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The Constitution in a Brave New World: A Century of Technological Change and Constitutional Law

May *Science* and her handmaid *Art*,
To this new world belong!
And infant muses joy impart
In strains of sportive song!—
Apollo see! with glory drest,
Appears refulgent in the west.

America is thus become
A seat to *freedom* dear,
Where virtuous strangers find a home,
And no oppression fear.
These rising States shall be renown'd
By *Plenty*, *Art*, and *Science* crown'd.

From "The Fabrick of Freedom," a song published in 1788, during debates over ratification of the Constitution.[1]

There is a fundamental natural right expressed in our Constitution as the "right to liberty," which permits an individual to refuse or direct the withholding or withdrawal of artificial death

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[1] Williams, The Fabrick of Freedom (1788), *reprinted in* 16 DOCUMENTARY HISTORY OF THE RATIFICATION OF THE CONSTITUTION 360, 361 (J. Kaminski & G. Saladino eds. 1986).

> prolonging procedures . . . . To decide otherwise . . . in effect gives one's body to medical science without their consent. We could then sing, less fervently of the land of the free, but as medical science advances to new horizons, much more fervently of the land of the brave.
>
> Judge Higgins, dissenting from the Missouri Supreme Court's decision in *Cruzan v. Harmon*.[2]

TWENTIETH century society is far different from the eighteenth century world inhabited by the Constitution's Framers. Nuclear power, genetic engineering, and high speed computers would astound James Madison, Alexander Hamilton, and their colleagues. Likewise, the politicians who drafted and ratified the fourteenth amendment barely dreamed of space shuttles, television sets, or heart transplants. In the last half of the nineteenth century, who could have foreseen that the heart of one human being would beat successfully in the chest of another or that mechanical respirators would keep alive comatose patients who had stopped breathing on their own?

During the last 100 years, courts have struggled to apply an eighteenth century Constitution to twentieth century technology. Universal vaccination, eugenic sterilization, computerized data banks, and mechanical respirators are among the technologies that have challenged constitutional doctrine. In applying constitutional guarantees of due process, equal protection, and privacy, courts have significantly shaped the use of technology. At the same time, the unrelenting march of technological change has permanently altered the course of constitutional law.

Now, the United States Supreme Court stands at the threshold of another confrontation between the Constitution and modern technology. In *Cruzan v. Director, Missouri Department of Health*,[3] the Court will decide whether a patient in a permanent vegetative state has the constitutional right to demand withdrawal of a surgically implanted feeding tube.[4] Whatever the Court's decision, the case already has provoked widespread debate and commentary.

This Article explores the interplay between constitutional law and technological change during the last 100 years.[5] The first part

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[2] 760 S.W.2d 408, 434 (Mo. 1988) (en banc) (quoting from the trial court's opinion), *cert. granted sub nom.* Cruzan v. Director, Mo. Dep't of Health, 109 S. Ct. 3240 (1989).

[3] 109 S. Ct. 3240 (1989).

[4] Because the patient is incompetent, the Court must also decide whether the patient's guardians may assert any such right on her behalf. For further discussion of *Cruzan*, see *infra* notes 89-93, 127-28 and accompanying text.

[5] Several other scholars have studied the interaction between technology and consti-

of the Article outlines four controversies, including the right-to-die disputes epitomized by *Cruzan*, in which litigants invoked constitutional rights to restrain the use of new technologies. The second part of the Article analyzes four trends emerging from these decisions. First, courts during the last 100 years have grown increasingly wary of technological change. Judges today are more likely than their predecessors to vindicate individual rights over technological progress. Second, this caution has accompanied, and perhaps precipitated, a shift in the courts' constitutional philosophy. Although courts once shaped constitutional principles around an implied social contract, they now focus on individual rights as the starting point for constitutional analysis. Third, lawsuits challenging new technologies have spawned a surprising number of new constitutional doctrines. Technology not only has tested constitutional law, but has enriched it. Finally, courts adjudicating conflicts between technology and constitutional law have become arbiters of technological and social change. Rather than simply resolving the specific controversies before them, judges have probed the deeper ethical and social stresses generated by new technologies. As the twenty-first century unveils still more technological marvels, litigants increasingly will ask the courts to resolve these social and ethical conundrums.

I

TECHNOLOGY IN THE COURTROOM: FOUR CASE STUDIES

New technologies have tested almost every constitutional provision. Courts struggle to reconcile the first amendment with methods of communication, such as loudspeakers, radio, and television.[6]

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tutional law, although from different perspectives than the one presented here. *See, e.g.*, Conley, *"The First Principle of Real Reform": The Role of Science in Constitutional Jurisprudence*, 65 N.C.L. REV. 935 (1987); Frampton, *Scientific Eclat and Technological Change: Some Implications for Legal Education*, 63 MICH. L. REV. 1423 (1965); Gibbons, *The Relationship Between Law and Science*, 22 IDEA 43, 159, 227, 283 (1980); Jasanoff & Nelkin, *Science, Technology, and the Limits of Judicial Competence*, 22 JURIMETRICS J. 266 (1982); Miller, *Technology, Social Change, and the Constitution*, 33 GEO. WASH. L. REV. 17 (1964); United States Congress, Office of Technology Assessment, *Biology, Medicine, and the Bill of Rights—A Special Report*, OTA-CIT-371 (1988).

[6] *See, e.g.*, Ward v. Rock Against Racism, 109 S. Ct. 2746 (1989) (upholding city's sound-amplification guidelines for park bandshell); FCC v. Pacifica Found., 438 U.S. 726 (1978) (upholding informal censure of radio station for broadcasting offensive language); Red Lion Broadcasting v. FCC, 395 U.S. 367 (1969) (upholding application of fairness doctrine to television station); Kovacs v. Cooper, 336 U.S. 77 (1949) (upholding ordinance prohibiting use of sound trucks on public streets).

Airplanes, electronic tracking devices, and automobiles challenge fourth amendment doctrine.[7] Even the basic structure of federalism has shifted under the strains of modern technology.[8] Rather than catalogue all of these technological influences on constitutional law, this Article focuses on four technologies that span the last century and provoked widespread constitutional challenges: universal vaccination, eugenic sterilization, computerized data banks, and life-prolonging medical techniques. A detailed examination of these controversies provides a starting point for exploring the complex relationship between constitutional law and technological change.

A. Universal Vaccination

Vaccination against smallpox was one of the first technologies to generate significant constitutional controversy.[9] During the waning years of the nineteenth century, many cities and towns required vaccinations of their citizens.[10] Most citizens welcomed vaccination as an effective preventive of smallpox, but a few resisted this unprecedented and "practically compulsory inoculation of their bodies with a virus."[11] These dissidents raised a host of constitutional objections to vaccination, including claims that compulsory vaccination violated the due process and equal protection clauses of the fourteenth amendment.[12]

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[7] *See, e.g.*, Florida v. Riley, 109 S. Ct. 693 (1989) (aerial observation from helicopter hovering 400 feet above ground did not violate fourth amendment); United States v. Knotts, 460 U.S. 276 (1983) (warrantless monitoring of an electronic tracking device did not violate fourth amendment when it revealed no information that could not have been obtained through visual surveillance); United States v. Ross, 456 U.S. 798 (1982) (warrantless search of automobile did not violate fourth amendment when officers had probable cause to suspect the presence of contraband).

[8] *See* Miller, *supra* note 5, at 24-40.

[9] The first constitutional attack on vaccination arose in 1830. In Hazen v. Strong, 2 Vt. 427 (1830), a Vermont resident claimed the town he lived in had exceeded its constitutional powers by seizing his cow to help defray the costs of smallpox inoculation. The Vermont Supreme Court upheld the constitutionality of the town's inoculation program.

[10] Vaccination against smallpox was known even before the nineteenth century. Between 1796 and 1798, Edward Jenner showed that an inoculation with cowpox could prevent smallpox. 10 ENCYCLOPEDIA BRITTANICA (Macropedia) *Jenner, Edward* 133 (1974). Fifteen years later, Congress passed a law encouraging the use of smallpox vaccine. Act of Feb. 27, 1813, ch. 37, 2 Stat. 806 (repealed 1822). Compulsory vaccination did not become widespread in the United States, however, until the last quarter of the nineteenth century.

[11] Potts v. Breen, 167 Ill. 67, 76, 47 N.E. 81, 84 (1897). Some physicians also opposed vaccination as dangerous. *See, e.g.*, Viemeister v. White, 179 N.Y. 235, 239, 72 N.E. 97, 98 (1904).

