something new when cDNA is made. cDNA retains the naturally occurring exons of DNA, but it is distinct from the DNA from which it was derived." 133 S. Ct. at 2119. In a footnote, the Court mentioned that inventors seeking to patent cDNA would still need to establish other elements of patentability such as novelty, non-obviousness, and enablement. 133 S. Ct. at 2119 n.9.

3. *Institutional competence.* The majority and dissent agree that whether living things can be patented is the sort of difficult philosophical and economic question that should be decided by Congress, not the courts. But the justices have differing assessments of what follows from that assumption. If the courts wish to maximize the likelihood of serious congressional investigation into a novel and important issue in property law or intellectual property law, what should they do? Should they recognize the ambiguous property right, as the majority did, or refuse to recognize such a right, as the dissent urged? Is the legislature more likely to create a property right that a court said was nonexistent under an existing statute or to abrogate a property right that the court said already exists? Constitutional provisions discussed in Chapter 13 also may affect the calculus.

2. Property in One's Person

Remember the foundation of Locke's labor theory of property, stated on page 15: "every man has a property in his own person." Slavery, obviously, was in opposition to that proposition, but slavery has been abolished. So, can we now say, without qualification, that you have property in yourself? Consider the following case.

Moore v. Regents of the University of California

Supreme Court of California, 1990
793 P.2d 479

[*Background*: In 1976 John Moore sought treatment for hairy-cell leukemia at the Medical Center of the University of California, Los Angeles. (We shall at times refer to the doctors at the Center and to the Regents of the University who own the Center collectively as "defendants.") The defendants conducted tests, took blood and tissue samples, confirmed the diagnosis, and told Moore that his condition was life-threatening and that his spleen should be removed. What they did not tell Moore was that his cells were unique and that access to them was of great scientific and commercial value.

Moore consented to the splenectomy and to some seven years of follow-up tests and procedures that he was led to believe were important to his treatment. His spleen was retained for research purposes without his knowledge or consent, and during the post-operative period samples of tissue and blood and other fluids were taken on each of Moore's visits. At some point Moore was informed that his bodily substances were being used for research, but he was never informed of the commercial value of the research or of the defendants' financial interest in it. The defendants subsequently established a cell line from Moore's cells (named

the Mo cell line, after Moore), received a patent for it, and entered into various commercial agreements. Hundreds of thousands of dollars had been paid to the defendants under these agreements by the mid-1980s, and the potential market for products from Moore's cell line is estimated to run into the billions of dollars.

Moore sued for damages in 1984, his complaint stating a number of causes of action, including conversion (wrongful exercise of ownership rights over the personal property of another; Moore alleged that his blood and bodily substances, and the cell line derived from them, were "his tangible personal property"), lack of informed consent, breach of fiduciary duty, fraud and deceit, unjust enrichment, intentional infliction of emotional distress, negligent misrepresentation, and others. The trial court sustained the defendants' demurrers to the conversion cause of action and held that because the conversion cause of action was incorporated into all the other causes of action, those too were defective.

The court of appeal reversed, finding that Moore had adequately stated a cause of action for conversion. Moore v. Regents of the University of California, 249 Cal. Rptr. 494 (Cal. App. 1988). The court could find "no legal authority, public policy, nor universally known facts of biological science . . . which compel a conclusion that this plaintiff cannot have a sufficient legal interest in his own bodily tissues amounting to personal property. Absent plaintiff's consent to defendants' disposition of the tissues, or lawful justification, such as abandonment, the complaint adequately pleads all the elements of a cause of action for conversion."

"We have approached this issue with caution," the court said. "The evolution of civilization from slavery to freedom, from regarding people as chattels to recognition of the individual dignity of each person, necessitates prudence in attributing the qualities of property to human tissue. There is, however, a dramatic difference between having property rights in one's own body and being the property of another. . . . We are not called on to determine whether use of human tissue or body parts ought to be 'gift based' or subject to a 'free market.' That question of policy must be determined by the Legislature. In the instant case, the cell line has already been commercialized by defendants. We are presented a *fait accompli*, leaving only the question of who shares in the proceeds. . . ."

