moore v. Regents of the University of California*,⁸⁵ patients may not be able to partake of the profits.

The courts have been presented with some difficult decisions regarding the control and disposition of fetal tissue. One court has recognized that biological parents have a dispositional right in the frozen embryos created from the cells they donated.⁸⁶ As a result, one parent who does not wish fetal tissue to be used for a particular purpose may prevent the other from consenting to its use for that purpose.⁸⁷ This is a result of the legal concept that a child is treated as the "property" of its parents.⁸⁸ Fetal tissue presents significant problems for use as commercial tissue because of the dual "ownership" rights in the mother and the father as well as the ethical issue of treating a potential human being as an item of property.⁸⁹ The use of prenatal tissue to cure disease is a concept fraught with potential abuse. Women may voluntarily become pregnant for the sole purpose of aborting their fetuses and donating the tissue to sick friends and relatives, or, in the alterna-

83. Danis, *supra* note 43, at 1082-83.

84. *Id.* See also *Fetal Tissue Transplantation: Medical and Ethical Aspects*, 27 *AGRESSOLOGIE*, Oct. 1986, at 68. Aborted fetuses are used as a source of transplant tissue for the treatment of diabetes and immunodeficiency diseases. *Id.*

85. 793 P.2d 479 (Cal.), *cert. denied*, 111 S. Ct. 1388 (1990).

86. *York v. Jones*, 717 F. Supp. 421 (1989); see John A. Robertson, *Resolving Disputes Over Frozen Embryos*, HASTINGS CENTER REPORT, Dec. 1989 at 9.

87. See Danforth, *supra* note 1, at 193.

88. The parents of the child may be obligated to provide financial support. See Robertson, *supra* note 85, at 8; see also John A. Robertson, *In the Beginning: The Legal Status of Early Embryos*.

89. Robertson, *supra* note 85, at 9.

tive, they may be coerced into conceiving for abortion or tissue donation.⁹⁰

The same potential for abuse would arise should people be permitted to sell their body parts for profit. If the poor were suddenly able to sell their bodies or products of their bodies such as fetuses they could discover a new source of income at their own risk and expense.⁹¹ At worst, the regular practice of selling body parts could cause the dehumanization of the individual into the butcher value of the sum of his parts. This appears to be the situation Justice Panelli is attempting to avoid in the *Moore* opinion.

In 1988, in response to the potential problems involved from the use of fetal tissue, the Department of Health and Human Services banned all of the experiments at the National Institute for Health that used tissue from aborted fetuses.⁹² However, these bans only affected federal research which was funded by this Department. These regulations do not preempt state laws.⁹³

III. IDENTIFICATION OF THE PROBLEM

In *Moore v. Regents of the University of California*,⁹⁴ Justice Panelli stated that the patient had a proper cause of action in tort for the doctor's breach of his fiduciary duty, but that the same patient did not possess enough property rights in his excised cells to maintain a cause of action for conversion.⁹⁵ In California, the tort of conversion has three elements: "the plaintiff's ownership or right of possession of the property at the time of conversion; . . . the defendant's wrongful taking or disposition of another's property rights; and . . . damages."⁹⁶ Although the *Moore* court eliminated the patient's property interest, it apparently did not eliminate the doctor's property interest. The doctor who defrauded Moore was allowed to accumulate vast sums of money for himself and the research

90. Danis, *supra* note 43, at 1091.

91. Andrews, *supra* note 40, at 32.

92. Danis, *supra* note 43, at 1086.

93. Danis, *supra* note 43, at 1086.

94. 793 P.2d 479 (Cal.), *cert. denied*, 111 S. Ct. 1388 (1990).

95. *Id.*

96. *Baldwin v. Marina City Properties*, 145 Cal. Rptr. 406, 416 (Ct. App. 1978).

companies for whom he procured the cells.⁹⁷ Moore was a necessary, albeit unknowing, contributor to their wealth, and as such he deserves to participate in the profits derived from his tissue, due to his property interest in those cells.⁹⁸ The legal problem to be addressed is whether Moore's doctor, the researchers, and the pharmaceutical companies obtained enough of a property interest in his cells to maintain that they owned them and the rights to their disposition without Moore's consent, while Moore did not have a significant enough property interest in the disposition of those same cells to support a cause of action for conversion.⁹⁹ This comment suggests that *Moore* was wrongly decided on the property issue. If a living human being may not exercise dispositive control over his own body and its attached or detached body parts, but someone else has the right to do so, we enter an area that closely resembles slavery.

If someone can exercise control over an individual's body parts once they are detached without that person's consent, what is to prevent that someone from dictating, directing, or otherwise expressing an ownership interest in a valuable body part before it is removed? A doctor who recognizes that a certain person's infected spleen has valuable characteristics will undoubtedly wish to preserve those characteristics and the spleen itself in its most profitable condition. Furthermore, any medical advice that is given by a doctor who is aware of the profitability of the unusual characteristics of that spleen might be biased or even tainted in favor of preservation of the spleen rather than in favor of the best interests of the patient. Finally, doctors may be unjustly enriched if they are eligible to receive both medical fees and finder's fees.