[12] Other constitutional challenges, though unsuccessful, included claims that vaccina-

Most state and federal courts readily rejected these constitutional challenges to mandatory vaccination. In 1890, the California Supreme Court upheld a statute requiring vaccinations of all children attending public schools.[13] The Pennsylvania Supreme Court approved a similar law four years later.[14] In 1905, the United States Supreme Court virtually ended the judicial debate over vaccination by holding that compulsory smallpox vaccination did not violate the fourteenth amendment.[15]

These courts acknowledged that some lay people and physicians opposed vaccination as ineffective or dangerous.[16] However, widespread support for the smallpox vaccine convinced judges that mandatory vaccination was a reasonable exercise of the police power and did not violate due process. The Connecticut Supreme Court observed, "If vaccination is a preventive of small pox, as claimed by what appears to be the great majority of the medical profession, the requirement would seem to be a reasonable one."[17] The United States Supreme Court concurred that in light of the strong support for vaccination in "the experience of this and other countries" compulsory smallpox vaccination was eminently reasonable.[18]

Likewise, courts easily dismissed most equal protection attacks

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tion violated the preamble and spirit of the Constitution, *see* Jacobson v. Massachusetts, 197 U.S. 11, 14 (1905), that conditioning school admission on vaccination violated state constitutional provisions guaranteeing public education, *see, e.g., Viemeister*, 179 N.Y. 235, 72 N.E. 97, that mandatory vaccination violated state constitutional prohibitions against unreasonable searches and seizures, *see, e.g.*, McSween v. Board of School Trustees, 60 Tex. Civ. App. 270, 274-75, 129 S.W. 206, 208 (1910), and that legislatures had unconstitutionally delegated power over vaccination to an administrative body, *see, e.g.*, State *ex rel.* Adams v. Burdge, 95 Wis. 390, 70 N.W. 347 (1897). *See also infra* note 22 and accompanying text (describing later challenges to vaccination based on religious freedom).

[13] Abeel v. Clark, 84 Cal. 226, 24 P. 383 (1890). The court did not explicitly discuss the federal Constitution, but it held that compulsory vaccination was within the scope of the police power. *Id.* at 230, 24 P. at 384.

[14] Duffield v. School Dist. of City of Williamsport, 162 Pa. 476, 29 A. 742 (1894); *see also* French v. Davidson, 143 Cal. 658, 77 P. 663 (1904); Bissell v. Davison, 65 Conn. 183, 32 A. 348 (1894); Morris v. City of Columbus, 102 Ga. 792, 30 S.E. 850 (1898); State v. Hay, 126 N.C. 999, 35 S.E. 459 (1900); *McSween*, 60 Tex. Civ. App. 270, 129 S.W. 206.

[15] *Jacobson*, 197 U.S. 11; *see also* Zucht v. King, 260 U.S. 174 (1922) (peremptorily rejecting constitutional challenge to vaccination on the authority of *Jacobson*).

[16] *See, e.g., Bissell*, 65 Conn. at 192, 32 A. at 350; *Viemeister*, 179 N.Y. at 239-40, 72 N.E. at 98; *Hay*, 126 N.C. at 1002-03, 35 S.E. at 461.

[17] *Bissell*, 65 Conn. at 192, 32 A. at 349.

[18] *Jacobson*, 197 U.S. at 31. The Court cited extensive evidence of public support for vaccination. *Id.* at 31-34 n.1.

on mandatory vaccination. The Supreme Court upheld a statute granting exceptions to some children but requiring all adults to submit to vaccination. "[T]he statute is applicable equally to all in like condition," the Court reasoned, "and there are obviously reasons why regulations may be appropriate for adults which could not be safely applied to persons of tender years."[19] Conversely, the California Supreme Court upheld vaccination requirements limited to schoolchildren, finding these children constituted a "natural class" of subjects for vaccination.[20]

Judicial support for the constitutionality of vaccination persists through the present day. Modern courts continue to reject fourteenth amendment challenges to vaccination,[21] and also turn aside claims based on the first amendment's protection of religious freedom. Although the Constitution grants unlimited protection for religious beliefs, it cannot shelter religious practices that threaten public health.[22]

Despite this long-standing support for the constitutionality of universal vaccination, the courts have recognized some limits on the state's power to compel vaccination. At the same time that it upheld compulsory vaccination, the United States Supreme Court warned that vaccination might exceed constitutional bounds if it would "seriously impair [the] health or probably cause [the] death" of a subject.[23] The Supreme Court of North Carolina and several lower federal courts agreed that "there may be some conditions of a

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[19] *Id.* at 30.

[20] French v. Davidson, 143 Cal. 658, 662, 77 P. 663, 664 (1904). *But see infra* notes 25-27 and accompanying text (discussing distinctions that violated equal protection clause).

[21] *See, e.g.*, Seubold v. Fort Smith Special School Dist., 218 Ark. 560, 237 S.W.2d 884 (1951); State v. Drew, 89 N.H. 54, 192 A. 629 (1937); Sadlock v. Board of Educ., 137 N.J.L. 85, 58 A.2d 218 (1948); *cf.* Eichner v. Dillon, 73 A.D.2d 431, 455, 426 N.Y.S.2d 517, 536 (1980) (recognizing, in dictum, that the need for universal vaccination is a compelling state interest that may overcome an individual's right to refuse medical treatment), *modified on other grounds sub nom. In re* Storar, 52 N.Y.2d 363, 420 N.E.2d 64, 438 N.Y.S.2d 266, *cert. denied*, 454 U.S. 858 (1981).

[22] *See, e.g.*, Wright v. DeWitt School Dist., 238 Ark. 906, 385 S.W.2d 644 (1965); Cude v. State, 237 Ark. 927, 377 S.W.2d 816 (1964); Board of Educ. v. Maas, 56 N.J. Super. 245, 152 A.2d 394 (1959), *aff'd*, 31 N.J. 537, 158 A.2d 330, *cert. denied*, 363 U.S. 843 (1960). The Massachusetts Supreme Court, however, struck down as discriminatory part of a vaccination statute exempting members of "a recognized church or religious denomination" but not other religious believers who opposed vaccination on religious grounds. Dalli v. Board of Educ., 358 Mass. 753, 267 N.E.2d 219 (1971). The court held that this exception violated the first amendment, the equal protection clause, and the state constitution.

[23] *Jacobson*, 197 U.S. at 39.

person's health when it would be unsafe to submit to vaccination, and which, therefore, would be a sufficient excuse for noncompliance" with a statute mandating vaccination.[24]

The courts also invoked the equal protection clause to invalidate vaccination laws that discriminated arbitrarily among classes of citizens. In 1900, a federal court struck down a regulation requiring all Chinese residents of San Francisco to receive a bubonic plague vaccine if they left the city.[25] This regulation violated the equal protection clause because it subjected Chinese residents to "charges or burdens . . . which [were] not equally borne by others."[26] In reaching this conclusion, the court summarily rejected the city's claim that Chinese residents were more susceptible to the plague than were San Francisco residents of other races.[27]

Finally, although courts repeatedly upheld "mandatory" vaccination, they never forced citizens to physically submit to vaccination. The penalty for resisting compulsory vaccination usually was a fine[28] or exclusion from school.[29] No reported decision ordered a citizen to submit to vaccination. Indeed, several courts have suggested that such an order might be unconstitutional.[30]

Thus, the courts have combined vigorous support for vaccination

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[24] State v. Hay, 126 N.C. 999, 35 S.E. 459, 461 (1900); *see also* Wong Wai v. Williamson, 103 F. 1, 7-8 (C.C.N.D. Cal. 1900) (resolution requiring Chinese residents of San Francisco to receive bubonic plague vaccine was unconstitutional in part because the vaccine could endanger the lives of persons already exposed to the disease); *Hay*, 126 N.C. at 1006, 35 S.E. at 462 (Douglas, J., concurring).

[25] *Wong Wai*, 103 F. 1.

[26] *Id.* at 9.

[27] "No evidence has . . . been offered to support this claim," the court observed, "and it is not known to be a fact. This explanation must therefore be dismissed as unsatisfactory." *Id.* at 7; *see also Dalli*, 358 Mass. 753, 267 N.E.2d 219 (vaccination statute that excepted members of "a recognized church or religious denomination" who opposed vaccination on religious grounds violated both first amendment and equal protection clauses).

[28] *See, e.g., Jacobson*, 197 U.S. 11 (five dollar fine); State v. Martin, 134 Ark. 420, 204 S.W. 622 (1918) ($10 fine).

[29] *See, e.g.*, French v. Davidson, 143 Cal. 658, 77 P. 663 (1904); Bissell v. Davison, 65 Conn. 183, 32 A. 348 (1894); McSween v. Board of School Trustees, 60 Tex. Civ. App. 270, 129 S.W. 206 (1910).

[30] *See, e.g., Martin*, 134 Ark. at 428, 204 S.W. at 625 ("[T]here is no American authority for compulsory vaccination in the sense of forcing one to submit his person thereto, but there is authority for penalizing one who refuses to comply with an order or law requiring vaccination."); Duffield v. School Dist., 162 Pa. 476, 483, 29 A. 742, 742 (1894) ("It should be borne in mind that there is no effort to compel vaccination. The school board do [sic] not claim that they can compel the plaintiff to vaccinate his son. They claim only the right to exclude [him] from the schools . . . ."); *McSween*, 60 Tex. Civ. App. at 274-75, 129 S.W. at 207-08 (noting that board of health merely excluded unvaccinated children from school, and "did not compel vaccination"; therefore, board

laws with the recognition that the Constitution imposes some limits on those laws. The states may order their citizens to submit to vaccination, but they may not vaccinate citizens who would suffer serious physical harm from the vaccine, arbitrarily select one racial or ethnic group for vaccination, or physically force recalcitrant citizens to submit to the vaccine. Within these limits, courts have uniformly upheld the constitutionality of mandatory vaccination.[31]

B. Eugenic Sterilization

Shortly after the courts resolved the constitutionality of universal vaccination, they faced constitutional challenges to a much more intrusive use of new scientific principles. During the early years of the twentieth century, students of Charles Darwin and Gregor Mendel stressed the role of heredity in shaping human character and intelligence.[32] A group of scientists and social leaders, styling themselves "eugenicists," argued that mental retardation, epilepsy, insanity, and even criminal tendencies were inherited traits.[33] Reformers urged that the best way to control crime, insanity, and other social problems was to sterilize individuals who manifested these undesirable characteristics.