The court then considered the meaning of property and concluded that the essential element is dominion, or rights of use, control, and disposition. It went on to discuss the "many cases" (involving search and seizure, consent to medical procedures, rights to dead bodies, and other instances) that recognize "rights of dominion over one's own body, and the interests one has therein. . . . These rights and interests are so akin to property interests that it would be a subterfuge to call them something else."

The court concluded by dealing with a series of contentions by defendants. There were no grounds to infer that Moore had abandoned his tissue or consented to its use in research unrelated to his treatment. And the fact that the defendants' skill and effort had enhanced the value of Moore's tissue went not to the issue of conversion but to the measure of damages for the conversion. "Plaintiff's cells and genes are a part of his person," the court said. To hold that patients do not have the ultimate power to control the destiny of their tissues

"would open the door to a massive invasion of human privacy and dignity in the name of medical progress." The court saw no reason to believe that medical research would suffer by requiring the consent of the donor of tissue before it can be appropriated. True, a potential donor, once informed, might refuse consent, but the court "would give the patient that right. As to defendants' concern that a patient might seek the greatest economic gain for his participation, this argument is unpersuasive because it fails to explain why defendants . . . are any more to be trusted with these momentous decisions than the person whose cells are being used." If giving patients a financial interest in their tissues inhibited donations and increased the costs of medical care, that problem could be addressed by the legislature.

Upon petition by the defendants, the court of appeal's judgment was reviewed by the California Supreme Court. The case takes up 65 pages of the official reporter; what follows is the essence of the views stated, particularly regarding the cause of action for conversion.]

PANELLI, J. We granted review in this case to determine whether plaintiff has stated a cause of action against his physician and other defendants for using his cells in potentially lucrative medical research without his permission. . . . We hold that the complaint states a cause of action for breach of the physician's disclosure obligations, but not for conversion. . . .

A. Breach of Fiduciary Duty and Lack of Informed Consent

Moore repeatedly alleges that Golde [the attending physician] failed to disclose the extent of his research and economic interests in Moore's cells before obtaining consent to the medical procedures by which the cells were extracted. These allegations, in our view, state a cause of action against Golde for invading a legally protected interest of his patient. This cause of action can properly be characterized either as the breach of a fiduciary duty to disclose facts material to the patient's consent or, alternatively, as the performance of medical procedures without first having obtained the patient's informed consent. . . .

B. Conversion

Moore also attempts to characterize the invasion of his rights as a conversion—a tort that protects against interference with possessory and ownership interests in personal property. He theorizes that he continued to own his cells following their removal from his body, at least for the purpose of directing their use, and that he never consented to their use in potentially lucrative medical research. . . . As a result of the alleged conversion, Moore claims a proprietary interest in each of the products that any of the defendants might ever create from his cells or the patented cell line.

No court, however, has ever in a reported decision imposed conversion liability for the use of human cells in medical research. While that fact does not end our inquiry, it raises a flag of caution. In effect, what Moore is asking us to do is to impose a tort duty on scientists to investigate the consensual pedigree of each

human cell sample used in research. To impose such a duty, which would affect medical research of importance to all of society, implicates policy concerns far removed from the traditional, two-party ownership disputes in which the law of conversion arose. . . .

[W]e first consider whether the tort of conversion clearly gives Moore a cause of action under existing law. We do not believe it does. . . .

Since Moore clearly did not expect to retain possession of his cells following their removal, to sue for their conversion he must have retained an ownership interest in them. But there are several reasons to doubt that he did retain any such interest. First, no reported judicial decision supports Moore's claim, either directly or by close analogy. Second, California statutory law drastically limits any continuing interest of a patient in excised cells. Third, the subject matters of the Regents' patent—the patented cell line and the products derived from it—cannot be Moore's property.

