Do the Dead Have Interests? Policy Issues for Research After Life (with D. Nelkin)

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The importance of establishing rights in a dead body has been, and will continue to be, magnified by scientific advancements. The recent explosion of research and information concerning biotechnology has created a market place in which human tissues are routinely sold to and by scientists, physicians and others. The human body is a valuable resource.1

I. INTRODUCTION

The body of the nineteenth century philosopher Jeremy Bentham is on display in a glass cage at University College, London.2 Bentham applied his utilitarian perspectives to the body by suggesting that corpses, including his own, would be of greater use to society stuffed and displayed as an "auto-icon" rather than simply buried away.3 Preserved, exhibited and studied, the corpse, he said, could serve "moral, political, honorific, dehonorific, money-saving, money getting, commemorative, genealogical, architectural, theatrical, and phrenological" ends.4

But the corpse is more than a utilitarian object; it is an ambiguous entity—subject to conflicting beliefs and contradictory representations.5 It has sacred meaning. We maintain burial grounds as sacred places and celebrate national holidays to commemorate the dead. And every religious faith has beliefs pertaining to

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1 Brotherton v. Cleveland, 923 F.2d 477, 481 (4th Cir. 1991) (citation omitted).
3 See id. at 203–04.
4 Id. at 205 (quoting Jeremy Bentham).
the treatment of corpses. Laws have recognized the corpse's instrumental value as an object for scientific study, clinical teaching and commercial gain, but they have also accommodated the desire to respect remains.

Scientific studies in biotechnology have placed increased value on the body as a source of research material, yet because of the ambiguous status of the corpse, the use of human tissue from the dead for research or medical training remains controversial. Disputes reflect the striking differences between scientific or utilitarian perspectives and the body's social meaning. These differences are becoming increasingly important as a variety of technological developments from genetic testing to modern scanning techniques have enhanced the research value of corpses.

In this Article, we assess historical controversies involving anatomy and dissection, describe four categories of cases, interpret the interests and social values involved when corpses become the focus of competing claims and suggest policy considerations for dealing with research on the dead.

II. HISTORICAL CONTROVERSIES OVER RESEARCH ON THE DEAD

Research and clinical uses of deceased individuals' bodies have been controversial since the early days of anatomical dissection when the process of fragmenting the body evoked Dantesque visions of Hell. The issue of integrity and continuity in the next life dominated the medieval discourse on the body. "[S]alvation is wholeness, hell is decay and partition."9 Because the body's integrity was thought to be necessary for salvation in the afterlife, many people did not want their corpses subjected to autopsy and research. Certain religious groups maintain this perspective today.9

During the Renaissance, these views clashed with the growing culture of inquiry. The dead body became increasingly valuable as an object for research through dissection (Vesalius), anatomical studies (Leonardo da Vinci) and autopsy to

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6 See infra note 32 and accompanying text.
7 Scanning technologies have also created new opportunities for analyzing dead bodies for research purposes. See Body Voyage, COMPUTER LIFE, June 1, 1997, at 110, available in 1997 WL 8920243. A detailed three-dimensional atlas of the human body is on the internet. See Tom Standage, Anatomy: Computers Are Killing Off the Cadaver, DAILY TELEGRAPH (London), Feb. 12, 1998, at 8. In proper historical tradition, the digital images were taken from the cadaver of a 39-year-old executed prisoner, Joseph Paul Jervigan, who had consented to have his body used for science. See Body Voyage, supra, at 110; Lawrence J. Magid, Beauty Is Only Skin Deep: Icky Stuff Is Deeper, L.A. TIMES, Sept. 29, 1997, at D4. After his death by lethal injection in Texas, x-ray images were made of the body which was then frozen, sliced into 1871 sections, and photographed once again—to be immortalized in cyberspace. See Ted Anthony, Dead Killer Becomes Online Body of Knowledge, L.A. TIMES, Jan. 7, 1996, at A4, available in LEXIS, News Library, Lat File. Dissected into seven gigabytes, Jervigan can be downloaded from the Internet and the images of his body are available throughout the world. See id. Jervigan's body—young, nontraumatized—was a boon for scientists, see id. (stating that "most people who die—either by old age or violence—don't leave prime human specimens behind"), but others expressed a vague sense of discomfort about a body, frozen, sliced and dissected into gigabytes. See, e.g., Magid, supra, at D4 (describing the idea as "macabre" and "ghoulish"). Their reservations about the treatment of Jervigan's body recalled earlier disputes over the sources of research cadavers from prisoners and the poor. See, e.g., Laura-Hill M. Patton, Note, A Call for Common Sense: Organ Donation and the Executed Prisoner, 3 VA. J. SOC. POL'Y & L. 387, 391–92 (1996).
improve clinical understanding (Rudolf Virchow). By the early nineteenth century, the corpse was well integrated in clinical thought, and the anatomical findings revealed by autopsies became the basis for both medical understanding and the development of the science of pathology.\footnote{See Rolla B. Hill & Robert E. Anderson, The Evolving Purposes of the Autopsy: Twenty-First-Century Values from an Eighteenth-Century Procedure, 32 Persp. Biology & Med. 223, 223–24 (1989).}

Still, the practice of autopsy remained controversial. The public considered the dissecting of a dead body to train medical students a degrading and sacrilegious practice, an act inflicted as punishment on executed criminals or other marginal or powerless persons.\footnote{In his classic 1801 anatomy textbook, Xavier Bichat wrote: "[Y]ou have taken notes at patients' bedsides . . . and all is confusion for you in the symptoms which, refusing to yield up their meaning, offer you a succession of incoherent phenomena. Open up a few corpses: you will dissipate at once the darkness that observation alone could not dissipate." (Xavier Bichat, Anatomie Générale, quoted in Michel Foucault, The Birth of the Clinic: An Archaeology of Medical Perception 126 (A.M. Sheridan Smith trans., Pantheon Books 1973).)\footnote{Michael Sappol, The Cultural Politics of Anatomy in 19th Century America: Death, Dissection, and Embodied Social Identity 526 (1997) (unpublished Ph.D. thesis, Columbia University) (on file with author) (stating further that "[d]issectors increasingly sought to forestall any identification with the body as a person, any identification that would evoke an emotional response in the anatomical student or the laity, even one so distancing as mockery").}

Body snatching became a lucrative practice. Because bodies were in short supply, they became valuable commodities—as historian Michael Sappol described them, "object[s] of exchange whose value fluctuated according to the law of supply and demand."\footnote{Id. at 824.} Anatomy departments paid between ten and thirty-five dollars for a body, more than the weekly wage of a skilled worker at that time.\footnote{Id. at 528.} Bodies were obtained in devious ways—through grave robbing\footnote{See id. at 526.} and even the murder of beggars.\footnote{Id.} As described by historian Ruth Richardson, corpses were "quarried"; "Parts extracted were sold to those who could use them, such as dentists and wigmakers, and to those who assisted medical research and study, such as articulators of bones for medical skeletons, and medical-specimen makers. Profits were to be made at every stage."\footnote{See id.}

The practice of body snatching continued until anatomy laws—passed in various states throughout the nineteenth century—eased the shortage by allowing medical schools to use the bodies of executed murderers and the unclaimed dead.\footnote{The first anatomy law was passed in Massachusetts in 1828. See id. at 74.} These
laws regularized the practice of dissection, reassuring law-abiding middle and upper class individuals that their bodies would not be involved. But throughout the nineteenth century, writes Sappol, people remained sensitive to the dangers of commercialization, insisting that the body remain “sequestered from the market economy, from any calculus advantage or disadvantage.”

Objections to dissection in the nineteenth century focused on both the instrumental and the commercial calculus, “the claim of science and the claim of the mart.” An article in Harpers in 1854 captured the dilemma: “Science may prove, ever so clearly, that there is nothing there but carbon, and oxygen, and lime, . . . but all this can never eradicate the sentiment we are considering. It enters too deeply into our laws of thinking, our laws of speech, our most interior moral and religious emotions.”

Disputes over the sources of cadavers for science and medicine reemerged after World War I, when surgical requirements brought about by war casualties greatly increased the need for surgeons trained in anatomy. The bodies of servicemen killed in the war were ideal subjects for training physicians, but the bodies’ ownership was contested. While the medical profession sought bodies on which to practice, families wanted them returned. To appease the families, doctors assured that they would give the cadavers reverential treatment and would return all removed body parts to their “shell.” But in fact, “insufficient care was taken to ensure that separated parts of an individual’s body were returned to the correct shell.”

The practice of autopsy continued as an essential part of medical education, but, as experimentation became the preferred mode of discovery, the information revealed by autopsy seemed to possess less compelling value to researchers, and interest in research on corpses dramatically declined. The rising importance of molecular diagnostics in the 1990s, however, augmented the value of tissue from the dead. Today, dead bodies serve a variety of research purposes. Pathologists argue

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21 But anatomists were apparently comfortable with using the bodies of those who were socially devalued. An anatomist at the University of Michigan reassured the trustees that “better people” could rest easy. See Humphrey, supra note 12, at 822.

22 Sappol, supra note 14, at 196.

23 Id. (quotations omitted).

24 Editorial, 8 HARPER’S NEW MONTHLY MAGAZINE 690, 690 (1853–1854).


26 See id.

27 See id. at 211.

28 See id. at 219.

29 Id.

30 See Hill & Anderson, supra note 10, at 226; see also Tom McNamee, Experts Afraid Autopsies Are a Dying Tradition, CHI. SUN-TIMES, Nov. 16, 1997, at 12, available in 1997 WL 6379286 (noting that over the past “three decades, the number of autopsies performed has declined from 41% of all hospital deaths nationwide to 10%”).