IV. ANALYSIS

A. *Summary of Property Interests in Human Bodies*

There are several levels of ownership in human biological materials. Living human bodies which are intact are under the

97. *Moore*, 793 P.2d at 481-82.

98. The court stated that Moore did not have a sufficient property interest in the cells to maintain a cause of action for conversion. However, it did not state that Moore had no property interest in those cells. *Id.* at 493-95.

99. *Id.*

exclusive control of that person.¹⁰⁰ A living person may donate his organs to another living person if he wishes, but cannot be compensated for it.¹⁰¹ In addition, a living person has the right to agree to the donation of his organs after death for the purposes of transplantation or scientific research.¹⁰² However, he is forbidden from selling his organs for the purpose of transplantation or treatment by federal law.¹⁰³ Once organs or tissues are removed from a patient's body, he no longer has any significant property interest in them.¹⁰⁴

There is a quasi-property right in dead bodies for the determination of custody for burial.¹⁰⁵ While alive, a person may agree to donate his organs for the purposes of transplantation or treatment. However, federal law makes it a felony for him to receive any compensation for those organs.¹⁰⁶

Blood and other replenishable bodily fluids which are classified as regenerative parts of the body may be sold.¹⁰⁷ However, California treats these sales as services in order to avoid strict liability issues for the blood banks, doctors and donors.¹⁰⁸ Because cells are regenerative, they fall within this

100. *Moore v. Regents of the Univ. of Cal.*, 793 P.2d 479, 499 (Cal. 1990) (Broussard, J., concurring and dissenting).

101. National Organ Transplant Act, 42 U.S.C. § 274e (1988).

102. Unif. Anatomical Gift Act, § 2(a), 8A U.L.A. 6 (1991). Again, neither he nor his estate may be compensated for it. National Organ Transplant Act, 42 U.S.C. § 274e (1988).

103. Uniform Anatomical Gift Act, § 10, 8A U.L.A. 26 (1991).

104. *Moore*, 793 P.2d at 489.

105. See Chattin, *supra* note 19.

106. Unif. Anatomical Gift Act, § 10, 8A U.L.A. 18-19 (1991). It is a felony to sell human organs for transplant purposes. Any such sale is punishable by up to \$50,000 in fines and/or up to five years imprisonment. *Id.*

107. Danforth, *supra* note 1, at 195.

108. Lavoie, *supra* note 2, at 1372. See, e.g., NEW DEVELOPMENTS, *supra* note 31, at 56. See Hardiman, *supra* note 18, at 220 n.64.

California statutory law declares that "[t]he procurement, processing, distribution, or use" of blood for transfusions is a rendition of a service. Cal health & Safety Code § 1606 (West 1979). Courts interpreting this statute consistently state that the legislature's object was to avoid strict liability for the provision of so vital a service. *Klaus v. Alameda-Contra Costa Medical Ass'n. Blood Bank, Inc.*, 62 Cal. App. 3d 417, 133 Cal. Rptr. 92 (1976); *Cramer v. Queen of Angels Hosp.*, 62 Cal. App. 3d 812, 815, 133 Cal. Rptr. 339, 340 (1976) ("The effect of section 1606 is that the doctrines of strict liability and breach of implied warranty may not be used to shift the economic consequences of the use of contaminated blood products to a supplier who is free from fault." *McDonald v. Sacramento Medical Found. Blood Bank*, 62

category and may be sold.¹⁰⁹ Generally, consent from the donor must be obtained in order to perform medical research on human subjects.¹¹⁰

1. *Living Human Bodies*

Human cells, organs, and other tissues which have not yet been excised from a living human being but which remain part of the living body are considered to be the property of the person to whom they are attached.¹¹¹ The owner has an exclusive right to direct the disposition and treatment of these parts.¹¹² As such, they may be donated to others for transplant, destroyed or removed at will.¹¹³ In addition, each person has legal remedies in tort for harmful interference with his body.¹¹⁴ Both statutory and common law recognize the right that a living human being has to exercise dominion over his own body and to have it protected from interference from others.¹¹⁵ To exercise any of these rights, a person must have possession and ownership of the thing being protected.¹¹⁶ Thus, one's body is the property of the mental spirit occupying the flesh which determines how it is to be used, disposed of, and protected from interference.

2. *Deceased Human Bodies*

The dead also have statutorily recognized rights over the disposition of their bodies.¹¹⁷ Before death, a person may choose how, when, and where his body will be interred or disposed of, and whether he will allow his valuable organs to

Cal. App. 3d 866, 872, 133 Cal. Rptr. 444, 447 (1976) ("The object and purpose of section 1606 is to shield blood donors and suppliers from *strict liability* . . .").

Id.

109. Danforth, *supra* note 1, at 195.

110. Lavoie, *supra* note 2, at 1376.

111. *Id.*

112. *Id.*

113. Unif. Anatomical Gift Act, § 2(a), 8A U.L.A. 6 (1991).

114. All of tort law encompasses this area with such causes of action as assault, battery, negligence, and the intentional infliction of emotional distress.