Neither the Court of Appeal's opinion, the parties' briefs, nor our research discloses a case holding that a person retains a sufficient interest in excised cells to support a cause of action for conversion. We do not find this surprising, since the laws governing such things as human tissues, transplantable organs, blood, fetuses, pituitary glands, corneal tissue, and dead bodies deal with human biological materials as objects sui generis, regulating their disposition to achieve policy goals rather than abandoning them to the general law of personal property. . . .

. . . [T]he Court of Appeal in this case concluded that "[a] patient must have the ultimate power to control what becomes of his or her tissues. To hold otherwise would open the door to a massive invasion of human privacy and dignity in the name of medical progress." Yet one may earnestly wish to protect privacy and dignity without accepting the extremely problematic conclusion that interference with those interests amounts to a conversion of personal property. Nor is it necessary to force the round pegs of "privacy" and "dignity" into the square hole of "property" in order to protect the patient, since the fiduciary-duty and informed-consent theories protect these interests directly by requiring full disclosure.

The next consideration that makes Moore's claim of ownership problematic is California statutory law, which drastically limits a patient's control over excised cells. Pursuant to Health and Safety Code section 7054.4, "[n]otwithstanding 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 [of health services] to protect the public health and safety." Clearly the Legislature 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. A primary object of the statute is to ensure the safe handling of potentially hazardous biological waste materials. Yet one 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. . . .

Finally, the subject matter of the Regents' patent—the patented cell line and the products derived from it—cannot be Moore's property. This is because the patented cell line is both factually and legally distinct from the cells taken from Moore's body. Federal law permits the patenting of organisms that represent the product of "human ingenuity," but not naturally occurring organisms. . . . It is this *inventive effort* that patent law rewards, not the discovery of naturally occurring raw materials. Thus, Moore's allegations that he owns the cell line and the products derived from it are inconsistent with the patent, which constitutes an authoritative determination that the cell line is the product of invention. . . .

[Having concluded that Moore's claim found no support under the existing law of conversion, the majority considered whether the law of conversion should be extended to allow the claim.]

. . . There are three reasons why it is inappropriate to impose liability for conversion based upon the allegations of Moore's complaint. First, a fair balancing of the relevant policy considerations counsels against extending the tort. Second, problems in this area are better suited to legislative resolution. Third, the tort of conversion is not necessary to protect patients' rights. For these reasons, we conclude that the use of excised human cells in medical research does not amount to a conversion.

Of the relevant policy considerations, two are of overriding importance. The first is protection of a competent patient's right to make autonomous medical decisions. . . . The second important policy consideration is that we not threaten with disabling civil liability innocent parties who are engaged in socially useful activities, such as researchers who have no reason to believe that their use of a particular cell sample is, or may be, against a donor's wishes. . . .

Indeed, so significant is the potential obstacle to research stemming from uncertainty about legal title to biological materials that the Office of Technology Assessment reached this striking conclusion: "[R]egardless of the merit of claims by the different interested parties, resolving the current uncertainty may be more important to the future of biotechnology than resolving it in any particular way." . . .

We need not, however, make an arbitrary choice between liability and nonliability. Instead, an examination of the relevant policy considerations suggests an appropriate balance: Liability based upon existing disclosure obligations, rather than an unprecedented extension of the conversion theory, protects patients' rights of privacy and autonomy without unnecessarily hindering research.

To be sure, the threat of liability for conversion might help to enforce patients' rights indirectly. This is because physicians might be able to avoid liability by obtaining patients' consent, in the broadest possible terms, to any conceivable subsequent research use of excised cells. Unfortunately, to extend the conversion theory would utterly sacrifice the other goal of protecting innocent parties. Since conversion is a strict liability tort, it would impose liability on all those into whose hands the cells come, whether or not the particular defendant participated in, or knew of, the inadequate disclosures that violated the patient's right to make an informed decision. In contrast to the conversion theory, the fiduciary-duty and informed-consent theories protect the patient directly, without punishing

innocent parties or creating disincentives to the conduct of socially beneficial research.