31 See Wayne W. Grody, Molecular Pathology, Informed Consent, and the Paraffin Block, 4 Diagnostic Molecular Pathology 155, 155–56 (1995) (documenting technological advances that make actual tissue samples even more valuable); Hill & Anderson, supra note 10, at 228 (stating that not only the medical profession and medical science but all of society benefits from the performance of autopsies).
that analysis of tissues using molecular methods is helping them to understand many diseases.\textsuperscript{32}

The historical disputes over dissection reflected several concerns about the violation of body integrity involved in cutting corpses, the collection and use of bodies without the consent or authorization of families and the "snatching" of bodies for profit. Concerns about body integrity, unauthorized collection and commercial exploitation remain in our historical memory. Today, dead bodies serve a variety of research purposes. Some research, such as studies requiring genetic material, can be accomplished with consenting, living volunteers.\textsuperscript{33} But other investigations can be more easily accomplished on dead bodies, such as teaching medical students intubation techniques.\textsuperscript{34} And some studies require the use of corpses.\textsuperscript{35} Researchers at the Body Farm at the University of Tennessee, for example, bury donated bodies or leave them by the side of the road.\textsuperscript{36} By determining how deteriorated and insect-ridden an abandoned corpse is at a particular time, they can advise medical examiners how to best estimate the time of death.\textsuperscript{37}

Today, old tensions have taken on new dimensions as the commercial potential of human tissue has captured the entrepreneurial imagination—as market interests provide incentives to treat tissue, blood and other body parts as valuable, collectible commodities.\textsuperscript{38} A close look at four types of cases reveals their legal, personal and social dimensions. Disputes today raise several legal questions: Should pathologists or other researchers be able to take tissue from the dead when there has been no consent? If an autopsy has been authorized, does this imply permission to take body tissue for research? Once research is completed, how should the body and its parts be treated? These narrow questions often have ambiguous legal answers. To de-

\textsuperscript{32}See Chester Herman & David Schwartz, \textit{Pathology and Laboratory Medicine}, 275 JAMA 1839, 1839 (1996) (arguing that because the availability of archived tissue specimens can provide a link between the emerging infections of today and the idiopathic illnesses of yesterday, the autopsy is the most important quality assurance indicator for the treatment of the sickest patients).

\textsuperscript{33}For example, research on the existence of a breast cancer gene mutation could be done in corpses, but, more commonly, it is done on living volunteers. See, e.g., Steve Sternberg, \textit{When Cancer's a Family Affair, Challenge Is to Isolate Genetic Link, Develop a Test}, ATLANTA J. & CONST., Jan. 8, 1994, at E1 (noting the progress made in locating the gene responsible for breast cancer by studying the chromosomes of families with a history of breast cancer).

\textsuperscript{34}See James P. Orlowski et al., \textit{The Ethics of Using Newly Dead Patients for Teaching and Practicing Intubation Techniques}, 319 NEW ENG. J. MED. 439, 440–41 (1988); see also D. Gary Benfield et al., \textit{Teaching Intubation Skills Using Newly Deceased Infants}, 265 JAMA 2360, 2362 (1991) (noting the inadequacies of using mannequins or animals for teaching intubation techniques). When techniques such as intubation cause serious harm to a living individual, it could be argued that the research intervention should be developed first on deceased individuals. However, even in those instances, criticisms arise if the consent of the next of kin is not obtained. See Orlowski, supra, at 440–41.


\textsuperscript{36}See id. at 78.

\textsuperscript{37}See id. at 77.

\textsuperscript{38}See Philippe Ducor, \textit{The Legal Status of Human Materials}, 44 DRAKE L. REV. 195, 196 (1996) (discussing how medical technology has allowed for the transfer and processing of body parts and other products of human origin in a manner typical of banal commodities). See generally George J. Annas, \textit{Outrageous Fortune: Selling Other People's Cells}, HASTINGS CENTER REP., Nov./Dec. 1990, at 36 (discussing the California Supreme Court case, Moore v. Regents of the University of California, 793 P.2d 479 (Cal. 1990), which involved doctors making a substantial profit from cells originally removed from a patient's body allegedly without the patient's knowledge of the cells' potential commercial uses).
velop an appropriate policy framework, it is necessary to understand the social values that underlie disputes.

III. CONTROVERSIES ABOUT RESEARCH ON THE DEAD

A. CASE I: CELEBRITY RESEARCH WITHOUT CONSENT—THE CASE OF EINSTEIN'S BRAIN

Albert Einstein died of a ruptured abdominal aortic aneurysm on April 18, 1955, and his body was cremated.\textsuperscript{39} The scattering of ashes took place at a location and time that was not publicized because Einstein had indicated he did not want a shrine, memorial, statue or museum.\textsuperscript{40} He used to say, "I want to be cremated so that people won't come to worship at my bones."\textsuperscript{41} Nor did he want to be studied.\textsuperscript{42} Einstein's family assumed that his entire body had been cremated,\textsuperscript{43} but his wishes had not been respected.\textsuperscript{44} Dr. Thomas Stoltz Harvey, the pathologist at Princeton Hospital who conducted Einstein's autopsy, removed and kept his brain.\textsuperscript{45} Without any previous consent from Einstein, he arranged for it to be sliced and embedded in celloidin, so that he could examine the pieces under the microscope.\textsuperscript{46} Harvey stored the sections in cardboard boxes and larger pieces in glass jars.\textsuperscript{47} He controlled access to the brain tissue, giving pieces to about twelve scientists who hoped to discover its unique qualities.\textsuperscript{48} Einstein's brain yielded little interesting scientific information, but the way it was handled yielded many questions about informed consent, respect for preferences and the control over tissue samples.

Would Einstein have consented to the study of his brain? Harvey insists that, "He being the scientist that he was, I think he would have agreed to the study of his brain."\textsuperscript{49} But there is much evidence to dispute this contention. Einstein's papers contain no mention of a desire to donate his brain for research.\textsuperscript{50} He did not choose

\textsuperscript{40} See Gina Maranto, \textit{Einstein's Brain}, DISCOVER, May 1985, at 28, 29.
\textsuperscript{41} Freedland, supra note 39, at T10 (quoting Abraham Pais, Einstein's friend and biographer).
\textsuperscript{42} See id.
\textsuperscript{43} See Osgood File (CBS radio broadcast, Aug. 21, 1995), available in 1995 WL 2961323 (Charles Osgood's interview with Dr. Thomas Stoltz Harvey). The family's wishes were that the whole body be cremated. See RACHLIN, supra note 2, at 329. After learning the nature of Harvey's proposed study, the family gave permission for him to proceed on the condition that the results be reported in scientific journals and that no attempts to sensationalize the findings be made. See id. at 330.
\textsuperscript{44} See Freedland, supra note 39, at T10.
\textsuperscript{45} See id.
\textsuperscript{46} See RACHLIN, supra note 2, at 330–31. "Harvey Rachlin refers to these slide specimens as "an exciting scientific treasure." Id. at 331.
\textsuperscript{47} See id. at 333.
\textsuperscript{49} Osgood File, supra note 43. Harvey also suggested that another rationale for the autopsy was that "particularly since Einstein was German and in Germany back then autopsies were routine." Scott LaFce, \textit{Einstein's Mind: His Brain Sits on a Shelf, Largely Unsought by the World}, SAN DIEGO UNION-TRIB., May 17, 1995, at E1 (quoting Dr. Thomas Harvey). However, Einstein viewed himself as an American citizen for the last 15 years of his life. See Ray Monk, \textit{The Adulation of Einstein}, SUNDAY TELEGRAPH (London), May 19, 1996, at 15, available in LEXIS, World Library, Textline File.
\textsuperscript{50} See Maranto, supra note 40, at 32.
to donate his body to science, as others such as Bentham and Sir William Osler had done. Instead he chose to have his body cremated, which would preclude scientific study. He took elaborate precautions to protect his image, bequeathing the right to license it to Hebrew University. If he had wanted his brain used, it is likely he would have taken similar precautions to assure that its uses coincided with his wishes. Harvey’s claim to know what Einstein would have wanted is particularly weak, given that he had ample opportunity to obtain consent. He had personally collected and analyzed Einstein’s blood during his lifetime, yet did not get permission to study his brain.

Although Harvey took Einstein’s brain for research purposes, he possessed it for over forty years without using it for meaningful research. In the 1980s, Marian Diamond, a neuroanatomist at the University of California at Berkeley, saw a picture in a science magazine of Einstein’s brain tissue in a cardboard box next to Harvey’s desk and, after some difficulty, convinced Harvey to give her some tissue to study. She sent her the tissue in a mayonnaise jar. Diamond found that Einstein’s brain had a greater glial/neuron ratio than did eleven controls, and published a study, including Harvey as a co-author as a courtesy for providing the tissue. But Diamond was quick to point out her study’s limitations, including the small sample size and the fact that she had no other geniuses’ brains for comparative examination.

Finally, in 1996, forty-one years after he had taken the brain, Harvey published an article about it. Along with co-author Britt Anderson of the University of Alabama Department of Neurology, he asserted that, “[s]tudying the brain of a genius can play a small and titillating role in the quest to identify these neurobiological features [that affect intelligence].” They compared Einstein’s brain to five controls and concluded that Einstein’s brain was within the average range in weight, but below the mean for men his age.

Neither Diamond’s nor Harvey’s research had sufficient controls or measures to determine whether Einstein’s particular brain morphology was related to his intellectual capability. In fact, other researchers questioned the appropriateness of trying to learn about genius through a physical study of the brain. Dr. Janice Stevens of the neuropsychiatry branch of the National Institute of Mental Health pointed out,


53 See LaFer, supra note 49, at 61 (discussing how Einstein left no known written bequest donating his brain to science).

54 See Richard O’Mara, Equated with Genius, BALTIMORE SUN, Mar. 16, 1996, at 1D.

55 See Maranto, supra note 40, at 30, 34.

56 See RACHLIN, supra note 2, at 332.


58 However, Harvey did not participate in the research. See Harrison, supra note 42, at 6.

59 See RACHLIN, supra note 2, at 333; Maronto, supra note 40, at 32.


61 See id. at 161, 163.
“Many idiots have big brains loaded with glial cells.”62 Physicist Banesh Hoffman, Einstein’s biographer and former assistant, also criticized the idea of studying the physical brain.63 So too did Robert Schulman, director of the Einstein papers at Princeton University: “He’d think it was ridiculous that people were chopping up his mind to see where his power came from.”64

Other “celebrities” have also been subjected to research after their death. In recent years, the New England Journal of Medicine has published articles on Karen Ann Quinlan’s brain65 and Hubert Humphrey’s cancerous bladder.66 Some celebrities have been disinterred to probe their genetic make-up or to solve the “mysteries” surrounding their life or death.67 In February 1994, the Federal Bureau of Investigation tested the hair relics of George Washington, after establishing their authenticity by comparing them with living relatives.68 It is unclear from reports what type of testing researchers performed. Some researchers suggested testing Washington’s samples to determine the cause of his health problems, including possible infertility.69 Along the same vein, researchers proposed genetic testing for Marfan’s syndrome on samples of Abraham Lincoln’s hair, bone chips and blood stains stored at the National Museum of Health and Medicine, affiliated with the Armed Forces Institute of Pathology.70 Marfan’s syndrome is characterized by weaknesses in bones, joints, eyes and the heart.71 Marfan patients are often tall with long limbs, fueling speculations that Lincoln had the condition.72 Due to the finite supply of Lincoln’s DNA, administrators at the National Museum of History and Medicine decided to delay the study, pending improvements in DNA test techniques and more knowledge about the genetic cause of Marfan’s syndrome.73 But many other deceased historical figures—from statesmen to outlaws—are being considered as subjects for research.