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action did not violate state constitutional prohibition against unreasonable seizures or searches); *cf.* State v. Drew, 89 N.H. 54, 192 A. 629, 632 (1937):

> We do not need to consider whether forcible vaccination by a public official would be an assault under our statute as it now stands. There was not even an attempt at such vaccination here. The defendant merely refused to send his child to school vaccinated. So he must pay the penalty for not submitting to a valid law.

[31] In addition to the exceptions discussed in text, a few early decisions refused to enforce school board directives excluding unvaccinated children from the public schools. *See* Burroughs v. Mortenson, 312 Ill. 163, 143 N.E. 457 (1924); People *ex rel.* Jenkins v. Board of Educ., 234 Ill. 422, 84 N.E. 1046 (1908); People *ex rel.* Labaugh v. Board of Educ., 177 Ill. 572, 52 N.E. 850 (1899); Potts v. Breen, 167 Ill. 67, 47 N.E. 81 (1897); Wisconsin *ex rel.* Adams v. Burdge, 95 Wis. 390, 70 N.W. 347 (1897). These rulings, however, rested on findings that the school boards lacked statutory authority to issue the contested orders. The courts repeatedly suggested that the legislature had the constitutional power to require vaccination of all school children by statute. *See, e.g., Potts*, 167 Ill. at 77-78, 47 N.E. at 85; *Adams*, 95 Wis. at 399, 70 N.W. at 351.

[32] Selective breeding was not a new idea. Plato discussed selective breeding in his *Republic*, and social reformers have advocated programs of selective breeding since that time. *See* T. DOBZHANSKY, MANKIND EVOLVING 245 (1962); Vukowich, *The Dawning of the Brave New World—Legal, Ethical, and Social Issues of Genetics*, 1971 U. ILL. L.F. 189, 189. The new science of genetics gave these proposals a renewed sense of urgency and a patina of scientific respectability during the late nineteenth and early twentieth centuries.

[33] Many respected scientists, of course, disagreed with the eugenic movement. Cynkar, Buck v. Bell: *"Felt Necessities" v. Fundamental Values?*, 81 COLUM. L. REV. 1418, 1426 (1981).

The eugenics platform won support in almost half the state legislatures. In 1907, Indiana passed the first eugenic sterilization statute, authorizing the sterilization of convicted criminals, idiots, imbeciles, and rapists.[34] By 1925, twenty-two other states had passed laws permitting sterilization of at least some of these individuals.[35] Constitutional assaults on eugenic sterilization quickly erupted in court.

Before 1940, many courts rejected these attacks and upheld the constitutionality of eugenic sterilization. In 1912, for example, the Supreme Court of Washington found that a statute authorizing sterilization of habitual criminals and statutory rapists was compatible with the constitutional prohibition against cruel and unusual punishment. If the legislature could punish criminal offenders by depriving them of their property, liberty, or lives, the court reasoned, it could also deny convicted criminals their reproductive powers.[36]

A few years later, the Supreme Court of Michigan upheld a statute authorizing the sterilization of all "mentally defective persons."[37] The court declared that no person had the right "to beget children with an inherited tendency to crime, feeble-mindedness, idiocy, or imbecility."[38] Indeed, the danger of unrestrained reproduction was so great, according to this court, that the legislature had an affirmative "*duty*[ ] to enact some legislation that would protect the people and preserve the race from the known effects of the procreation of children by the feeble-minded, the idiots, and the embeciles."[39]

Even the United States Supreme Court affirmed the constitutionality of eugenic sterilization laws. In *Buck v. Bell*,[40] the Court upheld a Virginia statute authorizing sterilization of institutionalized "mental defectives" whenever the superintendent of the institution determined that sterilization was "for the best interests of the pa-

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[34] Act of Mar. 9, 1907, 1907 Ind. Acts ch. 215. For an overview of the history of eugenics legislation in the United States, see Cynkar, *supra* note 33, at 1431-35.

[35] Cynkar, *supra* note 33, at 1433 & n.76.

[36] State v. Feilen, 70 Wash. 65, 126 P. 75 (1912).

[37] Smith v. Command, 231 Mich. 409, 412, 204 N.W. 140, 141 (1925).

[38] *Id.* at 415, 204 N.W. at 142.

[39] *Id.* (emphasis added); *see also* State v. Troutman, 50 Idaho 673, 299 P. 668 (1931); State *ex rel.* Smith v. Schaffer, 126 Kan. 607, 270 P. 604 (1928); *In re* Clayton, 120 Neb. 680, 234 N.W. 630 (1931); *In re* Main, 162 Okla. 65, 19 P.2d 153 (1933); Davis v. Walton, 74 Utah 80, 276 P. 921 (1929); *cf. In re* Opinion of the Justices, 230 Ala. 543, 162 So. 123 (1935) (mandatory sterilization is constitutional if state accords subject procedural due process).

[40] 274 U.S. 200 (1927).

tients and of society."[41] Justice Holmes' infamous opinion for the Court reasoned that, "[I]t is better for all the world, if . . . society can prevent those who are manifestly unfit from continuing their kind."[42] Referring to the fact that the mentally retarded plaintiff had both a retarded mother and a retarded child, the Court coldly declared, "Three generations of imbeciles are enough."[43]

This judicial solicitude for eugenic sterilization was not universal. Before the Supreme Court's ruling in *Buck v. Bell*, several state courts had invalidated eugenic sterilization measures. These courts relied upon constitutional provisions as diverse as the prohibition against cruel and unusual punishment,[44] and the due process[45] and equal protection clauses.[46] Together, these cases stressed the "humiliation, the degradation, [and] the mental suffering" of compulsory sterilization.[47] Eugenic sterilization, one court concluded, "belongs to the Dark Ages."[48]

The Supreme Court substantially reversed its position on eugenic sterilization in 1942. In *Skinner v. Oklahoma*,[49] the Court struck down an Oklahoma statute authorizing sterilization of most defendants convicted two or more times of " 'felonies involving moral turpitude.' "[50] The analysis began by noting that the statute "touche[d] a sensitive and important area of human rights."[51] Because the legislation affected "one of the basic civil rights," the Court subjected it to especially strict scrutiny.[52] Examined under

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[41] *Id.* at 206.

[42] *Id.* at 207.

[43] *Id.*

[44] Mickle v. Henrichs, 262 F. 687 (D. Nev. 1918); Davis v. Berry, 216 F. 413 (S.D. Iowa 1914), *rev'd on other grounds*, 242 U.S. 468 (1917).

[45] Williams v. Smith, 190 Ind. 526, 131 N.E. 2 (1921).

[46] Haynes v. Lapeer, 201 Mich. 138, 166 N.W. 938 (1918); Smith v. Board of Examiners, 85 N.J.L. 46, 88 A. 963 (1913); Osborn v. Thomson, 103 Misc. 23, 169 N.Y.S. 638, *aff'd mem.*, 185 A.D. 902, 171 N.Y.S. 1094 (1918).

[47] *Davis*, 216 F. at 416.

[48] *Id.*; *see also* Smith v. Command, 231 Mich. 409, 204 N.W. 140 (1925):

> When . . . [the] power of the state is employed to destroy the virility of unfortunate human beings . . . , we as a people invite atavism to the state of mind evidenced in Sparta, ancient Rome, and the Dark Ages, where individuality counted for naught against the mere animal breeding of human beings for purposes of the state or tribe.

Id. at 430, 204 N.W. at 147 (Weist, J., dissenting); *Osborn*, 103 Misc. at 34, 169 N.Y.S. at 644 (eugenic sterilization represents "a tendency almost inhuman in its nature").

[49] 316 U.S. 535 (1942).

[50] *Id.* at 536 (quoting OKLA. STAT. ANN. tit. 57, § 171 (West 1935)).

[51] *Id.*

[52] *Id.* at 541.

that standard, the Court found that the statute violated the equal protection clause because it arbitrarily excluded defendants convicted of embezzlement, political offenses, or violations of the prohibitory laws and revenue acts.[53]

The Court's *Skinner* decision stopped short of overruling *Buck v. Bell*, but several commentators have suggested that the Court would have to decide *Buck v. Bell* differently under *Skinner*'s strict scrutiny standard.[54] Indeed, several modern courts have denounced compulsory sterilization in the strongest terms. In 1981, the New Jersey Supreme Court declared: "We flatly reject continued efforts in recent times to justify compulsory sterilization for eugenics or population control purposes."[55] Several other courts, however, have upheld sterilization programs that were carefully tailored to serve a compelling state interest.[56] Thus, the history of eugenic sterilization in the courts continues to present a surprising mixture of approbation and opposition.

C. Computerized Data Banks

During the last two decades, computerized data banks revolutionized government recordkeeping. Before the advent of computers, "the very ponderousness" of traditional recordkeeping methods "inhibited man's urge to collect and preserve information about his peers."[57] Today, sophisticated computers can rapidly store, analyze, and exchange large quantities of data. This technology has enabled governments to compile extensive records about the habits and characteristics of their citizens. As one critic com-

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[53] *Id.* at 541-42.