Research on human cells plays a critical role in medical research. This is so because researchers are increasingly able to isolate naturally occurring, medically useful biological substances and to produce useful quantities of such substances through genetic engineering. . . . The extension of conversion law into this area will hinder research by restricting access to the necessary raw materials. Thousands of human cell lines already exist in tissue repositories. . . . At present, human cell lines are routinely copied and distributed to other researchers for experimental purposes, usually free of charge. This 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.

To expand liability by extending conversion law into this area would have a broad impact. The House Committee on Science and Technology of the United States Congress found that "49 percent of the researchers at medical institutions surveyed used human tissues or cells in their research." . . . In addition, "there are nearly 350 commercial biotechnology firms in the United States actively engaged in biotechnology research and commercial product development and approximately 25 to 30 percent appear to be engaged in research to develop a human therapeutic or diagnostic reagent. . . . Most, but not all, of the human therapeutic products are derived from human tissues and cells, or human cell lines or cloned genes." . . .

In deciding whether to create new tort duties we have in the past considered the impact that expanded liability would have on activities that are important to society, such as research. . . .

[T]he theory of liability that Moore urges us to endorse threatens to destroy the economic incentive to conduct important medical research. If the use of cells in research is a conversion, then with every cell sample a researcher purchases a ticket in a litigation lottery. Because liability for conversion is predicated on a continuing ownership interest, "companies are unlikely to invest heavily in developing, manufacturing, or marketing a product when uncertainty about clear title exists." . . .

If the scientific users of human cells are to be held liable for failing to investigate the consensual pedigree of their raw materials, we believe the Legislature should make that decision. Complex policy choices affecting all society are involved, and [l]egislatures, in making such policy decisions, have the ability to gather empirical evidence, solicit the advice of experts, and hold hearings at which all interested parties present evidence and express their views. . . .

[T]here is no pressing need to impose a judicially created rule of strict liability, since enforcement of physicians' disclosure obligations will protect patients against the very type of harm with which Moore was threatened. So long as a physician discloses research and economic interests that may affect his judgment, the patient is protected from conflicts of interest. Aware of any conflicts, the patient can make an informed decision to consent to treatment, or to withhold consent and look elsewhere for medical assistance. As already discussed, enforcement of physicians' disclosure obligations protects patients directly, without hindering the socially useful activities of innocent researchers.

For these reasons, we hold that the allegations of Moore's third amended complaint state a cause of action for breach of fiduciary duty or lack of informed consent, but not conversion. . . .

Lucas, C.J., Eagleson, J., and Kennard, J., concurred.

ARABIAN, J., concurring. I join in the views cogently expounded by the majority. I write separately to give voice to a concern that I believe informs much of that opinion but finds little or no expression therein. I speak of the moral issue.

Plaintiff has asked us to recognize and enforce a right to sell one's own body tissue *for profit.* He entreats us to regard the human vessel—the single most venerated and protected subject in any civilized society—as equal with the basest commercial commodity. He urges us to commingle the sacred with the profane. He asks much. . . .

It is true, that this court has not often been deterred from deciding difficult legal issues simply because they require a choice between competing social or economic policies. . . . The difference here, however, lies in the nature of the conflicting moral, philosophical and even religious values at stake, and in the profound implications of the position urged. The ramifications of recognizing and enforcing a property interest in body tissues are not known, but are greatly feared—the effect on human dignity of a marketplace in human body parts, the impact on research and development of competitive bidding for such materials, and the exposure of researchers to potentially limitless and uncharted tort liability. . . .

Whether, as plaintiff urges, his cells should be treated as property susceptible to conversion is not, in my view, ours to decide. . . .