63 See Maranto, supra note 40, at 33.

64 Freedland, supra note 39, at T10 (quoting Schulman).


66 E.g., Ralph Hurban et al., Brief Report, Molecular Biology and the Early Detection of Carcinoma of the Bladder—The Case of Hubert H. Humphrey, 330 NEW ENG. J. MED. 1276 (1994).

67 For example, the body thought to be Butch Cassidy was disinterred to establish its authenticity. See NOVA: Wanted: Butch and Sundance (PBS television broadcast, Oct. 12, 1993).


69 See id.


72 See id.

73 See id.; Larry Thompson, Experts Discourage Test of Lincoln Genes, WASH. POST, Apr. 16, 1992, at A14. In the initial proposal, the genetic “[t]esting would require destruction of tiny amounts of the samples to recover the . . . DNA, which could then be cloned to produce quantities sufficient for research.” Warren E. Leary, A Search for Lincoln’s DNA, N.Y. TIMES, Feb. 10, 1991, at A1. In May 1991, a committee assembled by the National Museum of Health and Medicine approved attempts to clone Abraham Lincoln’s genes for DNA testing. See Leary, supra note 70, at B9. The decision to clone Lincoln’s DNA provoked heated debate within the scientific community. See Will Dunham, Plan to Clone Lincoln's DNA Draws Criticism, UNITED PRESS INT’L, May 6, 1991, available in LEXIS, News Library, Arcnews File. Researchers then decided to clone Lincoln’s
B. CASE II: GROUP RESEARCH WITHOUT CONSENT — THE CASE OF NATIVE AMERICAN REMAINS

Einstein’s corpse was a target for research due to his personal characteristics. In other instances, corpses are of interest in studies of group characteristics. Native American corpses in particular have long been a focus of research. Anthropologists and archaeologists of the eighteenth century looked on Native Americans as “‘noble savages,’ unspoiled examples of what mankind must have been like in its earliest days, before the Biblical Fall.” They were “material” providing scientists with “valuable clues” to past cultures. In 1793, Thomas Jefferson, the father of American archaeology, endorsed burial excavation claiming he had the right to systematically excavate and remove the remains of over 1000 known Native American graves on his plantation by “virtue of a higher order called science.” Scientists of the time were primarily interested in Native American burial goods, but human remains were inevitably and “incidentally” excavated.

During the 1830s, two new “scientific” disciplines, craniology and phrenology, found uses for these incidental human remains. Researchers used the excavated bodies of Native Americans in attempts to categorize humans ethnically and to estimate intelligence based on the size and shape of crania. The largest Indian crania study involved the study of the Native Americans killed at the Sand Creek massacre.

existing DNA to create more of it, allowing them to pursue the research on Marfan’s syndrome. See id. In 1992, however, an expert panel convened by the National Museum of Health and Medicine recommended that researchers delay the cloning until genetic techniques improved. See Leary, supra note 71, at B6. The panel feared that the cloning would destroy all of the preserved material, precluding future uses. See id. Future tests may be possible using a technique known as polymerase chain reaction. See Richard A. Marini, Polymerase Chain Reaction, POPULAR SCI., May 1992, at 99, 99. This technique could create a sufficient DNA sample size to conduct the study by amplifying the inadequate samples. See id. The study was still pending in late 1997. See David N. Leff, First Steps on Long Road to Gene Therapy for Marfan’s Syndrome Aortic Aneurysms, BIOWORLD TODAY, Oct. 20, 1997, available in LEXIS, News Library, Curnws File.

74 See Maranto, supra note 40, at 34 (stating that it is no surprise that neurobiologists want to study Einstein’s brain because he was the premier scientist of this century).


78 See John B. Winski, There Are Skeletons in the Closet: The Repatriation of Native American Human Remains and Burial Objects, 34 ARIZ. L. REV. 187, 192 (1992). Additionally, the skeletal remains which were incidentally excavated received disrespectful treatment. See id. They were stored in boxes and treated as “relics or fossils,” or were turned over for scientific research. See id. See generally DOUGLAS H. UBELAKER, HUMAN SKELETAL REMAINS—EXCAVATION, ANALYSIS, INTERPRETATION: ALDINE MANUALS ON ARCHAEOLOGY (1978) (exploring scientific studies of aboriginal tribes, including osteological studies of sex, age, diet, disease and migration patterns).

79 See Riding In, supra note 77, at 17; Winski, supra note 78, at 191.

80 See Riding In, supra note 77, at 17; see also Winski, supra note 78, at 191 (noting that intelligence rankings were given to each race based on the measurements of crania).
whose bodies were “donated” by the U.S. Army.81 Furthermore, in 1868 the U.S. Surgeon General instituted his own crania study and ordered that all troops stationed near Native American burial sites fulfill their patriotic duties and collect and contribute more specimens for research purposes.82 These craniological and phrenological studies were used to support theories that all non-whites were intellectually and morally inferior.83 They were ultimately discredited, but researchers continued to view Native American remains as objects of curiosity.84

Responding to the growing interests in Native American skeletal remains85 among both scientists and art and antiquities dealers, in 1906 the federal government passed the American Antiquities Preservation Act (Antiquities Act) which legally converted all Native American burial sites, funerary objects and human remains into “objects of antiquity” and “archaeological resources” and thus federal property.86 Legal permits were required to excavate human remains for research purposes.87 When the 1906 Act was found to be unconstitutionally vague,88 the federal government in 1979 passed the Archaeological Resource Protection Act, reinforcing the legal construction of Native American human and funerary remains as archaeological resources and federal property.89 Scientists have begun to use DNA techniques on Native American remains, as a source of information about tribal migration patterns,90 as

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81 See Riding In, supra note 77, at 19.
82 See id. at 19–20. In fact, it is thought that all of the remains collected by the Surgeon General's crania study are now part of the Smithsonian's collection. See id. at 23.
83 See id. at 17–18; see also DELORIA, supra note 75, at 19 (discussing the primitive belief that human cranial capacity illustrated the intelligence of different races). Vine Deloria writes:

> Indians were hardly on their reservations before government employees began robbing graves at night to sever skulls from freshly buried bodies for eastern scientists to measure in an attempt to prove a wholly spurious scientific theory. Indeed, it may have been that Indians were unnecessarily slaughtered in battles, since it was a custom to simply ship bodies of Indians killed by the army to eastern laboratories for use in various experiments... Even today, dark rumors continue to circulate concerning the use of Indians by the Indian Health Service to test experimental drugs. Some years ago there were real questions concerning the number of Indian women being sterilized at government clinics without their knowledge or consent.

> Id.

88 See United States v. Diaz, 499 F.2d 113, 115 (9th Cir. 1974).
89 See 16 U.S.C. §§ 470aa–470ii. Specific examples of “archaeological resources” cited in the Act are human graves and skeletal material. See id. § 470bb(1).
well as "relations between diet, disease, ecology, and social arrangements" affecting mankind.91

The continuing research upset living Native Americans, including the descendants of those people whose bodies were the objects of research. They were concerned about religious issues and exploitation. According to James Riding In, "Many Indians assert that disinterment stops the spiritual journey of the dead, causing the affected spirits to wander aimlessly in limbo. These affected spirits can wreak havoc among the living, bringing sickness, emotional distress, and even death."92 Their objections also reflected sensitivities about past oppression. Why, they asked, were Native American remains more scientifically valuable than those of white Americans? Why was skeletal research necessary, proper or beneficial? Native Americans regarded the research on their ancestral skeletal remains as just another example of discrimination by "racist state laws" that "deprive them of equal burial rights."93 They were also offended by the use of remains to study tribal migration. Native American genesis stories are based not on tribal migration, but on spirits rising from the earth.94 Tribes tend to adhere to creationist theories and reject science as just another type of religion.95 As an officer of the Lakota tribe stated when he argued for the repatriation of skeletal remains that were slotted to become archaeological material, "We never asked science to make a determination as to our origins."96 In addition, Native Americans worry that such research will be used to deny them access to land on the basis of historical tribal claims.97

Recognizing the importance of Native American interests, the federal government passed the National Museum of the American Indian Act in 1989,98 and the

91 See John E. Peterson, Dance of the Dead: A Legal Tango for Control of Native American Skeletal Remains, 15 AM. INDIAN L. REV. 115, 117 (1990); see also Stumpf, supra note 76, at 305 (discussing how archaeologists regard material remains with which they work as irreplaceable clues to the past).
92 Riding In, supra note 77, at 13.
93 See id. at 26.
94 See George Johnson, Indian Tribes' Creationists Thwart Archaeologists, N.Y. TIMES, Oct. 22, 1991, at A1; see also DELORIA, supra note 75, at 39 (discussing how, although some Native American genesis stories involve migration, the majority of the stories involve spiritual creation); Bill Dietrich, Skeleton Leads to Bones of Contention: Science Collides with Tribal Beliefs, ARIZ. REPUBLIC, Sept. 1, 1996, at A28, available in 1996 WL 7734492 (noting that critics of American Indian skeletal investigations reject the tribal migration theory); Leslie Alan Horvitz, Indians and Anthropologists are Battling Over Old Bones, INSIGHT, Nov. 18, 1996, at 40, 40-41 (discussing the fact that because many tribes reject scientific theories of evolution and migration and embrace their own spiritual beliefs about creation, the chances of compromise between the scientists and the Native Americans are slim).
95 See Horvitz, supra note 94, at 40; Johnson, supra note 94, at A1.
97 See DELORIA, supra note 75, at 84.
Native American Graves Protection and Repatriation Act (NAGPRA) in 1990. These acts enabled requesting Native Americans to reclaim cultural items and family-related skeletal remains discovered on federal or tribal land from all federally funded institutions and museums.