115. Moore v. Regents of the Univ. of Cal., 793 P.2d 479 (Cal. 1990).

116. *Id.*

117. See Chattin, *supra* note 19.

be donated to a living person who needs them.¹¹⁸ This process is most often accomplished through a will, and it is supported by the fact that the law gives the family, or in some instances a designated person, a quasi-property right in the body of the deceased so that it may be laid to rest in a proper and dignified manner.¹¹⁹ Thus, even after death, a human being has a great deal of control over the disposition and treatment of his body. In effect, he still has a property interest in that flesh.

3. *Living Human Bodies with Excised Tissue, Cells, or Organs*

By contrast, California law does not permit the living person from whom cells are taken to control the disposition of these cells.¹²⁰ As long as the cells are attached to the living whole, the person has all rights to them.¹²¹ Once they are removed, however, the donor's property interest in those particular parts ceases.¹²² Because those portions of the body are no longer a part of the working entity, the law assumes, usually correctly, that the patient does not wish to keep the cells or have anything more to do with them.¹²³ The patient is no longer concerned with the removed cells, and they are in the possession of a doctor who may choose to study or dispose of them as the law permits.

Occasionally a patient is concerned about the disposition of his cells.¹²⁴ Most human flesh is removed because it is either infected or diseased or because it is no longer functional. Doctors and other researchers have no reason to keep or study such flesh except to identify and verify the diagnosis or to study it if it involves a new or rare malady.¹²⁵ In such cases, the tissue would either be destroyed or used in research.¹²⁶ No harm comes to the patient through the appropriation of

118. Unif. Anatomical Gift Act, § 2(a), 8A U.L.A. 6 (1991).

119. See Chattin, *supra* note 19.

120. Moore v. Regents of the Univ. of Cal., 793 P.2d 479 (Cal. 1990).

121. *Id.*

122. *Id.*

123. Venner v. State, 354 A.2d 483, 498 (Md. Ct. App. 1976).

124. *Id.*

125. See generally CAL. HEALTH & SAFETY CODE § 7054.4 (West 1972) (human waste flesh not properly destroyed or otherwise disposed of may only be kept for primarily scientific purposes).

126. *Id.*

such cells. This is a proper use of the cells since they are being used primarily for a scientific purpose, and the patient suffers no economic harm from the appropriation, since the doctor is not being unjustly enriched through their use.¹²⁷ The problem arises when the patient does not give the doctor permission to use the cells, and the doctor does not destroy them, but takes possession of them in order to serve a primarily commercial purpose rather than a scientific one. This is the situation in *Moore v. Regents of the University of California*.¹²⁸ Not only did Dr. Golde breach his fiduciary duty to Moore by fraudulently taking his cells for non-therapeutic scientific research without Moore's consent, but he profited handsomely from that misappropriation.¹²⁹

B. *The Moore Case*

The California Supreme Court held that John Moore should recover from his physician, Dr. Golde, for the breach of his fiduciary duty to Moore, but refused to hold Dr. Golde liable for the tort of conversion.¹³⁰ Stating that Moore's claim of ownership of the biological material removed from his body while under the care of Dr. Golde was a novel one which had no precedented support, the court held that Moore did not have a sufficient property interest in his excised cells to support the "ownership" or "right of possession" element of conversion.¹³¹ The reasons given were: (1) Moore did not expect to retain possession of the cells after they were removed; (2) no judicial decision supported Moore's claim to ownership of the cells; (3) California statutory law limits continuing interest in excised cells; and (4) the patented materials, patent, and products from the patented material could not be Moore's property because they are the intellectual property of patent holders.¹³² For policy reasons, including the need to have access to human cells for scientific research and to prevent strict liability to innocent parties who have not checked the pedigree

127. *Id.*

128. 793 P.2d 479 (Cal. 1990).

129. *Id.*

130. *Id.*

131. *Id.* at 489.

132. *Id.* at 492.

of each specimen they use in research,¹³³ the court stated that recovery should be on the basis of a breach of fiduciary duty or lack of informed consent only, not on the basis of conversion. Thus, the court declined to extend the tort of conversion.¹³⁴

1. *The Property Interest in Excised Cells Before Removal*

Likewise, while Moore's cells remained part of his body, Dr. Golde had no property rights in them to exchange with the research institute.¹³⁵ Prior to removal of the cells, only Moore had that property right.¹³⁶ Dr. Golde was contracting to sell something which he did not own. For that reason, Moore should receive some, if not all, of the compensation Dr. Golde received for procuring the cells, at least up to the time of their removal from his body. As a matter of equity, if Moore were entitled to receive all of the compensation that Dr. Golde collected for delivering Moore's cells, a small portion of the payment should have gone to Dr. Golde as a fee for bringing the patient and company into contact with each other. This result brings to the fore the issue of whether society really wishes to encourage doctors to be middlemen in deals between patients and researchers.