Where then shall a complete resolution be found? Clearly the Legislature, as the majority opinion suggests, is the proper deliberative forum. . . . Indeed, a legislative response creating a licensing scheme, which establishes a fixed rate of profit sharing between researcher and subject, has already been suggested. Such an arrangement would not only avoid the moral and philosophical objections to a free market operation in body tissue, but would also address stated concerns by eliminating the inherently coercive effect of a waiver system and by compensating donors regardless of temporal circumstances. . . .

[The concurring and dissenting opinion of Justice Broussard is omitted.]

MOSK, J. I dissent. Contrary to the principal holding of the Court of Appeal, the majority conclude that the complaint does not—in fact cannot—state a cause of action for conversion. I disagree with this conclusion for all the reasons stated by the Court of Appeal, and for additional reasons. . . .

The concepts of property and ownership in our law are extremely broad. . . .

Being broad, the concept of property is also abstract: rather than referring directly to a material object such as a parcel of land or the tractor that cultivates it, the concept of property is often said to refer to a "bundle of rights" that may be exercised with respect to that object—principally the rights to possess the property, to use the property, to exclude others from the property, and to dispose of the property by sale or by gift. . . . But the same bundle of rights does not attach to all forms of property. For a variety of policy reasons, the law limits or even forbids the exercise of certain rights over certain forms of property. For example,

both law and contract may limit the right of an owner of real property to use his parcel as he sees fit. Owners of various forms of personal property may likewise be subject to restrictions on the time, place, and manner of their use. Limitations on the disposition of real property, while less common, may also be imposed. Finally, some types of personal property may be sold but not given away,[4] while others may be given away but not sold,[5] and still others may neither be given away nor sold.[6]

In each of the foregoing instances, the limitation or prohibition diminishes the bundle of rights that would otherwise attach to the property, yet what remains is still deemed in law to be a protectible property interest. . . . The same rule applies to Moore's interest in his own body tissue. . . . Above all, at the time of its excision he at least had *the right to do with his own tissue whatever the defendants did with it*: i.e., he could have contracted with researchers and pharmaceutical companies to develop and exploit the vast commercial potential of his tissue and its products. . . .

Having concluded—mistakenly, in my view—that Moore has no cause of action for conversion under existing law, the majority next consider whether to "extend" the conversion cause of action to this context. Again . . . I respectfully disagree with [their reasoning].

. . . [O]ur society acknowledges a profound ethical imperative to respect the human body as the physical and temporal expression of the unique human persona. One manifestation of that respect is our prohibition against direct abuse of the body by torture or other forms of cruel or unusual punishment. Another is our prohibition against indirect abuse of the body by its economic exploitation for the sole benefit of another person. The most abhorrent form of such exploitation, of course, was the institution of slavery. Lesser forms, such as indentured servitude or even debtor's prison, have also disappeared. Yet their specter haunts the laboratories and boardrooms of today's biotechnological research-industrial complex. It arises wherever scientists or industrialists claim, as defendants claim here, the right to appropriate and exploit a patient's tissue for their sole economic benefit—the right, in other words, to freely mine or harvest valuable physical properties of the patient's body. . . .

A second policy consideration adds notions of equity to those of ethics. Our society values fundamental fairness in dealings between its members, and condemns the unjust enrichment of any member at the expense of another. This is particularly true when, as here, the parties are not in equal bargaining positions. . . . Yet defendants deny that Moore is entitled to any share whatever in the proceeds of this cell line. This is both inequitable and immoral. . . .

There will be . . . equitable sharing if the courts recognize that the patient has a legally protected property interest in his own body and its products: "property

4. A person contemplating bankruptcy may sell his property at its "reasonably equivalent value," but he may not make a gift of the same property.

5. A sportsman may give away wild fish or game that he has caught or killed pursuant to his license, but he may not sell it.

The transfer of human organs and blood is a special case discussed below.

6. E.g., a license to practice a profession, or a prescription drug in the hands of the person for whom it is prescribed.

rights in one's own tissue would provide a morally acceptable result by giving effect to notions of fairness and preventing unjust enrichment. . . ."