Researchers seeking access to Native American remains have challenged the constitutionality of NAGPRA. At issue in a pending case are human remains unearthed in 1996 near Kennewick, Washington. The remains of a skeleton, nicknamed the "Kennewick Man," startled researchers because initial radiocarbon dating indicated the skeleton was at least 9000 years old, and was in fact Caucasian, not Native American. If true, this would validate the belief held by many archaeologists that "some early Native American inhabitants came from European stock, migrating over a land bridge across the Bering Sea." The Army Corps of Engineers took custody of Kennewick Man and determined that, in accordance with NAGPRA, the remains should be returned to the Umatilla tribe, a culturally affiliated tribe, for repatriation without further scientific study. However, a group of scientists filed suit to halt the repatriation and "demanded a detailed scientific study to determine the origins of the man," which they viewed as "a rare discovery of national and international significance." They claimed that NAGPRA violates their

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100 See Sarah Harding, Justifying Repatriation of Native American Cultural Property, 72 IND. L.J. 723, 723 (1997).
102 See Bonnichsen v. U.S. Dep't of the Army, 969 F. Supp. 614, 617 (1997). The court granted the Army Corps of Engineers' motions to dismiss the scientists' § 1983 claim. See id. at 625. However, the scientists were allowed to argue that the government's decision was "arbitrary and capricious" under the Administrative Procedure Act and that the Native American Graves Protection and Repatriation Act (NAGPRA) was unconstitutional. See id. at 626.
103 See id. at 617. These remains are also referred to as the "Richland Man." See id.
104 See id.
105 See Dietrich, supra note 94, at A28.
107 See Bonnichsen, 969 F. Supp. at 617-18. The Umatilla Indian tribe claimed the remains and expressed their intent to repatriate the remains before any further scientific research could be conducted. See Afrasiabi, supra note 106, at 805; see also Memorandum in Opposition to Defendants' Motion to Dismiss at 2, Bonnichsen (No. 96-1481-JE) (copy on file with author).
108 Bonnichsen, 969 F. Supp. at 618. The Asatru Folk Assembly, described by their Complaint as a church "that represents Asatru, one of the major indigenous, pre-Christian, European religions," also filed suit asking the court to compel the Corps of Engineers to allow further scientific testing of the remains in order to determine whether the remains are Native or non-Native. See id. The Asatru contend that if in fact Kennewick Man is non-Native, they request custody of the remains "for study and 'for eventual reburial in accordance with native European belief.'" Id. at 618-19. The Asatru and Bonnichsen claims were joined for the purposes of these hearings. See id. at 619.
109 Id. at 618. These scientists include Robson Bonnichsen, an archaeologist at Oregon State University, who in 1994 discovered through DNA analysis that hairs found at burial sites in Oregon, Montana, Nebraska and Nevada were at least 10,000 years old. See Afrasiabi, supra note 106, at 817. A tribe has since claimed these hairs pursuant to NAGPRA and they will be repatriated. See id. Two other scientist plaintiffs, Douglas W. Owseley, a forensic anthropologist at the Smithsonian, and Richard L. Jantz, a professor of anthropology at the University of Tennessee in Knoxville, have developed a computerized, "specialized protocol for measuring and documenting human skeletal remains" which "permits various comparisons to be made between modern and ancient populations which would not otherwise be possible." Complaint at 3, Bonnichsen (No. 96-1481-JE) (copy on file with author).
“right” to scientific inquiry.\textsuperscript{110}

C. **CASE III: HOW BROAD IS CONSENT FOR AUTOPSY? A COLD WAR LEGACY**

Just as the bodies of celebrities and members of distinct groups have been the subject of research, so too have the bodies of ordinary citizens. Researchers study the manner in which people died, the diseases they experienced or the toxins to which they were exposed. In December 1958, Cecil Kelley, a thirty-eight-year-old lab worker at the Los Alamos National Laboratory\textsuperscript{111} “was exposed to a lethal dose of radiation when a stock of plutonium accidentally reached critical mass.”\textsuperscript{112} At the request of the laboratory, his widow, Doris, consented to an autopsy in order to ascertain the cause of death.\textsuperscript{113} The body was later sent to her in a sealed casket and buried.\textsuperscript{114}

Doris Kelley thought little more about the details of her husband’s death until 1993,\textsuperscript{115} when the *Albuquerque Tribune* published an investigative report on the human radiation experiments.\textsuperscript{116} Laboratory documents were made public and sent to Doris when the “documents [were] requested by the Tribune under the Freedom of Information Act.”\textsuperscript{117} Doris discovered from laboratory records that scientists had removed four kilograms of organs, bones and tissue from her husband’s body without her knowledge or consent.\textsuperscript{118} She and her daughter, Katie Kelley Mareau, sought damages for suffering and for violation of their civil rights.\textsuperscript{119} They believed that Cecil’s tissue was taken not only to learn more about the effects of radiation, but also to develop information that the laboratory could use to defend itself in potential litigation.\textsuperscript{120} Their lawyer is seeking to have the lawsuit certified as a class action on behalf of thousands of families whose relatives were the subject of radiation experiments.\textsuperscript{121}

There are many such families. In the late 1950s, Los Alamos had formed a “Human Tissue Analysis Project” to study the health effects of radiation on nuclear workers.\textsuperscript{122} They collected and stored tissue samples from 1520 corpses from twenty-seven states—all people who had been exposed to radiation from nuclear

\textsuperscript{110} See Complaint at 9, *Bonnichsen* (No. 96-1481-JE).
\textsuperscript{113} See id.
\textsuperscript{114} See id.
\textsuperscript{115} See id.
\textsuperscript{118} See Cohen, supra note 112, at 10.
\textsuperscript{119} See id.
\textsuperscript{120} See id.
\textsuperscript{121} See id.
\textsuperscript{122} See id.
weapons facilities.\textsuperscript{123} Through analysis of this tissue, they sought to find out whether the estimates of the doses the workers had received while alive were in fact accurate.\textsuperscript{124} Later, in 1968, the U.S. Department of Energy (DOE) established the U.S. Transuranium and Uranium Registry which maintains 20,000 tissue samples and residues taken from the remains of 700 current and former workers at nuclear weapons sites or from people who lived near the sites.\textsuperscript{125} Many of these tissue samples were obtained from local coroners.\textsuperscript{126} Families were not notified.\textsuperscript{127}

During the Cold War, a top secret Atomic Energy Commission (AEC) biophysics program, called "Project Sunshine," collected hundreds of cadavers in order to analyze the effect of exposure to Strontium-90 from hydrogen bomb fallout.\textsuperscript{128} But, as in the nineteenth century, bodies were in short supply.\textsuperscript{129} AEC Commissioner Willard Libby complained about the problem of finding human bones for these tests.\textsuperscript{130} "[W]here anybody knows how to do a good job of body snatching, they would be serving their country," he said.\textsuperscript{131} Project Sunshine hired a law firm to look at the legal status of body snatching and found that it was indeed illegal.\textsuperscript{132} But in 1955 and 1956, the project was able to obtain about thirty to forty bodies each month in New York City—mainly unclaimed bodies from examiners' offices and medical schools.\textsuperscript{133}

Project Sunshine focused on the effects of fallout, but other experiments focused on the effects of accidents on the bodies of nuclear plant workers such as Cecil Kelley.\textsuperscript{134} The purpose was to obtain data on long-term plutonium accumulation, to collect information on the effects of high doses of radiation and to compare the high doses from a criticality accident with data obtained from past cases of radiation exposure.\textsuperscript{135} This research took place at weapons plants throughout the United States and the Kellys were not the only family to sue. On May 20, 1985, Larry Hicks, a thirty-three-year-old employee of a DOE plant, National Lead, woke up feeling weak and experienced an irregular heartbeat.\textsuperscript{136} He was admitted to a coronary unit and died.\textsuperscript{137} His physician felt that workplace exposure to "black oxide" might have caused his death.\textsuperscript{138} A representative of National Lead suggested that the autopsy be

\textsuperscript{123} See id.
\textsuperscript{124} See id.
\textsuperscript{126} See Jewell, supra note 125, at B1.
\textsuperscript{127} See id.
\textsuperscript{129} See id.
\textsuperscript{130} See id.
\textsuperscript{131} Id. (quoting records released by the Advisory Committee on Human Radiation Experiments).
\textsuperscript{132} See id.
\textsuperscript{133} See id.
\textsuperscript{134} See Cohen, supra note 112, at 10.
\textsuperscript{135} See id.
\textsuperscript{137} See id.
\textsuperscript{138} See id.
performed by physicians at the U.S. Uranium Registry, in a program run by the Hartford Environmental Health Foundation (HEHF) for the DOE. Earlier, HEHF had contacted National Lead employees asking them to donate their tissue for research on their death, but Hicks apparently had not agreed to participate in such research. Consequently, when the coroner gave HEHF access to Larry Hicks' body, his widow sued National Lead and HEHF, claiming that they had conspired to obtain organs and tissue samples for research without consent—that they were, in effect, body snatching.

Among the corpses obtained during the Cold War was that of Karen Silkwood—a worker at the Kerr McGee fuel rod processing plant in Crescent, Oklahoma, and also an anti-nuclear activist. Silkwood died in 1974 at the age of twenty-eight in a fatal car crash as she was driving to meet a New York Times reporter to talk about the plant's violation of safety standards. After the accident, Los Alamos scientists flew to Oklahoma City. They obtained permission from the medical examiner for an autopsy to ascertain the cause of death and to cremate the body. But, without his permission, they preserved some organs—including her reproductive organs—before reducing the rest of her body to ashes.

In 1994, twenty years after the fatal accident, the head of the Human Studies Project team approached Silkwood's father for permission to analyze his daughter's stored tissue. The request, stated in cold administrative language:

"The analysis of Karen Silkwood's tissue produced 113 separate samples. These consisted of small flasks with solvent and small dissolved amounts of tissue. . . .

"This repository will maintain the samples identified only with a numerical case number for possible future research unless Silkwood's next-of-kin objects. In this case the repository can continue to store them, but not allow access to them without the next of kin's permission."

Bill Silkwood regarded this request as "ghoulish," as "more than hypocritical." He had never consented to the storage of his daughter's organs, only to an autopsy. "They stole those organs. . . . If they've got all those organs, from her brain on down to her womb, why weren't we told about it? They're a bunch of

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139 See id.
140 See id. at 1208 n.3.
141 See id.
142 See id. at 1209.
144 See id. Her father, Bill Silkwood, and activists in the anti-nuclear movement contended that she had been forced off the road. See id. This allegation became the theme of a popular film, SILKWOOD (ABC Motion Picture 1983).
145 See Scripps Howard, supra note 111, at 8A.
146 See id.
147 See id.
148 Id. (quoting letter sent to Bill Silkwood by Alan McMillan, head of the Los Alamos National Laboratory's Human Studies Project Team).
149 See id.
150 See id.
ghouls." He did not want the samples destroyed through research, "They've destroyed enough already."

D. CASE IV: TREATMENT OF BODIES AFTER RESEARCH—THE BENNETT CASE

The cavalier attitude of some scientists toward corpses and toward the families of the deceased sometimes extends to their treatment of bodies on completion of the research. Robert Bennett, Jr.'s sixty-one-year-old mother, Lorraine, died of cancer in 1992, and her body was donated to the University of California, Los Angeles (UCLA) for research and medical education purposes. The school had promised to give her a decent burial once they completed the investigations. Instead, her body ended up in the trash. Bennett brought a class action suit against UCLA, charging that as many as 18,000 bodies were wrongfully cremated with laboratory animals and dumped in garbage bins. The problem came to light when a box supposedly containing only human ashes broke open, revealing broken syringes, used gauze and other garbage. The contractor who had been hired to dispose of the ashes alerted state health officials. Bennett's lawsuit charges the university with breach of contract, negligence and fraud.