[54] *See, e.g.*, 2 R. ROTUNDA, J. NOWAK & J. YOUNG, TREATISE ON CONSTITUTIONAL LAW § 18.27, at 557 (1986); L. TRIBE, AMERICAN CONSTITUTIONAL LAW § 15-10, at 1339-40 (2d ed. 1988).

[55] *In re* Grady, 85 N.J. 235, 247 n.3, 426 A.2d 467, 473 n.3 (1981); *see also* Motes v. Hall County Dep't of Family & Children Servs., 251 Ga. 373, 374, 306 S.E.2d 260, 262 (1983) (quoting *Skinner*, 316 U.S. at 541, for the proposition that procreation is a fundamental right and requiring clear and convincing evidence as the standard of proof in involuntary sterilization proceedings).

[56] *See, e.g.*, North Carolina Ass'n for Retarded Children v. North Carolina, 420 F. Supp. 451 (M.D.N.C. 1976); *In re* Moore, 289 N.C. 95, 221 S.E.2d 307 (1976). Although the district court in *North Carolina Ass'n for Retarded Children* upheld the bulk of a eugenic sterilization statute, it struck down as "arbitrary and capricious" a section granting the retarded person's next-of-kin or legal guardian an absolute right to demand sterilization. *North Carolina Ass'n for Retarded Children*, 420 F. Supp. at 455-56.

[57] A. MILLER, THE ASSAULT ON PRIVACY: COMPUTERS, DATA BANKS, AND DOSSIERS 3 (1971).

plained, many Americans now are subjects of "womb-to-tomb" dossiers.[58]

Several plaintiffs have challenged the constitutionality of computerized data banks. One such controversy reached the Supreme Court in *Whalen v. Roe*.[59] The disputed statute in that case required physicians to report to the state health department the names and addresses of all patients receiving certain potentially addictive prescription drugs. The health department recorded this information in a centralized computer file. The plaintiffs in *Whalen*, both patients and physicians, claimed this scheme "invade[d] a constitutionally protected 'zone of privacy.' "[60]

The Supreme Court upheld the statute, stressing that the state had erected substantial barriers to insure the confidentiality of the computerized data and that the program might be useful in preventing drug abuse. Under different circumstances, however, the Court acknowledged that a constitutional right of privacy might restrict the government's ability to collect, store, or disclose private information about its citizens. The Court noted its awareness "of the threat to privacy implicit in the accumulation of vast amounts of personal information in computerized data banks or other massive government files."[61] For this reason, the Constitution might protect an "individual interest in avoiding disclosure of personal matters."[62]

Several lower courts have joined the Supreme Court in recognizing that, under some circumstances, computerized data banks may violate a constitutional privacy interest. In *Schulman v. New York City Health & Hospitals Corp.*,[63] the New York Court of Appeals registered its sensitivity "to the dangers posed by modern computer technology."[64] "Present day computerized information storage and retrieval systems," the court observed, "may pose a significant threat to the constitutionally protected right to privacy."[65] Although the court approved the computerized health department files challenged in that case, it stressed both the narrowly tailored

[58] *Federal Data Banks, Computers and the Bill of Rights: Hearings Before the Subcommittee on Constitutional Rights of the Senate Committee on the Judiciary*, 92d Cong., 1st Sess. 8 (1971) (statement of Arthur Miller).

[59] 429 U.S. 589 (1977).

[60] *Id.* at 598.

[61] *Id.* at 605.

[62] *Id.* at 599.

[63] 38 N.Y.2d 234, 342 N.E.2d 501, 379 N.Y.S.2d 702 (1975).

[64] *Id.* at 244, 342 N.E.2d at 507, 379 N.Y.S.2d at 709.

[65] *Id.*

objectives of the program and the health department's careful provisions for confidentiality.[66] Without these features, the court suggested, government's collection and maintenance of sensitive medical information might run afoul of the constitutional right of privacy.

Similarly, in *Peninsula Counseling Center v. Rahm*,[67] the Washington Supreme Court acknowledged that the government may compile private medical information in computerized data banks only if the government's program is "carefully tailored to meet a valid governmental interest" and the intrusion is no "greater than is reasonably necessary" to meet that interest.[68] Any "more intrusive disclosures to government authorities [would violate] the constitutional right to privacy."[69]

The *Rahm* court, like the courts in *Whalen* and *Schulman*, ultimately upheld the computerized data system challenged in that case.[70] To date, no court has enjoined operation of a computerized government data bank on the grounds that the data bank violates a constitutional right of privacy. Nevertheless, language in cases like *Whalen*, *Schulman*, and *Rahm* suggests that courts are sensitive to possible abuses of computer technology, and the Constitution does limit government uses of computerized recordkeeping systems.[71] Under appropriate circumstances, courts might well invalidate computerized data banks operated in an intrusive manner.[72]

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[66] *Id.*, 379 N.Y.S.2d at 710.

[67] 105 Wash. 2d 929, 719 P.2d 926 (1986) (en banc).

[68] *Id.* at 935, 719 P.2d at 929.

[69] *Id.*

[70] As in *Whalen* and *Schulman*, the *Rahm* court stressed that the system was "carefully tailored to meet the State's legitimate, and laudable, interests" and that "only a handful of [government] officials [would] have access to the raw data." *Id.* at 936, 719 P.2d at 929. Indeed, the court compared the confidentiality of the medical data in *Rahm* to the confidentiality of grand jury proceedings. *Id.*, 719 P.2d at 930.

[71] *See also* California Bankers Ass'n v. Shultz, 416 U.S. 21, 78-79 (1974) (Powell, J., joined by Blackmun, J., concurring) (agreeing with Court's decision to uphold regulations requiring banks to report details of transactions exceeding $10,000, but noting that "[a] significant extension of the regulations' reporting requirements . . . would pose substantial and difficult constitutional questions" because "[a]t some point, governmental intrusion upon [financial transactions] would implicate legitimate expectations of privacy").

[72] Dissenting justices in both *Schulman* and *Rahm* believed that the constitutional limits had been exceeded in those cases. In *Schulman*, Justices Fuchsberg, Wachtler, and Cooke argued that the centralized abortion records maintained in that case deterred women from obtaining abortions and that the city could have achieved its ends by compiling statistics without recording the names of individual patients. Schulman v. New York City Health & Hosp. Corp., 38 N.Y.2d 234, 245-49, 342 N.E.2d 501, 507-10, 379 N.Y.S.2d 702, 710-14 (1975) (Wachtler, J., joined by Cooke, J., dissenting); 38 N.Y.2d

D. Life-Prolonging Medical Technologies

In 1975, the plight of twenty-one-year old Karen Ann Quinlan captured the attention of the nation. After her lungs stopped breathing for two fifteen-minute periods, Quinlan lapsed into a permanent vegetative coma. Doctors were able to keep Quinlan alive by connecting her to an artificial respirator. Medical technology, however, could not restore Karen Quinlan's brain or revive her from the deep coma into which she had slipped. Neurologists predicted that Quinlan might live for some time with the help of a mechanical respirator, but that she would never emerge from her comatose state.[73]

After much deliberation, Quinlan's father asked the doctors to disconnect the respirator and allow his daughter to die. The doctors refused this relief, pointing out that Quinlan was still alive and that removal of the respirator "would not conform to medical practices, standards and traditions."[74] Quinlan's father then sought judicial permission to disconnect the respirator.

In a landmark decision, the New Jersey Supreme Court held that Karen Quinlan had a constitutional right to decline treatment with the respirator, and her father could assert this right on her behalf. The court acknowledged that the Constitution does not explicitly mention a right of privacy that would protect patients from intrusive and unwanted medical procedures. Nonetheless, the court found that "Supreme Court decisions have recognized . . . a right of personal privacy" and that "this right [was] broad enough to encompass a patient's decision to decline medical treatment under certain circumstances."[75]

Numerous state and federal courts followed *Quinlan* in recognizing a constitutional right to refuse life-sustaining medical treatment.[76] These decisions permitted patients to reject respirators,

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at 249-57, 342 N.E.2d at 510-15, 379 N.Y.S.2d at 714-21 (Fuchsberg, J., joined by Cooke, J., dissenting). Likewise, Justices Pearson and Brachtenbach contended in *Rahm* that the state could have met its goals by using anonymous computer codes, rather than identifiable names, to compile data about mental health patients. *Peninsula Counseling Center*, 105 Wash. 2d at 937-49, 719 P.2d at 930-36 (Pearson, J., joined by Brachtenbach, J., dissenting).

[73] *See In re* Quinlan, 70 N.J. 10, 23-26, 355 A.2d 647, 653-56, *cert. denied*, 429 U.S. 922 (1976).

[74] *Quinlan*, 70 N.J. at 19, 355 A.2d at 655.

[75] *Id.* at 39-40, 355 A.2d at 663.