I do not doubt that the Legislature is competent to act on this topic. The fact that the Legislature may intervene if and when it chooses, however, does not in the meanwhile relieve the courts of their duty of enforcing—or if need be, fashioning—an effective judicial remedy for the wrong here alleged. . . .

The inference I draw from the current statutory regulation of human biological materials, moreover, is the opposite of that drawn by the majority. By selective quotation of the statutes the majority seem to suggest that human organs and blood cannot legally be sold on the open market—thereby implying that if the Legislature were to act here it would impose a similar ban on monetary compensation for the use of human tissue in biotechnological research and development. But if that is the argument, the premise is unsound: contrary to popular misconception, it is not true that human organs and blood cannot legally be sold.

As to organs, the majority rely on the Uniform Anatomical Gift Act (Health & Saf. Code, §7150 et seq., hereafter the UAGA) for the proposition that a competent adult may make a post mortem gift of any part of his body but may not receive "valuable consideration" for the transfer. But the prohibition of the UAGA against the sale of a body part is much more limited than the majority recognize: by its terms the prohibition applies only to sales for "transplantation" or "therapy." Yet a different section of the UAGA authorizes the transfer and receipt of body parts for such additional purposes as "medical or dental education, research, or advancement of medical or dental science. No section of the UAGA prohibits anyone from selling body parts for any of those additional purposes; by clear implication, therefore, such sales are legal. Indeed, the fact that the UAGA prohibits *no* sales of organs other than sales for "transplantation" or "therapy" raises a further implication that it is also legal for anyone to sell human tissue to a biotechnology company for research and development purposes. . . .

The majority's final reason for refusing to recognize a conversion cause of action on these facts is that "there is no pressing need" to do so because the complaint also states another cause of action that is assertedly adequate to the task. . . .

I disagree, however, with the majority's further conclusion that in the present context a nondisclosure cause of action is an adequate—in fact, a superior—substitute for a conversion cause of action. . . .

The majority do not spell out how those obligations will be "enforced"; but because they arise from judicial decision (the majority opinion herein) rather than from legislative or administrative enactment, we may infer that the obligations will primarily be enforced by the traditional judicial remedy of an action for damages for their breach. . . .

The remedy is largely illusory. "[A]n action based on the physician's failure to disclose material information sounds in negligence. As a practical matter, however, it may be difficult to recover on this kind of negligence theory because the patient must prove a *causal connection* between his or her injury and the physician's failure to inform." (Martin & Lagod, Biotechnology and the Commercial Use of Human Cells: Toward an Organic View of Life and Technology (1989), 5 Santa Clara Computer & High Tech L.J. 211, 222, fn. omitted, italics added.)

There are two barriers to recovery. First, "the patient must show that if he or she had been informed of all pertinent information, he or she would have declined to consent to the procedure in question." (Id.) . . .

The second barrier to recovery is still higher, and is erected on the first: it is not even enough for the plaintiff to prove that he personally would have refused consent to the proposed treatment if he had been fully informed; he must also prove that in the same circumstances *no reasonably prudent person* would have given such consent. . . .

The second reason why the nondisclosure cause of action is inadequate for the task that the majority assign to it is that it fails to solve half the problem before us: it gives the patient only the right to *refuse* consent, i.e., the right to prohibit the commercialization of his tissue; it does not give him the right to *grant* consent to that commercialization on the condition that he share in its proceeds. . . .

Third, the nondisclosure cause of action fails to reach a major class of potential defendants: all those who are outside the strict physician-patient relationship with the plaintiff. Thus the majority concede that here only defendant Golde, the treating physician, can be directly liable to Moore on a nondisclosure cause of action. . . .

POSTSCRIPT

After losing on his conversion claim, Moore eventually resolved his remaining claims in a confidential settlement. Whatever amount he received, much of it probably went to pay attorneys' fees. Moore became an advocate for patients' rights. In 2001, his battle with cancer ended when he died at the age of 56.