Such causes of action would seem to be in keeping with precedents allowing relatives to sue for negligent handling of corpses by an individual who has lawful authority over the body. Even third parties who have no family relationships or contractual relationships to a decedent have duties with respect to the corpse. They are obliged, for example, not to mutilate it. As a 1908 case put it:

Respect for the dead is an instinct that none may violate. The democracy of death is superior to the edicts of kings. . . . It was her [the wife's] right, old as time, as broad as humanity, and as deep as the heart of man, that his mortal remains should be treated with due respect.

IV. THE SOCIAL VALUES AT STAKE

The cases we have described suggest the utilitarian value of dead bodies for research or, simply, the satisfaction of scientific curiosity. But are all research uses of dead bodies appropriate? Ruth Macklin, testifying before a New York State Sen-

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151 Id. (quoting Bill Silkwood).
152 Id.
154 See id.
155 See id.
156 See id.
157 See id.
158 See id.
159 See id.
162 Kyles, 61 S.E. at 281.
ate legislative committee, asserted, "The dead have no interests." But dead bodies do have significant value to individuals and families, who claim the right of consent. Their taking may violate personal or religious beliefs and social understandings.

In addition, cavalier attitudes toward the dead may ultimately damage the research enterprise. A basic tenet of research law and ethics is that research should not be undertaken without consent. The research goals of advancing scientific understanding and curing diseases are laudable, but research is not a matter of conscription. People can refuse to participate in research, even if it involves no risk to them and enormous potential benefit to the community. With respect to federally funded research, the protections of human subjects are codified in federal regulations. But because a dead person is not considered to be a human subject, these research protections do not apply. Instead, the rights of an individual (and his or her family members) to control what is done to the body after death is a matter of state law. To assess the appropriateness of state provisions, it is necessary to look beyond the scientific values of tissue to understand the values at stake in disputes over research on the dead.

A. INDIVIDUAL VALUES

Some individuals do not want research done on their bodies after death. Some may object to physical intervention on their bodies. Others may object to the type of information generated by the research, or to a particular line of research inquiry, or to a particular type of researcher, such as a for-profit biotechnician. Still others may be concerned that the information obtained from the research will affect their relatives or members of their ethnic or racial group.

Some individuals may prefer to take their secrets to their grave. Parents of a child who has a normal external appearance, but who has a genetic abnormality, may be particularly resistant to disclosure of the child's condition, both before and after

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163 Testimony in the New York State Legislature, October, 1997.
165 See 45 C.F.R. § 46.116(a)(8) (1997) (requiring that informed consent, oral or written, notifies a research participant that his participation is voluntary, refusal to participate does not result in penalty and he may discontinue participation at any time without loss of benefits).
166 Id. §§ 46.101–409.
167 See Michael H. Scarmon, Note, Brotherton v. Cleveland: Property Rights in the Human Body—Are the Goods Of Interred with Their Bones?, 37 S.D. L. REV. 429, 446–47 (1992) (discussing cases in various states that have analyzed claims with regard to cadavers based on property rights, using state law as a source of those rights). This is also manifested, for example, in states' adoption of the Uniform Anatomical Gift Act (UAGA) (amended 1987), 8A U.L.A. 19 (1993 & Supp. 1997). See also Ania M. Frankowska, Fetal Tissue Transplants: A Proposal to Amend the Uniform Anatomical Gift Act, 1989 U. ILL. L. REV. 1095, 1106, which discusses how all 50 states have adopted the UAGA.
168 Cf. Lori B. Andrews, My Body, My Property, Hastings Center Rep., Oct. 1986, at 28, 30 (noting that "[i]n a Gallup poll, 20% of respondents said they would not donate organs because they did not like the idea of being cut up after they died").
170 Cf. id. (discussing biological information (i.e., nonpaternity) as an issue that should be raised with potential subjects because disclosure of such information may reveal things about the participant or his family he may not want to know).
the child’s death. Some persons may not want their tissue used—even without their names attached—for research on race and I.Q., race and crime, or gender and mathematical ability—because the research that links genetics with crime, intelligence or other behaviors could label and stigmatize their group. Recently passed statutes in some states recognize such objections by protecting people’s control over their genetic material. In Florida, for example, a person’s genetic material may not be tested without consent. Twenty-six other states give people varying degrees of control over what is done with their genetic material or the results of testing it. In recent legislative enactments, however, at least five states have carved out research exceptions to these laws.

Other people may object to their tissue being patented or their body being used by a for-profit enterprise. In 1951, a thirty-one-year-old black woman, Henrietta Lacks, died of ovarian cancer. Without the knowledge or consent of Lacks or her family, her tissue was taken and made into a cell line that has been extremely valuable for research and is still sold today. In a recent interview, her husband said, “As far as them selling my wife’s cells without my knowledge and making a profit—I don’t like that at all. They are exploiting both of us.” In addition, some people may have political or ideological objections to certain research or researchers. It is unlikely, for example, that Silkwood would have consented to the DOE research on her remains given her activist stance against the nuclear industry.

Unauthorized taking of body tissue from the dead can also violate the religious beliefs of tissue sources. In the Orthodox Jewish community, the body must be

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171 Cf. Sonia M. Suter, Note, Whose Genes Are These Anyway? Familial Conflicts over Access to Genetic Information, 91 Mich. L. Rev. 1854, 1867 (1993) (noting that a mother who has a daughter with testicular feminization syndrome, in which a person develops as a woman but remains genetically male, may refuse to tell her sisters the risk to their daughters of inheriting the syndrome because of the associated social stigma).

172 See Daniel J. Kevles & Leroy Hood, Reflections, in THE CODE OF CODES: SCIENTIFIC AND SOCIAL ISSUES IN THE HUMAN GENOME PROJECT 300, 326–27 (Daniel J. Kevles & Leroy Hood eds., 1992) (highlighting the social stigma that has devolved from the linkage of genes with behavior); see also T.H. Cushing, Should There Be Genetic Testing in Insurance Risk Classification?, 60 Def. Couns. J. 249, 260–61 (1993) (discussing the possibility that genetic testing could lead to discrimination of certain ethnic, racial and gender groups). For instance, the early eugenics movement stigmatized immigrants from eastern and southern Europe by declaring that their genetic composition predisposed them to inferior intelligence, criminality, alcoholism and prostitution. See id.; see also Dorothy E. Roberts, The Nature of Blacks’ Skepticism About Genetic Testing, 27 SETON HALL L. Rev. 971, 979 (1997) (discussing African American’s cultural resistance to and skepticism about genetic testing due to fears of discrimination).


176 See Reilly et al., supra note 169, at 18–19.


178 See id.

179 Id.

180 See Tolley, supra note 143, at B3.

181 See, e.g., Lott v. State, 225 N.Y.S.2d 434, 436–37 (Ct. Cl. 1962) (recognizing that patients’ religious beliefs should be taken into consideration in determining what is proper handling of their bodies after their death).
buried whole.\textsuperscript{182} If a person's leg is amputated during his or her life, arrangements are made to store that body part for burial with the individual after death.\textsuperscript{183} Family members of Orthodox Jewish decedents have sought to enjoin the performance of autopsies.\textsuperscript{184} Rabbis apparently asked Harvey for Einstein's brain so that it could be buried, allowing the scientist to rest in peace.\textsuperscript{185} Orthodox Jewish individuals and Native Americans are not the only people to have religious and cultural ideas about the handling of the dead. Laws in every state express our cultural concerns over proper treatment of remains.\textsuperscript{186} Many states recognize "[t]he right to have the body in the condition in which it was left by death, without mutilation."\textsuperscript{187}

The American legal system recognizes the psychological benefits to living individuals of having a say about what will happen to their property and their bodies after they die.\textsuperscript{188} That is the basis of the estates laws and organ donor laws. The Uniform Anatomical Gift Act of 1987 (UAGA), requires, prior to death, the patient's permission, before organs or tissue can be taken for transplant or research purposes.\textsuperscript{189} If a patient's wishes are not known, family members can consent on his or her behalf.\textsuperscript{190} But if wishes are known, the relatives' wishes cannot overrule them.\textsuperscript{191} Along those lines, serial killer Jeffrey Dahmer wanted to be cremated.\textsuperscript{192}

\textsuperscript{182} See Maurice Lamm, The Jewish Way in Death and Mourning 10 (1969) (explaining that Jewish tradition maintains that man was created in the image of God, and therefore in death the body should retain the unity of that image). If parts are removed, they must be returned and buried with the body. See Kohn v. United States, 591 F. Supp. 568, 573 (E.D.N.Y. 1984) (citing Fred Rosner, Autopsy in Jewish Law and the Israeli Autopsy Controversy, in Jewish Bioethics 331, 332, 335, 338 (Fred Rosner & J. David Bleich eds., 1979)).

\textsuperscript{183} In fact, when Menorah Gardens and Funeral Chapels in Florida lost an amputated leg of an Orthodox Jewish woman, it paid a $1.25 million lawsuit settlement to her daughter. See Henry Fitzgerald, Jr., Woman Awarded $1.25 Million in Suit, SUN-SENTINEL (Fl. Lauderdale), May 16, 1997, at B1, available in 1997 WL 3104029. "Orthodox Jews believe that at the end of time, not only will a person's soul be resurrected, but the body as well. . . . It's important that the whole body, including blood, be buried." Id.

\textsuperscript{184} See, e.g., Wilensky v. Greco, 344 N.Y.S.2d 77, 78 (Sup. Ct. 1973) (enjoining coroner from performing autopsy on automobile accident victim whose parents were Orthodox Jews for whom the procedure was "repugnant to their religious beliefs").

\textsuperscript{185} See Freedland, supra note 39, at T10.

\textsuperscript{186} See Oliver Metzger, Note, Making the Doctrine of Res Extra Commercium Visible in United States Law, 74 Tex. L. Rev. 615, 643 (stating that every state has some measure of legal protection for graves); see also Marla K. Clark, Note, Solving the Kidney Shortage Crisis Through the Use of Non-Heart-Beating Cadaveric Donors: Legal Endorsement of Perfusion as a Standard Procedure, 70 Ind. L.J. 929, 939 (1995) (stating how the Uniform Anatomical Gift Act §§ 1–17 (amended 1987), 8A U.L.A. 29 (1993 & Supp. 1997), "adopted in some form by every state, and other statutes governing the disposition of dead bodies have unwittingly strengthened [the] notion of a property interest in cadavers").

\textsuperscript{187} E.g., Infield v. Cope, 270 P.2d 716, 719 (N.M. 1954).

\textsuperscript{188} See Andrews, supra note 168, at 30.


\textsuperscript{190} See id. § 3(a), at 40.