[76] *See, e.g.*, Gray v. Romeo, 697 F. Supp. 580 (D.R.I. 1988), *attorney's fees awarded*, 709 F. Supp. 325 (D.R.I. 1989); Rasmussen v. Fleming, 154 Ariz. 207, 741 P.2d 674 (1987) (en banc); Bartling v. Superior Court, 163 Cal. App. 3d 190, 209 Cal. Rptr. 220

feeding tubes, and other forms of medical treatment.[77] Moreover, most courts permit guardians or family members to assert the constitutional right of privacy on behalf of incompetent patients. As in *Quinlan*, courts recognize that the right would be meaningless for most patients if it could not be exercised by third parties.[78]

Gray v. Romeo,[79] a recent decision by the District Court of Rhode Island, is typical of these decisions. Marcia Gray, a forty-nine-year-old woman, suffered a cerebral hemorrhage that left her

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(1984); Foody v. Manchester Memorial Hosp., 40 Conn. Supp. 127, 482 A.2d 713 (1984); Satz v. Perlmutter, 379 So. 2d 359 (Fla. 1980); Superintendent of Belchertown State School v. Saikewicz, 373 Mass. 728, 370 N.E.2d 417 (1977); Leach v. Akron Gen. Medical Center, 68 Ohio Misc. 1, 426 N.E.2d 809 (1980); *In re* Grant, 109 Wash. 2d 545, 747 P.2d 445 (1987), *amended*, 757 P.2d 534 (1988) (correcting list of concurring justices); *In re* Colyer, 99 Wash. 2d 114, 660 P.2d 738 (1983) (en banc), *modified on other grounds*, *In re* Hamlin, 102 Wash. 2d 810, 689 P.2d 1372 (1984) (en banc). Some of these decisions rely solely upon the federal Constitution; others buttress their conclusions with references to state constitutions or common law.

[77] *Bartling*, *Foody*, *Satz*, *Leach*, and *Colyer*, discussed *supra* note 76, involved mechanical respirators. In *Gray*, discussed *supra* note 76, the court authorized removal of a surgically implanted feeding tube. *Superintendent of Belchertown State School*, discussed *supra* note 76, approved withholding chemotherapy from a mentally retarded adult, and *Rasmussen*, discussed *supra* note 76, endorsed placement of "do not resuscitate" and "do not hospitalize" orders on an incompetent patient's chart. In *Grant*, the court issued a broad order authorizing a guardian " 'to approve and direct the withholding of life sustaining procedures utilizing mechanical or other artificial means including cardiopulmonary resuscitation, defibrilation, the use of a respirator, intubation, the insertion of a naso-gastric tube, and intravenous nutrition and hydration.' " 109 Wash. 2d at 547, 747 P.2d at 446 (quoting an order issued following oral argument).

To the lay person, feeding tubes may not seem to share the technological sophistication of mechanical respirators or other medical devices. However, as the New Jersey Supreme Court noted, "artificial feedings such as nasogastric tubes, gastrostomies, and intravenous infusions are significantly different from bottle-feeding or spoonfeeding—they are medical procedures with inherent risks and possible side effects, instituted by skilled healthcare providers." *In re* Conroy, 98 N.J. 321, 372, 486 A.2d 1209, 1236 (1985). According to another court, " '[e]fficient provision of nutrition with any of these procedures requires skilled personnel and specialized techniques, often as special nutrition support teams in hospitals. The standards required are quite exacting, and substantial deviation from them greatly increases risks of infection or illness arising from erroneous nutritional balance.' " *In re* Gardner, 534 A.2d 947, 954 n.7 (Me. 1987) (quoting Major, *The Medical Procedures for Providing Food and Water: Indications and Effects*, *reprinted in* BY NO EXTRAORDINARY MEANS: THE CHOICE TO FOREGO LIFE-SUSTAINING FOOD AND WATER 21, 27 (J. Lynn ed. 1986)).

[78] *See, e.g.*, *Rasmussen*, 154 Ariz. at 218-19, 741 P.2d at 685-86; *Foody*, 482 A.2d at 718 ("To deny the exercise because the patient is unconscious or incompetent would be to deny the right."); *Superintendent of Belchertown*, 373 Mass. at 745, 370 N.E.2d at 427-28; *Quinlan*, 70 N.J. at 41, 355 A.2d at 664 ("The only practical way to prevent destruction of the right is to permit the guardian and family of Karen to render their best judgment . . . as to whether she would exercise it in these circumstances.").

[79] 697 F. Supp. 580 (D.R.I. 1988), *attorney's fees awarded*, 709 F. Supp. 325 (D.R.I. 1989).

in a persistent vegetative state.[80] Gray's doctors agreed that her chances of regaining consciousness were " 'close to zero.' "[81] Because Gray could not feed herself, surgeons inserted a tube in her abdomen through which she received water and liquid nutrition. Convinced that Marcia Gray would not want to be kept alive by these means, her family asked the hospital to remove the feeding tube. Hospital personnel unanimously refused this request, maintaining that withdrawal of the feeding tube would be "tantamount to euthanasia." The medical staff further objected that removal of the tube would be "inconsistent with the physician's role as safekeeper of his or her patient's well being."[82]

Like Quinlan's father, Gray's husband then sought judicial permission to remove the feeding tube. The federal district court recognized a "right . . . to control fundamental medical decisions" that was "properly grounded in the liberties protected by the Fourteenth Amendment's due process clause."[83] Because Marcia Gray was incompetent, the court reasoned that her husband and family could assert this constitutional right on her behalf.[84] The hospital either had to transfer Gray to a facility that would comply with her wishes, or remove the tube itself.[85]

Not all courts, however, embrace the constitutional right to refuse life-sustaining medical treatment. Several courts have vindicated a patient's right to decline unwanted medical procedures, but have rested those decisions on common law, rather than constitu-

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[80] According to the guardian appointed to represent Gray, a persistent vegetative state "is a type of comatose state in which the cerebral functioning has ceased but in which the brain stem functioning is fully or partially intact." *Id.* at 582. "The cerebrum . . . controls sensation and voluntary and conscious activities," so that a patient in a persistent vegetative state "displays no voluntary or conscious movements, . . . [or] any awareness or sensation." *Id.* On the other hand, "[t]he brain stem controls primitive reflexes, including heart activity, breathing, the sleep/wake cycle, reflexive activity in upper and lower extremities, some swallowing motions and eye movements." *Id.* Therefore, patients in a persistent vegetative state ordinarily display these reflexive actions. A persistent vegetative state "is generally a permanent condition." *Id.*

[81] *Id.* at 583.

[82] *Id.* The hospital also cited its "fear . . . of civil or criminal responsibility" and its "reputation . . . [as] an institution for long-term care and the treatment of chronic care patients." *Id.*

[83] *Id.* at 585.

[84] The court in *Gray* found it unnecessary to outline universal procedures for making this type of judgment because Gray's husband, her family, the court-appointed guardian, and the court itself all agreed that Gray clearly would have wanted withdrawal of the feeding tube. *Id.* at 587-88.

[85] *Id.* at 591.

tional, grounds. In *In re Storar*,[86] the New York Court of Appeals noted that the existence of a constitutional right to decline medical treatment was "a disputed question . . . which the Supreme Court has repeatedly declined to consider."[87] The court found it unnecessary to address that issue because "[a]t common law, . . . every person 'of adult years and sound mind has a right to determine what shall be done with his own body.' "[88]

More significantly, the Missouri Supreme Court recently refused to allow family members to order removal of a feeding tube under circumstances quite similar to those in *Gray*. In *Cruzan v. Harmon*,[89] the parents of a thirty-year-old woman who had languished for five years in a vegetative state sought permission to remove her surgically implanted feeding tube. The Missouri Supreme Court observed that the United States Supreme Court had not endorsed a constitutional right to refuse medical treatment and had repeatedly warned against expansive readings of its privacy opinions.[90] Thus, the state court expressed "grave doubts as to the applicability of privacy rights to decisions to terminate the provision of food and water to an incompetent patient."[91] Even if such a right existed, it was outweighed by the state's interest in prolonging the incompetent patient's life.[92]

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[86] 52 N.Y.2d 363, 420 N.E.2d 64, 438 N.Y.S.2d 266, *cert. denied*, 454 U.S. 858 (1981).

[87] *Id.* at 376, 420 N.E.2d at 70, 438 N.Y.S.2d at 272-73.

[88] *Id.*, 438 N.Y.S.2d at 272 (quoting Schloendorff v. Society of New York Hosp., 211 N.Y. 125, 129-30, 105 N.E. 92, 93 (1914)); *see also In re* Gardner, 534 A.2d 947 (Me. 1987). The New Jersey Supreme Court, which pioneered the constitutional right to decline medical treatment in *Quinlan*, subsequently decided to base that right on the common law rather than the Constitution. *See, e.g., In re* Conroy, 98 N.J. 321, 348, 486 A.2d 1209, 1223 (1985).

[89] 760 S.W.2d 408 (Mo. 1988) (en banc), *cert. granted sub nom.* Cruzan v. Director, Mo. Dep't of Health, 109 S. Ct. 3240 (1989).

[90] *Id.* at 418. In support, the court cited both Roe v. Wade, 410 U.S. 113, 154 (1973) ("[I]t is not clear to us that the claim asserted by some *amici* that one has an unlimited right to do with one's body as one pleases bears a close relationship to the right of privacy previously articulated in the Court's decisions."), and Bowers v. Hardwick, 478 U.S. 186, 195 (1986) ("There should be . . . great resistance to expand the substantive reach of [the due process] Clauses, particularly if it requires redefining the category of rights deemed to be fundamental.").

[91] 760 S.W.2d at 418.

[92] *Id.* at 424. In reaching this decision, the court stressed that the patient had neither executed a formal living will nor made statements that would provide "clear and convincing, inherently reliable evidence" of her opposition to the use of feeding tubes. *Id.* at 425. Thus, the court did "not decide any issue . . . relating to the authority of competent persons to suspend life-sustaining treatment in the face of terminal illness or otherwise." *Id.* at 424.