2. *Who Has Property Rights in Excised Cells*

If Moore did not have sufficient property rights in his own excised cells to maintain a cause of action for conversion, the question is how Dr. Golde, the researcher, the research company, and the various other scientific and commercial entities involved in this case obtained property rights in those cells to Moore's exclusion.¹³⁷ There are no statutes giving property rights in tissue removed from humans to anyone other than the donor,¹³⁸ unless the donor has specifically agreed to donate them to a particular person or organization. There are provisions for the disposal of such biological materials,¹³⁹

133. *Id.* at 487.

134. *Id.*

135. *Id.* at 489.

136. *Id.*

137. *Id.* at 479.

138. National Organ Transplant Act, 42 U.S.C. § 274e (1985).

139. See CAL. HEALTH & SAFETY CODE § 7054.4 (West 1972) (implies sufficient

which could involve a limited temporary property interest; but there are no provisions for assignment of significant property interests, only quasi-property rights.¹⁴⁰

The law fails to provide guidance for the situation which arose in *Moore*. First, the court states that Moore does not have any property interests in his own excised cells, then it upholds the property rights of Moore's doctor and several commercial entities in those same cells once they have been developed into the Mo cell line.¹⁴¹ Who held the property rights in those cells in the interim period between the removal from Moore's body and the patenting of the Mo cell line? The person who is entitled to the property rights at that time is also entitled to any potential financial gain during that period.

3. *Property Interest in the Patent, Subject of the Patent, and Profits Made from Use of the Patent*

Federal law permits the patenting of organisms that represent the product of "human ingenuity," but not naturally occurring organisms.¹⁴² The inventive effort which Dr. Golde and the other researchers put into the development of the Mo cell line clearly qualifies them for the patent they were granted, and they are entitled to any compensation they may derive from it. "The patent is not granted for the cell as it is found in nature, but for the modified biogenetic product."¹⁴³ Thus, Moore could have no property rights in the patent itself. However, Moore was a crucial contributor to the development of the cell line. He was a supplier of raw materials, human cells and organs. Because he was a necessary component of the research who provided the researchers with "unique raw materials, without which the resulting product could not exist,"¹⁴⁴ excluding him from compensation¹⁴⁵ would not be equitable. The commercial entities and Dr. Golde would receive unjust enrichment since they could use Moore's raw materials to cre-

interest to direct disposal).

140. Chattin, *supra* note 19, at 381.

141. *Moore v. Regents of the Univ. of Cal.*, 793 P.2d 479 (Cal. 1990).

142. *Diamond v. Chakrabarty*, 447 U.S. 303, 313 (1980).

143. Danforth, *supra* note 1, at 197.

144. Danforth, *supra* note 1, at 197.

145. See, e.g., *Moore v. Regents of the Univ. of Cal.*, 793 P.2d 479 (Cal. 1990).

ate a valuable product without ever having to compensate him for that use.¹⁴⁶

Moore should be compensated in proportion to his contribution.¹⁴⁷ There are a few ways to do this. The doctor and/or researchers could pay him the actual market price of his flesh, which would be a relatively low amount for unremarkable items, or, Moore could be paid a royalty for the licensed use of his cells and organs in commercial medical research.

C. *Other Situations Involving Property Rights in Human Cells and Tissues*

There are other situations involving research on human tissue which argue for the existence of a property right in excised human cells, tissues or organs. These involve the use of fetal tissue in research for commercial purposes. *Moore* is concerned with the use of diseased tissues which must be removed from the patient in order to cure him. However, in the case of aborted fetal tissue or placentas, neither the patient nor the tissue is unhealthy, and there is no curative benefit to the patient upon their removal. Moore benefited from the removal of his spleen, while a new mother does not receive the same type of benefit from the removal of the placenta from her body since she is not ill. An example follows.

1. *A Hypothetical*

During childbirth, a healthy, uninfected placenta is removed from a patient who is being treated in a hospital. It is sent to the hospital laboratory from which it is stolen by a greedy and unethical medical researcher from another laboratory. The "crooked" researcher develops a valuable cell line from the placenta, and finds a way to have it patented and marketed commercially as an anti-aging cream. As a result, the researcher and the cosmetics manufacturing company realize great profit. The patient from whom the part was removed was not informed of the potential value of her body part, although it was common knowledge to the doctor and the researcher. The patient gave no consent for its use beyond consent for

146. *See id.*

147. *Id.*

medical treatment which resulted in the part's removal from her body during the birth of her child. Who has what property rights and what are the remedies available to the patient?