\textsuperscript{191} See id. § 3(b)(2), at 41.

His mother wanted his brain donated for research. A judge held that Dahmer’s wishes for cremation took priority.

B. HARM TO FAMILY MEMBERS

Clyde Snow, a forensic anthropologist who has done many DNA tests on dead bodies, reminded the public that “Bones may be my business, but they’re other people’s families.” Sometimes the decedents’ families object to their study. In 1993, Wesley Allan Dodd was hanged in Washington State for the murder of three children. As the first prisoner to be hanged since 1965, his sentence was controversial. But the hanging did not end the controversy; for his body became the focus of competing claims. A physician wanted to analyze his brain and his blood to discover if there were neurological or genetic abnormalities. Death penalty opponents wanted access to the body for an investigation that might show that hanging was cruel and unusual punishment. The family allowed researchers to study his blood, but rejected the study of his brain. Their lawyer said, “They wanted to see him cremated as a whole person.”

The emotional impact on relatives of mistreatment of cadavers is widely recognized. In Lott v. State, an Orthodox Jewish woman, Rose Lott, and an Italian-American woman, Mary Tuminelli, both died in Brooklyn State Hospital on the same day; the hospital mixed up the bodies, erroneously giving them to the wrong undertakers. This resulted in Tuminelli’s body being prepared for an Orthodox Jewish burial, and Lott’s body being embalmed, made up with cosmetics and placed in a coffin with a crucifix and rosary according to the rites of the Roman Catholic faith. The court awarded families of both women damages for their mental suffering as a result of the treatment of the bodies. Another case similarly pointed out, “Physical mutilation of remains may be expected to distress the next of kin. But where they believe that the treatment will affect the afterlife of the deceased, the impact inevitably is greater.”

194 In re Estate of Jeffrey L. Dahmer, No. 94 PR 175 (Wis. Cir. Ct. Dec. 14, 1995) (order releasing the brain of Jeffrey Dahmer to his father, Lionel Dahmer) (on file with author); Jones, supra note 192, at 1.
195 NOVA, supra, note 67.
196 See Deann Glamser, Killer’s Brain Causes Clash, USA TODAY, Jan. 6, 1993, at 3A.
197 See id.
198 See id.
199 See id.
200 See id.
201 See Peter Lewis et al., Doctor Says Dodd Felt No Pain—Neck Ligaments Tore, Then He Strangled, SEATTLE TIMES, Jan. 6, 1993, at C1, available in LEXIS, News Library, Majap File.
202 Kate Shatzkin et al., Dodd Autopsy Fuels Both Sides of Debate over Hanging, SEATTLE TIMES, Jan. 7, 1993, at G1, available in LEXIS, News Library, Majap File (quoting the Western State Hospital Medical Director, Dr. Jerry Dennis, who asked the family for Wesley Dodd’s brain for research).
204 See id. at 435–36.
205 See id. at 437 ( awarding each family $1000).
When the decedent’s religious and personal interests are not respected, or when the body is treated without respect, family members may suffer emotional distress as a result.\textsuperscript{207} Christina Arnaud died in her sleep from sudden infant death syndrome (SIDS).\textsuperscript{208} Since Louisiana is one of four states that requires autopsies of infants who die from that condition, her body was delivered to Dr. Charles B. Odom, the deputy coroner of the Parish of Lafayette, Louisiana.\textsuperscript{209} Before undertaking the authorized autopsy, Odom performed research on Christina’s body.\textsuperscript{210} He held her body by her feet and dropped it head-first onto the concrete lab floor.\textsuperscript{211} Then he x-rayed her skull and recorded the results.\textsuperscript{212} He had previously performed this same study with the body of another infant, Kendall Felix.\textsuperscript{213}

Odom’s interest in this particular study followed from a professional dispute in which he was involved.\textsuperscript{214} While Chief Medical Examiner of Honolulu, he concluded through autopsy that a child had accidentally been dropped.\textsuperscript{215} Another forensic pathologist argued that the infant died of intentional abuse.\textsuperscript{216} Dr. Odom was gathering data in his Louisiana study so that he could testify before a Hawaiian grand jury.\textsuperscript{217} But imagine the harm to the family, first losing a child to SIDS, then learning that their daughter’s body had been crushed by being dropped, head-first, on cement.

Family members may also have direct personal interests in the research conducted on their deceased relatives. The parents of serial killers might be concerned about stigma. But other family members might be harmed by research on their kin. Genetic analysis of the tissue from relatives can reveal information about the health status and predispositions of family members.\textsuperscript{218} One researcher tried unsuccessfully to test Einstein’s brain tissue to see if he had a genetic mutation that predisposed him to an aneurysm.\textsuperscript{219} His findings could have led to genetic discrimination against Einstein’s surviving relatives.\textsuperscript{220} Unless the decedent had in life expressed a contrary

\textsuperscript{207} See Andrews, supra note 168, at 29 (stating that people have an interest in their extracorporal body parts, but a protection of that interest “now tenuously rests on precarious doctrines that protect people from emotional distress”).

\textsuperscript{208} See Arnaud v. Odom, 870 F.2d 304, 305 (5th Cir. 1989).

\textsuperscript{209} See id. Arizona, California, Louisiana and Ohio all statutorily compel autopsies in suspected cases of sudden infant death syndrome. See ARIZ. REV. STAT. ANN. § 11–597 (West 1997); CAL. GOV’T CODE § 27491.41 (West Supp. 1998); LA. REV. STAT. ANN. § 33:1563(C) (West 1988); OHIO REV. CODE ANN. § 313.121 (Anderson Supp. 1996).

\textsuperscript{210} See Arnaud, 870 F.2d at 306.

\textsuperscript{211} See id.

\textsuperscript{212} See id.

\textsuperscript{213} See id.

\textsuperscript{214} See id. at 305–06.

\textsuperscript{215} See id. at 306.

\textsuperscript{216} See id.

\textsuperscript{217} See id.

\textsuperscript{218} See Theresa E. Morelli, Genetic Discrimination by Insurers: Legal Protections Needed from Abuse of Biotechnology, HEALTHSPAN, Sept. 1992, at 8, 8.

\textsuperscript{219} See Scott McCartney, Believing Einstein’s Brain Matters, Doctors Keep the Remains, ASIAN WALL ST. J., May 6, 1994, at 1, available in 1994 WL–WSJA 2009122. The DNA in the particular sample was too degraded to provide a definitive answer. See id.

\textsuperscript{220} Genetic testing on deceased individuals can also disrupt family relationships. Einstein’s adopted granddaughter, Evelyn, asked a New Jersey physician, Dr. Charles Boyd, to use genetic testing to determine if she was actually Einstein’s illegitimate daughter. See Einstein’s Brain,
desire, relatives have a right under the UAGA to refuse to consent to research on their kin's body. In addition, many courts recognize a quasi-property right in a dead body that the deceased's next of kin can exercise to further the individual's previous wishes. For example in Brotherton v. Cleveland, the court, considering a widow's claim concerning the removal of her dead husband's corneas without consent, acknowledged her property-like interest in his dead body. She had a right to stop the use of his corneas because she felt he would not have wanted them donated for transplantation purposes.

C. COMPROMISING POLITICAL BELIEFS

As Bill Silkwood recognized, the cadaver has significant political meaning. In an analysis of debates over the repatriation of the fragmented remains of Atomic bomb victims to Japan, Susan Lindee shows that body fragments are not only a source of scientific information but also "a diplomatic commodity, a classified secret, a spoil of war, and an instantiation of the effectiveness of American democracy and American Science." Body parts held for twenty-six years as state secrets at the Armed Forces Institute of Pathology were repatriated after 1965 and became caught up in international debates over the legality and morality of the use of the Atomic bomb. The body parts—acquired, processed, preserved, managed, classified and controlled—became objects just like the organs from Kelley and Silkwood and the brains of Einstein and the serial killers. Even when they have no ritual meaning, body parts have potential to reveal a scientific "truth," and, as Lindee shows, this "truth" provides the records for historical interpretation.

The political value of bodies also underlies disputes over black burial grounds which have long been especially vulnerable to body snatching. In 1788 the black community in Kings County, New York, called for a ban on medical students "making a merchandise of human bones." Over 200 years later, African Americans in New York City objected to the analysis of bones from black burial grounds by white researchers, for they recognized the political value of these bones as sources of information about the history of early black communities, their work and their illnesses. They, like Native Americans reacting to research on remains, anticipated that the interpretations drawn from remains would reflect social stereotypes.
D. HARM TO THE RESEARCH ENTERPRISE

When researchers take and use tissue from corpses without consent, the research enterprise itself may be harmed. It can hardly be claimed that letting Harvey decide what was done to Einstein’s brain led to the best possible research. Harvey was not an expert in neuropathology.\(^{231}\) He had not published any scientific studies prior to, or in the forty years after, Einstein’s death.\(^{232}\) By 1988, Harvey had lost his medical license\(^{233}\) and subsequently obtained a job as a factory worker making advertising display stands.\(^{234}\) With no medical affiliation, he reportedly sliced off snippets of the brain on his kitchen breadboard.\(^{235}\)

Disputes over the disinterment of Native American remains for research purposes have suggested that these remains are often not well used. Like Einstein’s brain, the Native American bones had in many cases been shoved in boxes, not even catalogued, let alone used in research.\(^{236}\) Says Steven Moore:

I think that it’s arrogance in the extreme to say that those sites have scientific value and should be exploited for their scientific value when the legacy is 300,000 human remains in cardboard boxes. I think that, as a professional community, you’ve destroyed your credibility in my eyes to say that future sites that are going to be exposed have unique scientific value if you’ve done little more than place the bones in cardboard boxes in basements.\(^{237}\)

Following protests, the NAGPRA was passed, requiring remains to be returned to descendants.\(^{238}\) Researchers have decried this law, saying it will stop valuable research,\(^{239}\) but others refute this argument by pointing to evidence proving that in the decades when researchers and museums had custody of the remains, they did not use them to the best research advantage.\(^{240}\)

\(^{231}\) See Freedland, supra note 39, at T10.

\(^{232}\) See id.

\(^{233}\) See id.

\(^{234}\) See LaFee, supra note 49, at E1.

\(^{235}\) See Nancy Banks-Smith, The Man with No Brain, GUARDIAN, April 2, 1994, at 26.


\(^{237}\) PROCEEDINGS: CONFERENCE ON REBURIAL ISSUES, supra note 236, at 25.


\(^{239}\) See, e.g., Afsiabi, supra note 106, at 807 (arguing that remains should not be “repatriated if they would thereby be lost to science and humankind forever”).