The United States Supreme Court has granted certiorari in *Cruzan*.[93] The Court may soon decide whether the Constitution confers a right to refuse life-sustaining medical procedures and, if so, whether a guardian may assert that right on behalf of an incompetent patient. Whatever the disposition of *Cruzan*, the lower court opinions in *Quinlan* and its progeny display the difficulties courts have faced in adapting our eighteenth century Constitution to twentieth century technologies.

II

EXPLORING THE INTERFACE BETWEEN TECHNOLOGY AND CONSTITUTIONAL LAW

As the four case studies demonstrate, courts have played a significant role in policing the social uses of new technologies. From smallpox vaccines to feeding tubes, judges have probed the constitutional ramifications of technological advances. The remainder of this Article analyzes four significant trends that have emerged from judicial confrontations between the Constitution and new technologies.

A. The Growth of Judicial Cautiousness Toward Technology

During the late nineteenth and early twentieth centuries, most courts greeted technological change with enthusiasm and rejected constitutional challenges to those technologies. For example, judges eagerly welcomed vaccination as a scientifically proven preventive of smallpox. The Pennsylvania Supreme Court observed that "[i]n the present state of medical knowledge and public opinion . . . it would be impossible for a court to deny that there is reason for believing in the importance of vaccination as a means of protection from the scourge of smallpox."[94] Likewise, the California Supreme Court hailed vaccination as "the best method known to medical science to lessen the liability to infection with the disease."[95]

The courts also hastened to point out the social benefits flowing

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[93] 109 S. Ct. 3240 (1989).

[94] Duffield v. School Dist., 162 Pa. 476, 483-84, 29 A. 742, 742-43 (1894).

[95] Abeel v. Clark, 84 Cal. 226, 230, 24 P. 383, 384 (1890). Courts acknowledged that some doctors and lay people opposed vaccination, *see supra* notes 11 & 16 and accompanying text, but they contemptuously dismissed this opposition. "There are those . . . who deny the efficacy of vaccination," one court commented, "as there are always some who will deny any other result of human experience, however well established." State v. Hay, 126 N.C. 999, 1002, 35 S.E. 459, 461 (1900).

from universal vaccination. In 1830, the Vermont Supreme Court noted that inoculation against smallpox had "eminent utility . . . in saving expense."[96] The court reasoned that if a community vaccinated all of its members, individuals could "attend to their usual vocations, instead of being confined with a loathsome disease, or becoming nurses to those who are thus confined."[97] Seventy years later, the North Carolina Supreme Court agreed that, without universal vaccination, smallpox would "quickly paralyze commerce and all public business."[98] Courts thus perceived vaccination as a medical triumph allied with economic and social progress.[99]

Similarly, many courts welcomed eugenic sterilization as a proven scientific principle with beneficial social consequences. One court declared: " 'There appears to be a wonderful unanimity of favoring opinion as to the advisability of the sterilization of criminals and the prevention of their further propagation. The Journal of the American Medical Association recommends it, as does the Chicago Physicians' Club, the Southern District Medical Society, and the Chicago Society of Social Hygiene.' "[100] Another court observed more simply: "Biological science has definitely demonstrated that feeble-mindedness is hereditary."[101]

Some judges and politicians believed that these eugenic principles could save society from pressing ills. One court noted that the legislature had enacted a eugenic sterilization statute in response to "the growing belief that, due to the alarming increase in the number of degenerates, criminals, feeble-minded, and insane, our race is facing

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[96] Hazen v. Strong, 2 Vt. 427, 432 (1830).

[97] *Id.*

[98] *Hay*, 126 N.C. at 1001, 35 S.E. at 461.

[99] The author of an influential treatise published during this era even more explicitly linked universal vaccination with social and economic progress. He noted that during the fourteenth century the Black Death killed half the laboring population in England. As a result of this tragedy, "wages were greatly raised, [and] . . . the profits to be obtained from the land were decreased . . . . [T]he workmen refused to work unless they were given such pay as they might demand, and many fertile estates were ruined." H. HEMENWAY, LEGAL PRINCIPLES OF PUBLIC HEALTH ADMINISTRATION § 1, at 2 (1914). Hemenway suggested that modern capitalist societies could avoid such calamities only if they embraced vaccination and other new techniques of controlling public health. *Id.*

[100] State v. Feilen, 70 Wash. 65, 69, 126 P. 75, 77 (1912) (quoting Foster, *Hereditary Criminality and Its Certain Cure*, 22 Pearson's Magazine 565, 571 (1909)).

[101] Smith v. Command, 231 Mich. 409, 414, 204 N.W. 140, 141 (1925); *see also* State v. Troutman, 50 Idaho 673, 679, 299 P. 668, 670 (1931) ("The record before us and the recognized authorities on the scientific questions involved leave no doubt in our minds that heredity plays a controlling part in the blight of feeble-mindedness.").

the greatest peril of all time."[102] Eight members of the United States Supreme Court agreed that eugenic sterilization was necessary "in order to prevent our being swamped with incompetence."[103] The California Attorney General was so enthusiastic about the sterilization of prisoners and hospital inmates that he rejoiced over "this enlightened piece of legislation which is an awakening note to a new era."[104]

Thus, a belief in the infallibility of science and an enthusiasm for its social benefits helped courts reject constitutional challenges to technological innovations during the opening decades of the twentieth century. After about 1940, however, courts became more suspicious of scientific claims and more wary of social programs premised on those claims. In *Skinner v. Oklahoma*,[105] the Supreme Court refused to endorse sterilization with the same enthusiasm it had displayed only fifteen years earlier. Instead, the Court stressed the dangers of eugenic sterilization:

> The power to sterilize, if exercised, may have subtle, far-reaching and devastating effects. In evil or reckless hands it can cause races or types which are inimical to the dominant group to wither and disappear. There is no redemption for the individual whom the law touches. Any experiment which the State con-

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[102] *Smith*, 231 Mich. at 425, 204 N.W. at 145. In its next sentence, the court disclaimed any power to say "[w]hether this belief was well founded." *Id.* Nevertheless, the court affirmed that feeble-mindedness "present[ed] a social and economic problem of grave importance" and that "no one [would] question" that the feeble-minded "[were] a serious menace to society." *Id.* at 415, 204 N.W. at 142.

[103] Buck v. Bell, 274 U.S. 200, 207 (1927). Justice Holmes, writing for the Court, continued: "It is better for all the world if instead of waiting to execute degenerate offspring for crime, or to let them starve for their imbecility, society can prevent those who are manifestly unfit from continuing their kind." *Id.* Holmes further endorsed eugenics in his nonjudicial writings. In one 1915 article, Holmes declared that "wholesale social regeneration" could be achieved only "by taking in hand life and trying to build a race." This principle, he explained, "would be [his] starting point for an ideal for the law." Holmes, *Ideals and Doubts*, 10 U. ILL. L. REV. 1, 3 (1915); *see also* State *ex rel.* Smith v. Schaffer, 126 Kan. 607, 608, 270 P. 604, 605 (1928) ("Procreation of defective and feeble-minded children with criminal tendencies does not advantage, but patently disadvantages, the race. . . . The race may insure its own perpetuation and such progeny may be prevented in the interest of the higher general welfare.").

[104] *See* Osborn v. Thomson, 103 Misc. 23, 36, 169 N.Y.S. 638, 645 (quoting the attorney general's opinion), *aff'd*, 185 A.D. 902, 171 N.Y.S. 1094 (1918). However, the court in *Osborn*, which was one of the few early decisions holding eugenic sterilization unconstitutional, disagreed with the attorney general's "poetic" statement. *Id.*

Robert Cynkar has suggested that Americans embraced eugenic legislation during the early decades of the twentieth century because they perceived eugenics as one means of coping with the cultural cross currents sweeping society at that time. Cynkar, *supra* note 33, at 1425-28.

[105] 316 U.S. 535 (1942).

> ducts is to his irreparable injury. He is forever deprived of a basic liberty.[106]

Justice Jackson, concurring in the judgment, declared even more emphatically that transmissibility of criminal characteristics "in our present state of knowledge [is] uncertain," and that "[t]here are limits to the extent to which a legislatively represented majority may conduct biological experiments at the expense of the dignity and personality and natural powers of a minority."[107]

More modern courts have continued to view eugenic sterilization with skepticism. In 1981, the New Jersey Supreme Court admonished lawmakers of a previous generation for being "too quick to accept unproven scientific theories of eugenics."[108] The court declared that "we have serious doubts about the scientific validity of eugenic sterilization, . . . as well as its morality."[109] Another court recently pointed out that "[m]ost competent geneticists now reject social Darwinism" and that "medical and genetical experts are no longer sold on sterilization to benefit either retarded patients or the future of the Republic."[110] This decline in judicial respect for eugenic sterilization surely has contributed to the technology's constitutional demise.

Similarly, modern judges have displayed a cautious attitude toward the widespread governmental use of computerized data banks. In *Whalen v. Roe*,[111] the Supreme Court recognized "the threat to privacy [which is] implicit in the accumulation of vast amounts of personal information in computerized data banks."[112] The Court then cited the works of two authors who had campaigned vigorously against the indiscriminate use of computerized data banks.[113]

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[106] *Id.* at 541.