2. Discussion

Few people are aware that some hospitals collect afterbirth and sell it to others to extract the hormones.¹⁴⁸ These hormones are then used in scientific research and for commercial purposes.¹⁴⁹ This situation is similar to that found in *Moore*. The hospital is exercising some right of ownership over those tissues. Unlike the situation as it exists in *Moore*,¹⁵⁰ there is no infectious waste involved in this hypothetical. California law requires infectious waste to be properly disposed of by the hospital or doctor if the procedure is done in an office.¹⁵¹ This would seem to imply a limited right of control over the tissue for purposes of waste or scientific research, but not necessarily for commercial use.¹⁵² While there are guidelines for the disposal of non-infectious waste, there are no requirements for its destruction.¹⁵³

This scenario involving the sale of a placenta may be distinguished from that of the sale of Moore's spleen and other tissues on the basis that placentas are generally not considered infectious waste unless they are, in fact, infected. Thus the doctor or hospital does not obtain even the limited statutory property right of disposal. It follows that if they do not possess the right of disposal they should not possess the broader right of sale.

148. Andrews, *supra* note 40, at 30-31; Hardiman, *supra* note 18, at 227; see also NEW DEVELOPMENTS *supra* note 31.

149. Andrews, *supra* note 40, at 30-31; Hardiman, *supra* note 18, at 227; see also NEW DEVELOPMENTS 31.

150. *Id.*

151. See CAL. HEALTH & SAFETY CODE § 7054.4 (West 1992). In California: [R]ecognizable 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. As used in this section "infectious waste" means any material or article which has been, or may have been, exposed to contagious or infectious disease.

CAL. HEALTH AND SAFETY CODE § 7054.4. (West 1992).

152. *Id.*

153. *Id.*

The gap remains. "Once the cells are excised from the body they are no longer the property of the patient, but until they are patented, they do not belong to anyone else, except for purposes of disposal by incineration, interment, or any other method determined by the state department of health to protect the public health and safety."¹⁵⁴ The law permits excised human cells to be disposed of by the hospital or used for scientific research, but it does not permit them to be used for any purpose that is primarily commercial.¹⁵⁵ In effect, the courts and legislature have supported the public policy of the altruistic search for knowledge for the good of mankind, while avoiding the compromise of human dignity for profit.

There is a second level on which the cells of the placenta may be distinguished from the cells removed from Moore. Placenta cells are a waste product of the female body which is expelled when a woman gives birth. In that sense, it has not been removed from the woman's body in any medical procedure, but is an unnecessary portion of the body which is left behind naturally. For legal purposes, this may be considered to be an abandonment of this tissue.¹⁵⁶ Abandoned property is defined as that property "to which [the] owner has relinquished all right, title, claim, and possession, with intention of not reclaiming it or resuming its ownership, possession or enjoyment."¹⁵⁷ To be considered abandoned, the property must be intentionally abandoned and the owner must claim no right to it.¹⁵⁸ The finder of abandoned tissue becomes its owner and prevails against all but the true owner.¹⁵⁹ Therefore, either the hospital or doctor as the finder of this abandoned afterbirth becomes its owner.

One problem with this rule is that the chattel, in this case the human tissue, must have been voluntarily and intentionally abandoned.¹⁶⁰ The sloughing of the afterbirth is an involun-

154. See generally *Moore v. Regents of the Univ. of Cal.*, 793 P.2d 479, 488-89 & n.20 (Cal. 1990) (quoting CAL. HEALTH & SAFETY CODE § 7054.4 (West 1992)); see also *supra* note 150.

155. See CAL. HEALTH & SAFETY CODE § 7054.4 (West 1992); see also *supra* note 150.

156. *Venner v. State*, 354 A.2d 483 (Md. Ct. App. 1976).

157. BLACK'S LAW DICTIONARY 2 (6th ed. 1990).

158. W. B. RAUSHENBUSH, BROWN ON PERSONAL PROPERTY 8-9 (3d ed. 1975).

159. *Id.* at 24.

160. *Id.* at 8-9.

tary process. However, leaving it in the hospital can be considered voluntary abandonment, since it can be presumed that most people would have no desire to keep that tissue. Yet it has been recognized that some people prefer to retain parts of their bodies that have been removed or expelled; these items may be returned to the patient as long as they are not infectious waste, an aborted viable fetus, or items required for the medical records of the patient which must be kept by the hospital pathologist and other doctors.¹⁶¹

*Venner v. State*¹⁶² is one of the leading cases involving the utilization of discarded bodily tissues and fluids.¹⁶³ In this case, the excrement of a patient who had swallowed several drug-filled balloons which burst in his body was held to be abandoned by a Maryland appellate court.¹⁶⁴ In dicta, the court stated that "[i]t is not unknown for a person to assert a continuing right of ownership . . . over such things as excrement, . . . blood, and organs or other parts of the body, whether their separation from the body is intentional, accidental, or merely the result of normal bodily functions."¹⁶⁵ The court also stated that "[w]hen one places, or permits others to place waste material from his body into the stream of ultimate disposition as waste, he has abandoned whatever legal right he theretofore had to protect it from prying eyes or acquisitive hands."¹⁶⁶ According to this case, placentas, surgical wastes and all other medical wastes are abandoned property in which any finder may acquire property rights. There is a succession of possession, but no succession of ownership.