\(^{240}\) See 136 CONG. REC. H10,985, H10,988 (daily ed. Oct. 22, 1990) (statement of Rep. Campbell) (stating that “thousands upon thousands of native American human remains and sacred objects are housed in museums and Federal agencies across the country[,] . . . kept in boxes, crates, and small wooden file drawers, tagged and numbered”); Riding In, supra note 77, at 28 (arguing that “[I]nIndians continue to be victims of a practice that is without scientific or moral justification. . . . Many scientists now agree that there are no overriding reasons to retain collections of recent Indian remains. Little research is done on these collections, and little new has been learned from them” (quoting Lawrence Rosen, Give American Indian Remains Back to Tribes, N.Y. TIMES, Nov. 15, 1988, at 30A)); see also Jack F. Trope & Walter R. Echo-Hawk, The Native American Graves Protection and Repatriation Act: Background and Legislative History, 24 ARIZ. ST. L.J. 35, 41 (1992) (stating how at the turn of the century, “[s]cientific means were not always used by museum collecting expeditions . . . which can better be described, in some instances, as ‘fervid rip-and-run operations’”). See generally S. REP. NO. 104-350 (1996), reprinted in 1996 U.S.C.A.A.N. 3802
V. POLICY CONSIDERATIONS

The disputes we describe highlight the differences between the instrumental perspectives of science and social and cultural concerns. Some of these concerns follow from personal or religious beliefs, others from political ideologies. They are becoming increasingly important as body tissue from the dead assumes growing value in biotechnology research.

Legal constraints regarding research on the dead may seem limited. Yet a vast body of legal precedents—generally overlooked by researchers and sometimes ignored by courts—could be used to avert what happened in the cases we discussed. The taking of tissue without consent, even purportedly for research purposes, violates statutes and common law principles about appropriate respect for dead bodies.241 It violates principles of giving next of kin authority to make decisions that best approximate those the deceased would have made.242 As an Ohio court pointed out, "Abuse of dead bodies . . . has received extraordinary treatment in the courts."243 And courts acknowledge that research can constitute abuse.244

Courts currently vary in the protections they provide against nonconsensual research on the dead. Some states recognize a right of relatives to receive the body "in the same condition it was in when death intervened."245 Even an autopsy, when done without proper authority, is considered an actionable "mutilation."246 Thus, in Case I, the taking of Einstein's brain without permission could have been actionable. And, in Case II, the NAGPRA allows decedents to recover their ancestors' remains from researchers and to reinter them. The violation of the person's religious or personal beliefs by removing body parts or interfering with cremation or burial is clearly actionable.

In certain cases, relatives have property or quasi-property rights in the body.247 The Supreme Court of Appeals of West Virginia defined the quasi-property right in the following terms:

(calling for amendments to the National Museum of American Indian Act of 1989 so that it imposes on the Smithsonian Institution the same artifact identification and repatriation requirements as those mandated by NAGPRA).

241 See supra text accompanying notes 221–23.

242 See supra text accompanying notes 164–94.


244 See, e.g., Hassard v. Lehane, 128 N.Y.S. 161, 162–63 (N.Y. 1911) (holding that a mother had a cause of action for "wrongful and unlawful dissection" and "wrongful and unlawful removal and detention of parts of the remains" against a coroner who removed, dissected and kept her dead son's spleen simply because it was enlarged).

245 E.g., Foley v. Phelps, 37 N.Y.S. 471, 473–74 (App. Div. 1896) (holding that a widow is entitled to the possession of her deceased husband's body in the same condition as when death occurred, for the purpose of proper care and burial).


247 See, e.g., Whaley v. County of Tuscola, 58 F.3d 1111, 1115 (6th Cir. 1995) (holding that next of kin have a constitutionally protected property interest in the dead body of a relative and have a right to refuse the removal of corneas or eyeballs of decedent); Brotherton v. Cleveland, 923 F.2d 477, 482 (6th Cir. 1991) (holding that widow and children may have a protected property interest in decedent's body and the removal of the corneas for transplantation without consent presents a valid due process claim); Fuller v. Marx, 724 F.2d 717, 719 (8th Cir. 1984) (holding that widow had quasi-property right in the dead body, which was satisfied when husband's body returned in acceptable condition, even though some organs had been removed). But see State v. Powell, 497 So. 2d 1188, 1193 (Fla. 1986) (holding that next of kin have only a limited right to possess the dead body...
The quasi-property rights of the survivors include the right to custody of the body; to receive it in the condition in which it was left, without mutilation; to have the body treated with decent respect, without outrage or indignity thereto; and to bury or otherwise dispose of the body without interference.\textsuperscript{248}

The emotional distress of relatives was also at issue in \textit{Christensen v. Superior Court}, a 1991 class action against mortuaries, funeral homes and crematoriums that had handled as many as 16,000 bodies.\textsuperscript{249} Without consent, these institutions had harvested organs from brains to uteri.\textsuperscript{250} The court held that “the next of kin, while not in the full proprietary sense ‘owning’ the body of the deceased have property rights in the body which will be protected, and for a violation of which they are entitled to indemnification.”\textsuperscript{251} Not only were the crematory services liable for the emotional distress of relatives, but so was the purchasing entity since “it knew or should have known that the crematories had not complied with the laws of the state which prohibit removal and sale of human organs absent the consent of the decedent or statutory rights holder.”\textsuperscript{252} By buying the organs, presumably for sale in research, it encouraged or induced the unlawful conduct. Such cases give clear legal protection to relatives for the emotional harm that comes from disturbance of their loved one’s corpse.

The overwhelming protection given dead bodies from disturbance is subject to one exception—state-mandated autopsies for the narrow purpose of determining cause of death.\textsuperscript{253} Most state statutes controlling autopsies dictate that coroners may order or conduct an autopsy only in instances where justice requires it.\textsuperscript{254} “The compelling interest of the state in knowing when death may have resulted from a criminal act or other acts that might affect the health and well being of its citizens outweigh[s] the interest[s]” of family members or the decedent who oppose an autopsy on ethical, religious, or philosophical grounds.\textsuperscript{255}

Medical curiosity alone is not a sufficient reason for an autopsy. As a New York case pointed out, “The desire of the Medical Examiner to perform an autopsy merely to determine whether the decedent died by reason of injury to one vital organ

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\textsuperscript{249} 820 P.2d at 181, 184–85 & n.5 (Cal. 1991).
\textsuperscript{250} See \textit{id.} at 185. For a more detailed description of the parts, see \textit{Christensen v. Superior Court}, 271 Cal. Rptr. 360, 364–65 (Ct. App. 1990). The suit also alleged that the bodies had been cremated disrespectfully by burning 30 to 40 together at one time, mixing up the ashes. \textit{See id.} at 365–66.
\textsuperscript{251} \textit{Id.} at 193 (citing O’Donnel v. Slack, 55 P. 906, 907 (Cal. 1899)).
\textsuperscript{252} \textit{Id.} at 194.
\textsuperscript{254} 818 AM. JUR. 2D Coroners § 10 (1985), which states that:
Ordinarily, the right of the coroner to perform an autopsy is restricted to cases where death is supposed to have been caused by violent or unlawful means, although under some statutes it may exist where death results from casualty, or where death results in a suspicious, unusual, or unnatural manner and when the decedent was in apparent good health.

However, even in these situations, an “autopsy cannot be justified in the interest of science.” \textit{Id.}
\textsuperscript{255} \textit{Id.}
as opposed to another" is insufficient.256 Private physicians have even less right to satisfy their medical curiosity. In a turn-of-the-century case, a physician performed an autopsy because "the decedent had a greatly enlarged spleen and it was an interesting case."257 He removed the heart and spleen, cut them into numerous pieces and preserved them.258 The court held that even if the autopsy had been justified, that would provide no authority for the physician to remove and retain organs against the will of the person entitled to the corpse.259

When an autopsy violates religious beliefs, the need for the autopsy must be compelling. Six states have enacted statutes that provide that autopsies can never be performed when they are contrary to the decedent's, or his next of kin's, wishes absent a "compelling public necessity."260 Court cases have protected religious beliefs. In Begay v. State, the decedent's sisters and brother brought suit for emotional distress because the state did not handle the body "according to traditional Navajo religious beliefs."261 The State of New Mexico had performed an autopsy on the decedent because his body had scratches on his face and his wallet was missing.262 The coroner had decided the New Mexico statute requiring autopsies in all cases of suspicious death was applicable and did not obtain consent from the decedent's next of kin.263 Although the lower court dismissed the suit for failure to state a cause of action,264 the appellate court held that the plaintiffs' had alleged a cause of action for emotional distress and remanded the suit.265

In a 1979 case, a judge permanently enjoined the court medical examiner from conducting an autopsy on the plaintiff's mother and directed the examiner to return the remains for burial.266 The mother had been struck by a motor vehicle while crossing a street.267 She was an Orthodox Jew, who observed the Orthodox tradition that prohibits dissection of the body.268 The court stated: "An autopsy cannot re-

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256 Weberman v. Zugibe, 394 N.Y.S.2d 371, 372 (Sup. Ct. 1977). In that case, the decedent had been struck by a car and her family sued to enjoin performance of an autopsy for religious reasons. See id. at 372; see also Atkins v. Medical Exam'r, 418 N.Y.S.2d 839, 841 (Sup. Ct. 1979) (holding that "where there is not criminal activity or suspicion of foul play, there is no sound reason to permit an invasion of deep seated religious beliefs").


258 See id.

259 See id. at 164.


262 See id.

263 See id.

264 See id. at 254.

265 See id.

266 See Atkins v. Medical Exam'r, 418 N.Y.S.2d 839, 840-41 (Sup. Ct. 1979). In a very similar case six years earlier, in Wilensky v. Greco, the Supreme Court of Orange County, New York, also enjoined the county coroner from performing an autopsy on an Orthodox Jewish man. See Wilensky v. Greco, 344 N.Y.S.2d 77, 78 (Sup. Ct. 1973). As in Atkins, the court ruled that the purpose of the autopsy, to determine the manner of death, was so obvious in the case of a man killed in a car accident that the state could not justify overriding the religious beliefs of the decedent or his family. See id. Thus, the autopsy was not performed and the coroner was directed to return the body to the plaintiff. See id.

267 See Atkins, 418 N.Y.S.2d at 810.

268 See id. at 841.
store her moral being. It should not be countenanced to destroy her eternal life. The
grief which follows the shadow of death must not be compounded by the indignity of
transgression against sacred belief."269 Because there was no criminal activity or
suspicion of foul play connected to the death of the woman, "there [was] no sound
reason to permit an invasion of deep-seated religious beliefs to merely satisfy curi-
osity as to the cause of death."270

In Hicks v. NLO, Inc., the coroner’s delegation to HEHF of the testing neces-
sary to determine the cause of death was held to be proper.271 However, the research
done on the tissue from Kelley and Silkwood clearly went beyond that necessary to
determine cause of death. So, in Case III, there could be a common law tort right on
the part of relatives to damages for unauthorized, unrelated research.