[107] *Id.* at 546 (Jackson, J., concurring).

[108] *In re* Grady, 85 N.J. 235, 246, 426 A.2d 467, 472 (1981) (footnote omitted).

[109] *Id.* at 246-47, 426 A.2d at 472-73 (footnote and citation omitted).

[110] North Carolina Ass'n for Retarded Children v. North Carolina, 420 F. Supp. 451, 454 (M.D.N.C. 1976).

[111] 429 U.S. 589 (1977).

[112] *Id.* at 605. Justice Brennan, concurring in the judgment, recognized even more emphatically that "[t]he central storage and easy accessibility of computerized data vastly increase the potential for abuse of that information." *Id.* at 607. "[F]uture developments," he suggested, might therefore "demonstrate the necessity of some curb on [computer] technology." *Id.*

[113] *Id.* at n.34 (citing A. MILLER, *supra* note 57; Boyer, *Computerized Medical Records and the Right to Privacy: The Emerging Federal Response*, 25 BUFFALO L. REV. 37 (1975); Miller, *Computers, Data Banks and Individual Privacy: An Overview*, 4 COLUM. HUM. RTS. L. REV. 1 (1972)). Professor Miller, for example, warned:

> [T]he computer, with its insatiable appetite for information, its image of infal-

In another decision, Justice Douglas pessimistically forecast that computers would enable government officials to record the consumer purchases, telephone conversations, and financial transactions of all citizens: "Now that we have the data banks, these . . . items will enrich that storehouse and make it possible for a bureaucrat—by pushing one button—to get in an instant the names of the 190 million Americans who are subversives or potential and likely candidates."[114] At least four other Justices shared Douglas's concern that governmental recordkeeping might become so intrusive that it "would implicate legitimate expectations of privacy."[115]

On the New York Court of Appeals, Justice Fuchsberg similarly observed that "[p]eople . . . are . . . divided over and mistrustful of the potential of computers in government."[116] Fuchsberg cautioned that "[h]eadlines in the recent past, and even in the present, provide ample basis for concern that centralized data banks may be misused."[117] Two Justices of the Washington Supreme Court concurred that "[c]omputers . . . permit the analysis and centralized storage of each individual's record, in effect creating a 'dossier' on practically every individual in the United States."[118] These Justices warned that authorizing the continued collection of this data would

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> libility, and its inability to forget anything that has been stored in it, may become the heart of a surveillance system that will turn society into a transparent world in which our homes, our finances, and our associations will be bared to a wide range of casual observers, including the morbidly curious and the maliciously or commercially intrusive.

A. MILLER, *supra*, at 3.

[114] California Bankers Ass'n v. Shultz, 416 U.S. 21, 85 (1974) (Douglas, J., dissenting).

[115] *Id.* at 79 (Powell, J., joined by Blackmun, J., concurring); *see also id.* at 91 (Brennan, J., dissenting); *id.* at 93 (Marshall, J., dissenting).

[116] Schulman v. New York City Health & Hosp. Corp., 38 N.Y.2d 234, 256, 342 N.E.2d 501, 515, 379 N.Y.S.2d 702, 721 (1975) (Fuchsberg, J., joined by Cooke, J., dissenting).

[117] *Id.* The majority in *Schulman* agreed that "[p]resent day computerized information storage and retrieval systems may pose a significant threat to the constitutionally protected right to privacy" and that the court was "not insensitive to the dangers posed by modern computer technology." *Id.* at 244, 342 N.E.2d at 507, 379 N.Y.S.2d at 709.

[118] Peninsula Counseling Center v. Rahm, 105 Wash. 2d 929, 938, 719 P.2d 926, 930 (1986) (Pearson, J., joined by Brachtenbach, J., dissenting). The justices analogized the computer dossiers compiled in the United States to the intrusive recordkeeping of the Soviet Union described in Solzhenitsyn's novel, CANCER WARD. *Id.* (" 'As every man goes through life he fills in a number of forms for the record, each containing a number of questions. . . . There are thus hundreds of little threads radiating from every man, millions of threads in all.' " (quoting A. SOLZHENITSYN, CANCER WARD 189 (1968)). The justices concluded that "[c]omputers [are] the machines from which these threads emanate." *Id.*

"move this country that much closer to the Orwellian society we all fear."[119]

These references to computerized "dossiers" and an "Orwellian society" suggest that judges view the effects of computer technology with mixed feelings. Although computers permit efficient recordkeeping and rapid data analysis, they also reduce privacy and threaten governmental abuse. One state court justice observed that " '[t]he mere collection and retention of sensitive or personal information creates a state of severe psychological insecurity.' "[120] The courts' recognition of the dark side of computer technology has made them approach computerized recordkeeping with caution. Although judges have upheld several applications of computer technology, they have suggested that other uses might violate a constitutional right of privacy. This selectivity differs markedly from the courts' broad endorsement of vaccination and sterilization during an earlier era.

Finally, courts reviewing challenges to life-prolonging medical technologies have been especially cognizant of the evils implicit in those technologies. "Medical technology," one court wrote, "has effectively created a twilight zone of suspended animation where death commences while life, in some form, continues. Some patients . . . want no part of a life sustained only by medical technology."[121] Another court more graphically described " '[t]he ultimate horror [not of] death but the possibility of being maintained in limbo, in a sterile room, by machines controlled by strangers.' "[122] These courts fervently conclude that, at some point, "active [medical] treatment designed to prolong life becomes utterly pointless and probably cruel."[123]

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[119] *Id.* at 948, 719 P.2d at 936.

[120] *Id.* at 938, 719 P.2d at 930-31 (Pearson, J., joined by Brachtenbach, J., dissenting) (quoting Comment, *The Privacy Act of 1974: An Overview and Critique*, 1976 WASH. U.L.Q. 667, 674).

[121] Rasmussen v. Fleming, 154 Ariz. 207, 211, 741 P.2d 674, 678 (1987) (en banc).

[122] *In re* Torres, 357 N.W.2d 332, 340 (Minn. 1984) (quoting Steel, *The Right to Die: New Options in California*, 93 CHRISTIAN CENTURY (July-Dec. 1976)).

[123] *In re* Conroy, 188 N.J. Super. 523, 528, 457 A.2d 1232, 1235, *rev'd*, 190 N.J. Super. 453, 464 A.2d 303 (1983), *rev'd*, 98 N.J. 321, 486 A.2d 1209 (1985); *see also* Bouvia v. Superior Court, 179 Cal. App. 3d 1127, 1134, 225 Cal. Rptr. 297, 299 (1986) (describing the "increased dehumanizing aspects . . . created by the insertion of a permanent tube through [the patient's] nose and into her stomach"); Satz v. Perlmutter, 362 So. 2d 160, 164 (Fla. Dist. Ct. App. 1978) (mechanical respirator would "inflict[ ] never ending physical torture on [the patient's] body until the inevitable, but artificially suspended, moment of death"), *aff'd*, 379 So. 2d 359 (Fla. 1980); Superintendent of Belchertown State School v. Saikewicz, 373 Mass. 728, 737-38, 370 N.E.2d 417, 423

Because of judicial distaste for these intrusive procedures, courts have approved the withdrawal of medical technologies even over the determined opposition of doctors and nurses. In the pathbreaking *Quinlan* case, the physicians treating Karen Quinlan refused to disconnect the respirator sustaining her life.[124] Nonetheless, the court permitted Quinlan's father to order removal of the respirator. Although the court admitted that it had "no inherent medical expertise," it believed that it was capable of "reevaluat[ing] the applicability of the medical standards" and deciding whether they contained sufficient "internal consistency and rationality" to bar the relief sought for Karen Quinlan.[125] Rather than deferring to medical judgment, the court examined the doctors' judgment critically and rejected the prevailing medical standards.[126]

The same wariness of medical judgment emerges in the refusal of some courts to allow medical jargon to dictate the results in right-to-die cases. In *Cruzan*, the Missouri Supreme Court admitted that reliance upon medical terminology is attractive because " '[i]t removes the responsibility for decisions that seem harsh when explained in plainer language.' "[127] Nonetheless, the court "refuse[d]

(1977) ("[I]n many cases the effect of using extraordinary measures to prolong life is to 'only prolong suffering, isolate the family from their loved one at a time when they may be close at hand or result in economic ruin for the family.") (quoting Lewis, *Machine Medicine and Its Relation to the Fatally Ill*, 206 J. A.M.A. 387 (1968)); *In re* Conroy, 98 N.J. 321, 343, 486 A.2d 1209, 1220 (1985); *id.* at 398-99, 486 A.2d at 1250 (Handler, J., concurring in part and dissenting in part) ("Eventually, pervasive bodily intrusions, even for the best motives, will arouse feelings akin to humiliation and mortification for the helpless patient.").

[124] *See supra* note 74 and accompanying text.

[125] *In re* Quinlan, 70 N.J. 10, 45, 355 A.2d 647, 666, *cert. denied*, 429 U.S. 922 (1976).