D. *Further Complications Involving Frozen Embryos*

Another form of human tissue which may be used for commercialization or scientific research is that of the frozen embryos which are cultivated for use in the process of in vitro fertilization.¹⁶⁷ The gametes or sex cells which are taken vol-

161. *Venner*, 354 A.2d at 498.

162. 354 A.2d 483 (Md. Ct. App. 1976).

163. Lavoie, *supra* note 2, at 1377.

164. *Venner*, 354 A.2d at 485-86.

165. *Id.* at 498.

166. *Id.* at 499.

167. Robertson, *supra* note 85, at 9. Embryo freezing is an adjunct to in vitro fertilization. *Id.* at 7.

untarily from the patients are distinct genetic material whose structure can be distinguished from the cells of other human beings.¹⁶⁸

This identification is possible because only human sexual cells specifically contain the specific identity of the person or the "genetic library."¹⁶⁹ It is at this point that concepts of invasion of privacy for the appropriation of a person's likeness become relevant. The law of torts forbids the misappropriation of another person's image or likeness for profit as a part of the right to privacy.¹⁷⁰

When a doctor artificially cultivates human embryos outside of the womb for the purpose of in vitro fertilization, it is often the case that several "back-up" embryos are made in case a transplant is not successful.¹⁷¹ Two issues arise with respect to these "extra" embryos. The first concern is that doctors or scientists will experiment on these tissues. The second is the fate of these tissues in the event that a couple who has been involved in this process decides to divorce or terminate the relationship.

The first problem is more easily solved. In order to use any of these materials in research or transfer them to others to be used for research, or in another attempt at fertilization, the donee should obtain the consent of both parties.¹⁷² The second situation is more complex since it involves the separate and distinct property rights of two people in the same embryos. For the married couple, the frozen embryos may be viewed as community property to be divided equally between the parties in community property states.¹⁷³ Equitable division of this type of property would be difficult at best. In the case of an unmarried couple, each party may have a separate property interest in the same tissue.¹⁷⁴ A conflict arises when one of

168. *Id.* at 9.

169. See 1 J. Watson, *et al.*, *MOLECULAR BIOLOGY OF THE GENE*, 4th ed., 596 (1987).

170. "One who appropriates to his own use or benefit the name or likeness of another is subject to liability to the other for invasion of his privacy." *RESTATEMENT (SECOND) OF TORTS* § 652(c) (1977).

171. Robertson, *supra* note 85, at 7.

172. Robertson, *supra* note 85, at 11.

173. Robertson, *supra* note 85, at 10; see also *York v. Jones*, 717 F. Supp. 421 (1989); Andrews, *supra* note 40, at 31.

174. Andrews, *supra* note 40, at 31; American Fertility Society, *Ethical Statement*

the two parties wishes to continue in vitro fertilization in direct opposition to the wishes of the other contributing party.¹⁷⁵ Once again, possession is in the hands of the doctor or laboratory in which the embryos are stored; yet, due to the special nature of these cells, ownership rights are in the two parties who contributed cells.¹⁷⁶ Property rights exist in this emotional setting in a form that invites conflict and precludes resolution.

V. PROPOSAL

A. *Informed Consent*

The simplest way to resolve the problem of the gap in property rights presented by the *Moore*¹⁷⁷ case would be for the legislature to require any doctor or researcher who is interested in using a patient's cells for commercial research to obtain his informed consent to that use of his cells before they are removed from his body. Once such consent has been given, the tissue would become the property of the doctor or researcher to whom the person assigns his dispositional interest in the cells. Potential abuses of this process could be avoided by imposing heavy ethical and criminal sanctions for physicians who either do not obtain informed consent or who refuse medical care in an effort to force patients to relinquish the rights to their cells.

Doctors should also be prohibited from acting as middle-men or flesh-peddlers. Compensation should not go to the doctors unless they take part in the successful development and patenting of a product, or receive a sort of finder's fee for locating a patient with the type of cells required for research. The primary function of a doctor is to treat diseases. This can be accomplished through scientific research, but can hardly be said to result from the commercial exploitation of patients.

on *In Vitro Fertilization*, FERTILITY & STERILITY 41, 12 (1984).

175. Robertson, *supra* note 85, at 9.

176. Robertson, *supra* note 85, at 9.

177. *Moore v. Regents of the Univ. of Cal.*, 793 P.2d 479 (Cal. 1990).

B. *Waiver*

Requiring a patient to sign a waiver of commercial interest in cells, tissues, or organs which may be removed from his body during medical treatments is another possible solution to this problem. A waiver is "the intentional or voluntary relinquishment of a known right, or such conduct as warrants an interference of the relinquishment of such right"¹⁷⁸ Unfortunately, such waiver is illegal since federal law "prohibit[s] the use of exculpatory language in consent forms that effect or appear to effect a waiver of the subject's legal rights."¹⁷⁹