In Kohn v. United States, a New York district court held that the parents of a
serviceman killed by another serviceman were entitled to $210,000 in damages be-
cause the United States’s handling of the body violated the Jewish plaintiffs’ reli-
gious beliefs.272 The Army—without notice to the family and without their consent—
performed an autopsy on the body of the serviceman, removed certain body parts to
be retained "indefinitely,"273 and then cremated some of the body parts.274 The
plaintiffs sued the United States for emotional distress resulting not only from the
autopsy itself, but also from the fact that the United States cremated some body parts
and retained certain organs.275 The court held that even though the autopsy itself
was not actionable, the parents could recover emotional distress damages for the
removal and cremation of body parts.276 The court recognized that “[p]hysical mutila-
tion of the remains may be expected to distress the next of kin.”277 The cases which
recognize relatives’ interests in how the corpse of their loved one is handled and
which require proper treatment of the corpse after a legitimate intervention has oc-
curred could serve as precedents to address the harm in Case IV, where bodies do-
nated for research were allegedly handled improperly after the research had ended.

Over a century of legal precedents recognize the rights of the deceased to be
left alone except in instances where autopsy is necessary to protect the public by
providing evidence of a crime’s commission.278 But the research value of cadaver
tissue has increased as the uses that can be made of the body expand. While most
state statutes provide that autopsies are to be limited only to inquiry necessary for
determining the cause of death,279 and are to be performed in the “customary and

269 See id.
270 Id.; see also Weberman v. Zugibe, 394 N.Y.S.2d 371, 372 (Sup. Ct. 1977) (holding that an
autopsy may not be performed over the religious, ethical or philosophical objections of a decedent’s
family, absent a showing of genuine necessity).
273 See id. at 573.
274 See id.
275 See id.
276 See id. at 572–73.
277 See id. at 573. The court also stated that “[t]he United States similarly cannot excuse the
retention indefinitely of those parts of the body that have not been cremated. To say that a practice
is ‘accepted’ is not to justify it.” Id.
278 See supra notes 253–78 and accompanying text.
usual" manner, twenty-four states and the District of Columbia allow the retention without consent for research purposes of tissues that are removed as a result of autopsies. And seventeen state statutes allow the removal and retention of corneas and/or pituitary glands without consent if they are to be used for research and/or manufacturing drugs. Minnesota has gone the furthest with a statute stating that

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280 See id. at 891, § 11(a).
281 See Ariz. Rev. Stat. Ann. § 11-597(B) (West 1997) (requiring autopsies in cases of "sudden and unexplained infant death" and allowing the examiner to retain tissue samples for research purposes as long as the parent of the infant does not object to the removal, and it is not likely to result in any visible disfigurement); Cal. Gov't Code § 27491.41(e)-(g) (West 1997) (requiring autopsies in cases of sudden unexplained infant death, and allowing the removal and retention of tissues for research purposes without consent of the parent if the removal will not result in any "visible disfigurement," and if the research is approved by the State Committee for the Protection of Human Subjects); id. § 27491.45(a) (stating that the coroner has the right to retain tissues that may be necessary for scientific investigation and to distribute the tissues for "training, educational, and research purposes" in cases where the decedent did not die in a state hospital and the next of kin has consented); D.C. CODE ANN. § 2-1605(a)-(c) (1997) (stating that the Medical Examiner's Office may retain "the corneal tissues, and the aortic and pulmonary heart valves" from autopsied bodies which are suitable for transplantation or medical research as long as the medical examiner does not know the decedent or his next of kin objects to the practice); Fla. Stat. Ann. § 872.04(1)-(2), (4) (West 1997) (requiring all autopsies to be performed with the consent of the decedent's next of kin, unless the next of kin cannot be located; however, once the consent to autopsy is obtained, the coroner may retain for scientific purposes those tissues "customarily removed" during autopsy); Haw. Rev. Stat. Ann. § 841-14 (Michie 1997) (authorizing the coroner to retain tissues removed at autopsy for research purposes where the death occurred in a suspicious manner and even if the autopsy was conducted in the absence of decedent's or decedent's next of kin's consent); Minn. Stat. Ann. § 383B.225(7) (West 1997) (authorizing the coroner to conduct an autopsy in all cases of suspicious death but requiring oral or written consent from decedent's next of kin if the retention and removal of body parts "is done only for the advancement of medical knowledge and progress"); Mont. Code Ann. § 46-4-103(1)-(2) (1997) (stating where an autopsy is ordered by the coroner or county attorney or attorney general, a medical examiner may retain tissue samples or organs for whatever purpose is deemed necessary, which presumably would include research, despite the decedent's or decedent's family's wishes); N.M. Stat. Ann. § 24-12-4(c), (e) (Michie 1997) (allowing the retention of any tissues "customarily removed during the course of" autopsies for research purposes where the autopsy is performed either at the direction of the district attorney regardless of familial consent); N.Y. Pub. Health Law §§ 4214(2), 4215(2) (McKinney 1997) (stating that research laboratories and educational facilities shall have priority in claiming and using all otherwise unclaimed bodies, whether subject to coroner autopsy or not, and that these facilities may retain cadaveric body parts for scientific purposes); N.C. Gen. Stat. §§ 130A-399 to -400 (1997) (explicitly allowing the retention of tissues obtained from autopsies performed on inmates dying in state mental health facilities for research purposes and requiring written consent from the decedent's next of kin); Okla. Stat. Ann. tit. 21, § 1154 (West 1997) (allowing tissues to be retained from bodies autopsied by the coroner for research purposes in cases in which a decedent or his next of kin does not explicitly object); Or. Rev. Stat. § 146.117(1) (1997) (stating that a medical examiner or district attorney may order an autopsy in all cases requiring "investigation," without seeking any familial consent, and that tissues removed during the autopsy may be retained for research purposes if allowed by the State Medical Examiner Advisory Board); S.C. Code. Ann. § 17-5-260 (Law Co-op. 1997) (requiring autopsies in certain instances (such as suspicion of violence, etc.) but requiring the coroner to seek the informed consent of the decedent's next of kin before retaining any body parts solely for noninvestigative purposes, such as research); Utah Code Ann. § 26-4-42(2) (1995) (authorizing the medical examiner to retain tissues removed from autopsied bodies "for scientific purposes and those he considers necessary to accurately certify the cause and manner of death . . . or to determine [the body's] identity" but making no mention of next of kin consent to autopsy or consent to retain tissues); W. Va. Code § 61-12-10 (1997) (stating that tissues may be retained by the chief medical examiner; statute's language, "necessary for further study or consideration," is broad enough to allow the tissues to be used for research).
282 See Ark. Code Ann. § 12-12-320 (Michie 1995) (allowing the coroner to remove the pituitary gland automatically and donate it to the American Dwarf Association unless the next of kin
due to the important state interest in researching and preventing Alzheimer's,\textsuperscript{283} the coroner may remove the brain of any deceased person suspected of suffering from Alzheimer's for the purposes of research—unless the coroner knows the patient or his relative has previously objected to the research.\textsuperscript{284}


\textsuperscript{284} See id. § 145.132 (stating that the doctor must have permission from the decedent's next of kin, county coroner and the medical research facility). Additionally, if a coroner, performing an
Letting individual coroners and pathologists decide to do whatever type of research they please may not lead to the best research. Indeed, experiments like those done by Dr. Odom on the SIDS infants are likely to lead to a diminution in faith in the research enterprise. In contrast, individual and social interests could be served by allowing individuals greater control over the research uses made of their bodies after their deaths. The current legal approach of “finders keepers” in which pathologists, coroners and other health care providers act as if they own their patients’ samples for research purposes runs afoul of social values and may not even serve useful research goals.

VI. CONCLUSION

The use of dead bodies for research purposes has been the source of a range of disputes as the benefits gained from the corpse’s use conflict with the body’s emotional or religious importance. In the cases we have described, researchers took tissue in circumstances that violated individual wishes and social and religious understandings about the body.

Many scientists remain convinced that “progress in molecular diagnosis and therapy requires the continued availability of tissues obtained during postmortem examination.”285 They often object, for example, to requirements for informed consent. Well-known pathologists286 and professional pathology groups287 argue that the time and expense it would take to ask for permission is just too burdensome. They hold an idealized image of the researcher—the “lone investigator quietly working in relative obscurity with a bunch of numbered paraffin blocks.”288

Such a view has led to disputes reflecting the difference between the instrumental perspectives of science and other cultural concerns. The cases we present suggest that there may be important reasons to recognize the individual and social values at stake in the disputes over research on the dead. The use of dead bodies for research has potent emotional effects on individuals before death and on their next of kin. It can violate religious beliefs, reveal information the decedent has sought to control, lead to discrimination against relatives and violate important social norms. Our analysis suggests that it is important to recognize an individual’s right to refuse to participate in post-mortem research. If the individual has expressed no position before death, the right should be exercisable by his or her next of kin.

In every era, there are important medical uses that could be made of deceased individuals. Nevertheless, until now, the law has protected the dead from invasions

autopsy which is required by law (such as those deaths that appear suspicious, violent, are the remains of inmates of public institutions or whose bodies are to be cremated, dissected, buried at sea or otherwise will be unavailable for examination in the future), “is informed by a physician or pathologist that a dead person is suspected of having had Alzheimer’s disease, the coroner shall authorize the removal of the brain of the dead person.” Id. § 390.11. Otherwise, a coroner may only retain tissue or organs “deemed beneficial, and . . . done only for the advancement of medical knowledge and progress” where separate written or oral consent is obtained from the decedent’s next of kin prior to the removal, retention and use of such organs and tissues. Id. § 383B.225(7).

285 Chester J. Herman & David A. Schwartz, Pathology and Laboratory Medicine, 275 JAMA 1839, 1839 (1996).
286 See Grody, supra note 31 at 156.
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designed merely to further medical or scientific goals. New autopsy provisions that allow the use of dead bodies for research on particular diseases are not consistent with long-held social and legal beliefs about respect for corpses. They also violate more recent legal protections that recognize that research is not a matter of conscription. Such statutes should contain explicit consent provisions. In addition, when an autopsy is legitimately undertaken to determine if a crime has been committed, the body should not be subjected to additional research unless consent of the individual or family member has been obtained. Finally, the cases presented in this Article suggest that the tissue and organs taken for research purposes are often not used to their best advantage. A review mechanism should be put in place so that the scientific merit of research on the dead is examined before such research is undertaken. Bentham was clearly prescient in predicting the growing utilitarian value of the body, but he could hardly fully recognize the social consequences.