C. *Licensing*

The development of a licensing system for human cells, organs, and tissues would enable the patients to partake of any financial benefits resulting from the research and commercialization of their cells.¹⁸⁰ A license is defined as "[t]he permission by competent authority to do an act which, without such permission, would be illegal, a trespass, or a tort."¹⁸¹ In order to give a license, the patient must possess enough property rights in his cells to maintain a cause of action for trespass or in tort for the action of the doctor or hospital or such action must not be illegal. As the California Supreme Court has stated in *Moore*, a patient whose cells have been removed from his body does not have a sufficient property interest in that material to sustain a cause of action for conversion.¹⁸² Thus, a patient would be unable to give a license for the use of his body parts since he has no property rights in them to protect once they are detached from his body. Before parts are removed, a patient may be able to negotiate and grant a license for those

178. BLACK'S LAW DICTIONARY 1580 (6th ed. 1990).

179. Lavoie, *supra* note 2, at 1376. Current law is that:

[n]o informed consent, whether oral or written, may include any exculpatory language through which the subject or the representative is made to waive or appear to waive any of the subject's legal rights, or releases or appears to release the investigator, the sponsor, the institution or its agents from liability for negligence.

45 C.F.R. § 46.116 (1991).

180. Danforth, *supra* note 1, at 199.

181. BLACK'S LAW DICTIONARY 919-20 (6th ed. 1990).

182. *Moore v. Regents of the Univ. of Cal.*, 793 P.2d 479 (Cal. 1990).

biological materials, but that would have to be accomplished while the patient was still in possession of and exercising full property rights.¹⁸³

D. *Bailment*

Bailment presents a similar problem. Bailment is defined as:

A delivery of goods or personal property, by one person to another, in trust for the execution of a special object upon or in relation to such goods, beneficial either to the bailor or bailee or both, and upon a contract, express or implied, to perform the trust and carry out such object, and thereupon either to redeliver the goods to the bailor or otherwise dispose of the same in conformity with the purpose of the trust.¹⁸⁴

The true owner is the bailor, "the party who *bails* or delivers goods to another in the contract of bailment."¹⁸⁵ Usually, the hospital pathologist takes possession of the cells once they have been removed from a body. He keeps them for comparison, record, or until disposal. Since either he or the doctor has actual possession of the materials, they would be the bailees.¹⁸⁶ If they are employees of the hospital, the hospital or its administrators may be considered to be the bailees should any liability arise under the theory of respondeat superior.¹⁸⁷ Yet the patient does not have enough property rights in those cells to be considered their owner.¹⁸⁸ Again, a proposed resolution of the problem fails because of the gap in ownership of the human biological materials.

A system of bailment or licensing would account for the continuity of possession in the body parts but for the lack of clear ownership interests in the interim period between removal from the body and the patenting of a new product made

183. *Id.*

184. BLACK'S LAW DICTIONARY 142 (6th ed. 1990).

185. *Id.*

186. See BLACK'S LAW DICTIONARY 1311-12 (6th ed. 1990).

187. The theory of respondeat superior states that the "master is responsible for want of care on [the] servant's part toward those to whom master owes duty to use care, provided failure of servant to use such care occurred in the course of his employment." BLACK'S LAW DICTIONARY 1312 (6th ed. 1990).

188. *Moore v. Regents of the Univ. of Cal.*, 793 P.2d 479 (Cal. 1990).

from them. Either of these systems may work for the frozen embryos since property rights can be determined under a theory of misappropriation of a person's likeness and genetically specific identification of those cells with those contributors.¹⁸⁹ However, for cells, organs and tissues excised from living human beings, the fact that the patient has insufficient property interests in those biological materials to support a cause of action for conversion would imply that he also has insufficient property rights in them to support a license or bailment.

E. *Combinations*

Another possible solution to the problem would be to preserve the patient's dispositional rights in the cells after removal with informed consent, then to give the tissue to the hospital pathologist in bailment. In this case they could keep the cells, tissues, or organs as bailees for the patients who would still have a sufficient dispositional property right in the cells to act as bailors. In any case, the patient is the most recent owner of the cells, and thus, the most logical person with whom to continue those rights until they are used for commercial scientific research.¹⁹⁰

Another alternative would be to eliminate doctors as the middle-men in the sale or transfer of human organisms for commercial research by forcing the commercial entities to contract directly with the patients while they are still owners of the cells.¹⁹¹ Alternatively, the doctor could be paid a specified, limited fee for his services in bringing patients and researchers together. Both the fees and the transfers should be regulated by either the American Medical Association, the state medical association, or another appropriate organization in order to maintain a high level of ethical standards.

Since the California Supreme Court has refused to determine who has what rights to human biological material that has been removed from a living patient and which is to be used in commercial research, and since the Supreme Court of the United States has denied Moore's application for a writ of certiorari,¹⁹² it is up to the legislatures to decide who owns

189. Danforth, *supra* note 1, at 193.

190. Moore v. Regents of the Univ. of Cal., 793 P.2d 479, 499 (Cal. 1990).

191. *Id.* at 479.

192. Moore v. Regents of the Univ. of Cal., 793 P.2d 479 (Cal.), *cert. denied*,

that property during that period.¹⁹³ Given the fact that the patient was the most recent owner of the tissue, and that no one can obtain anything greater than a property interest for the purpose of scientific research or disposal in those materials until a unique, differentiated cell line or other product has been created and patented, a minimal dispositional property interest should remain with the patient.¹⁹⁴ Combined with the present requirement that a patient give informed consent to the use of his tissues in medical research, the succession of ownership is continuous.¹⁹⁵ The patient has at least that much of a right to the ownership of his own body parts whether they are attached or not.

Although none of these remedies would be viable standing alone, given the gap between ownership by the cell generator and ownership by the doctor or researcher which presently exists, it is possible for the legislature to cure what the courts will not. It may do so by passing a law which defines ownership rights in cells which have been excised from a living human and used for commercial scientific research without the consent of the patient. Once the cells have been altered sufficiently for researchers to obtain a patent on the product derived from them, the cells become the property of the patent holders in their altered state.¹⁹⁶ The patient generally receives no compensation for his cells or from the patent.¹⁹⁷ New legislation could bridge the property gap by completing the chain of ownership.

Another facet of this solution would be to drastically limit the amount of compensation a doctor may receive for bringing a patient and a commercial research company together. If the potential financial rewards were significantly reduced, the doctors would have less incentive to take advantage of innocent patients. In addition, the legislature may choose to require the written informed consent of the patient to commercial research on his cells prior to their removal as a prerequisite to their commercial research use. This would result in a waiver of

111 S. Ct. 1388 (1990).

193. *Id.*

194. *Id.* at 499.

195. *Id.* at 501.

196. *Id.* at 492.

197. *Id.*

the patient's rights in his cells, and again solve the problem of the ownership gap by giving those rights to another.

F. *Proposed Legislation*

The theme of this comment is that *Moore v Regents of the University of California*¹⁹⁸ is wrongly decided with respect to the property issue. Humans may not have a sufficient property interest in their excised body parts to constitute a cause of action for conversion. However, they should have a sufficient property interest in those parts to constitute a cause of action for misappropriation of them and to prevent the unjust enrichment of doctors and researchers. Following is a model statute which would overrule *Moore* to a limited degree, giving patients a sufficient property interest in their own excised parts to constitute a license. It requires informed consent and accounts for third-party ownership and development of the cells and subsequent patents, while preventing the free market approach to sales of human flesh which so concerned Justice Panelli in *Moore*.

California Health and Safety Code Section XXXXX

1. Any cell, tissue, or organs as defined previously in this code which is removed, excised, sloughed or expelled from a human subject shall be considered the property of the subject or his guardian or representative for the purpose of granting a license for their use in commercial or scientific research and development unless:

- a. The subject has consented in writing to the use of the cell, tissue or organ in commercial research;
- b. The subject has affirmatively waived his property interest in the cell, tissue, or organ;
- c. The subject has died; or
- d. The subject has donated the cell, tissue, or organ for use in scientific or commercial research and development.

2. The subject's property in the excised or sloughed cell, tissue, or organs shall be limited to the right to grant a license for commercial research and development of such cell, tissue, or organ.

198. *Moore v. Regents of the Univ. of Cal.*, 793 P.2d 479 (Cal.), cert. denied, 111 S. Ct. 1388 (1990).

VI. CONCLUSION

A legislative solution is required to remedy the problems left by the *Moore*¹⁹⁹ case. By holding that the patient has an insufficient property interest in his excised cells to support a cause of action for conversion while upholding the exclusive right of the doctors and the research institute to the profits of the patent,²⁰⁰ the court declines to address the issue of who owns the biological material while the research is being performed and the patentable cell line is being developed. The court also failed to recognize the patient's significant contribution to the development of the patent and his implied right to participate in its commercial success.²⁰¹ It never explains how the ownership was transferred from the patient to either the doctor or the research institute. Although the patient has some dispositional interest in his cells by virtue of federal law, he no longer has full ownership of the cells according to California law.²⁰² Rather, he has a negative right to prevent someone from doing scientific research on his cells.²⁰³ He is not able to prevent anyone from appropriating his cells for commercial scientific development.

Although Moore was unethically treated by his physician, the court is unwilling to allow him enough of an ownership interest in his own cells to participate in the extreme financial benefit which resulted to his doctor and the commercial entities involved.²⁰⁴ The court has ruled that the part of every human being which is considered to be the most obvious symbol of his identity, his body, is not considered to be exclusively his own.²⁰⁵ A doctor, researcher or commercial entity may profit from the use of his cells, yet the patient is permitted no legal remedy for the misappropriation of what, by all standards of aesthetics and dignity, should be his property. This situation should be remedied either through the courts or new legisla-

199. *Moore v. Regents of the Univ. of Cal.*, 793 P.2d 479 (Cal.), *cert. denied*, 111 S. Ct. 1388 (1990).

200. *Id.*

201. *Id.*

202. *Id.* at 484.

203. Danforth, *supra* note 1, at 192.

204. *Id.*

205. *Id.*

tion. Property rights in human body parts must be defined and protected in our legal system.

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