[126] *See also* Bouvia v. Superior Court, 179 Cal. App. 3d 1127, 225 Cal. Rptr. 297 (1986) (ordering public hospital to honor patient's demand to disconnect feeding tubes); Bartling v. Superior Court, 163 Cal. App. 3d 186, 209 Cal. Rptr. 220 (1984) (trial court should have ordered doctors to disconnect patient's respirator, even though both doctors and hospital vigorously opposed disconnection as unethical); *In re* Conroy, 98 N.J. 321, 352-53, 486 A.2d 1209, 1225 (1985) ("[I]f the patient's right to informed consent is to have any meaning at all, it must be accorded respect even when it conflicts with the advice of the doctor or the values of the medical profession as a whole."). The courts' willingness to overrule medical judgments in these cases contrasts with the deference they show medical custom in malpractice cases. *See* W. KEETON, D. DOBBS, R. KEETON & D. OWEN, PROSSER AND KEETON ON THE LAW OF TORTS § 32, at 189 (5th ed. 1984) [hereinafter PROSSER AND KEETON] (standard of care in medical malpractice cases is "one of 'good medical practice,' which is to say, what is customary and usual in the profession").

[127] Cruzan v. Harmon, 760 S.W.2d 408, 423 (Mo. 1988) (en banc) (quoting Alexander, *Death by Directive*, 28 SANTA CLARA L. REV. 67, 83 (1988)), *cert. granted sub nom.* Cruzan v. Director, Mo. Dep't of Health, 109 S. Ct. 3240 (1989).

to succumb to the semantic dilemma created by medical determinations" and held that the medical designation of a procedure as treatment or non-treatment was irrelevant to the legal decision of whether a guardian could order cessation of the procedure.[128] Similarly, in *Gray v. Romeo*,[129] the district court rejected the notion that " 'the definition of a medical term of art should coincide with the parameters of a constitutional standard.' "[130] Refusing to distinguish between ordinary and extraordinary medical treatments, the *Gray* court held that a guardian could refuse any type of treatment that the incompetent patient would have declined.[131]

In the right-to-die cases, therefore, as in modern controversies over eugenic sterilization and computerized data banks, the courts have displayed an increasing caution towards technological advances and an unwillingness to allow scientific standards to dictate social results. Although judges have recognized the benefits of computerized recordkeeping, life-sustaining medical procedures, and even eugenic sterilization,[132] they have also seen the underside of those technologies. No longer willing to accept a new technology "just 'because it is there,' "[133] courts are more likely to probe the social applications of scientific principles to insure that they confer real benefits on individuals.

B. From Social Contract to Individual Rights

The judicial progression from universal vaccination to mechanical respiration reveals not only an increased wariness of technological change, but a marked shift in constitutional philosophy. In the early vaccination and sterilization cases, courts centered their constitutional doctrine on the belief that an implicit social contract governs society. According to this paradigm, individuals consent to communal protection and then, having reaped the benefits of organ-

[128] *Id.* at 423. Instead, the court ruled that the legal decision hinged on whether the procedure was burdensome to the patient.

[129] 697 F. Supp. 580 (D.R.I. 1988), *attorney's fees awarded*, 709 F. Supp. 325 (D.R.I. 1989).

[130] *Id.* at 589 (quoting Winston v. Lee, 470 U.S. 753, 764 n.8 (1985) (quoting Lee v. Winston, 551 F. Supp. 247, 260 (E.D. Va. 1982))).

[131] *Id.* Ironically, the courts' refusal to adopt medical technology led to opposite results in *Cruzan* and *Gray*. In *Gray*, the court allowed removal of a feeding tube; in *Cruzan*, it did not. *See supra* notes 79-85, 89-93 and accompanying text.

[132] *See, e.g.*, North Carolina Ass'n for Retarded Children v. North Carolina, 420 F. Supp. 451, 454 (M.D.N.C. 1976); *In re* Torres, 357 N.W.2d 332, 341 (Minn. 1984).

[133] Schulman v. New York City Health & Hosp. Corp. 38 N.Y.2d 234, 256, 342 N.E.2d 501, 515, 379 N.Y.S.2d 702, 721 (1975) (Fuchsberg, J., joined by Cooke, J., dissenting).

ized society, must submit to its laws. More recent decisions eschew this reliance on the notion of a social contract. Rather than stressing social duties, these modern cases focus on individual rights.

Jacobson v. Massachusetts,[134] in which the Supreme Court upheld mandatory vaccination, exemplifies early judicial reliance upon the concept of a social contract. The Court first noted that, under the state constitution governing the citizen who had challenged universal vaccination, "the whole people covenants with each citizen, and each citizen with the whole people, that all shall be governed by certain laws for 'the common good.' "[135] The Court then stressed that the individual resisting vaccination had "enjoy[ed] the general protection afforded by an organized local government" for many years and had "cho[sen] to remain a part of that population."[136] Having accepted the benefits of civilized society, the citizen could not avoid its obligations; vaccination against smallpox was merely one term of the social contract.

The North Carolina Supreme Court likewise countered a constitutional challenge to mandatory vaccination by observing that " '[t]here is an implied assent on the part of every member of society that his own individual welfare shall, in cases of necessity, yield to that of the community.' "[137] The court continued: "[I]t is every day common sense that, if a people can draft or conscript its citizens to defend its borders from invasion, it can protect itself from the deadly pestilence that walketh by noonday."[138]

In the same case, Justice Douglas agreed with his colleagues that "[w]hen man entered the social compact, he gave up a portion of his natural liberty in exchange for the protection of society."[139] Douglas, however, argued that there must be some limit to the terms of that contract.[140] For example, Douglas asserted that the legislature

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[134] 197 U.S. 11 (1905).

[135] *Id.* at 27 (quoting MASS. CONST. preamble).

[136] *Id.* at 37-38.

[137] State v. Hay, 126 N.C. 999, 1001, 35 S.E. 459, 460 (1900) (quoting H. BROOM, LEGAL MAXIMS 1 (7th ed. 1874) (1st ed. 1845)).

[138] *Id.*, 126 N.C. at 1001, 35 S.E. at 461; *see also* Morris v. City of Columbus, 102 Ga. 792, 798, 30 S.E. 850, 852 (1898) (" 'The individual must sacrifice his particular interest or desires, if the sacrifice is a necessary one, in order that organized society as a whole shall be benefited.' ") (quoting People *ex rel.* Nechamcus v. Warden of City Prison, 144 N.Y. 529, 39 N.E. 686 (1895)); *id.* at 801, 30 S.E. at 854 ("[T]he citizen may avoid the consequences of a muncipal regulation by putting himself beyond the jurisdiction of the municipality.").

[139] *Hay*, 126 N.C. at 1006, 35 S.E. at 462 (Douglas, J., concurring).

[140] *Id.*

could not "pass an act that all persons afflicted with certain diseases should be killed," and it could not "enforce vaccination if, under the peculiar conditions of health of the patient, it might reasonably be expected to endanger his life."[141] Such laws, Douglas suggested, would exceed the reasonable expectations of individuals consenting to the social contract.[142]

The United States Supreme Court concurred that, in some cases, mandatory vaccination might transcend the implied terms of the social contract. The Court acknowledged that vaccinating someone who would suffer serious illness or death from vaccination "would be cruel and inhuman in the last degree."[143] Under those circumstances, the Court asserted, "the judiciary would . . . be competent to interfere and protect the health and life of the individual concerned."[144] Thus, the courts have relied upon the concept of a social contract both to uphold and limit mandatory vaccinations.[145]

The same references to an implicit social contract helped early courts uphold statutes mandating eugenic sterilization. In *Buck v. Bell*,[146] the Supreme Court peremptorily approved sterilization of a mentally retarded woman by observing that "[w]e have seen more than once that the public welfare may call upon the best citizens for their lives."[147] If the social contract could demand this sacrifice from society's soldiers, "[i]t would be strange if it could not call upon those who already sap the strength of the state for these lesser

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[141] *Id.*

[142] *Id.*

[143] Jacobson v. Massachusetts, 197 U.S. 11, 39 (1905).

[144] *Id.*

[145] Courts have continued to use social contract terminology to resolve mandatory vaccination disputes. In 1937, the New Hampshire Supreme Court observed that a defendant challenging compulsory vaccination could not "claim constitutional rights under articles 4 and 5 of the [New Hampshire] Bill of Rights without making concessions of some of his natural rights under article 3." State v. Drew, 89 N.H. 54, 57-58, 192 A. 629, 632 (1937). The latter article contains explicit social contract imagery: "When men enter into a state of society, they surrender up some of their natural rights to that society, in order to ensure the protection of others; and, without such an equivalent, the surrender is void." N.H. CONST. art. III.

Similarly, a New Jersey court noted in 1948 that cases sustaining mandatory vaccination " 'are but illustrations of the extent to which the highest tribunal has gone in vindication of the principle that the individual must yield somewhat of his personal rights to society in return for the benefits of society which he enjoys.' " Sadlock v. Board of Educ., 137 N.J.L. 85, 91, 58 A.2d 218, 222 (1948) (quoting Valentine v. Englewood, 76 N.J.L. 509, 522, 71 A. 344, 349 (1908)).

[146] 274 U.S. 200 (1927).

[147] *Id.* at 207.

sacrifices" of sterilization.[148] The Court concluded that the same "principle that sustain[ed] compulsory vaccination [was] broad enough to cover cutting the Fallopian tubes."[149]

Other early decisions sustaining mandatory sterilization stress that the individual's interest in reproduction must yield to the greater social good. The Idaho Supreme Court, for example, declared that "[i]f there be any natural right for natively mental defectives to beget children, that right must give way to the police power of the state in protecting the common welfare."[150] The Michigan Supreme Court likewise queried: "Measured by its injurious effect upon society, what right has any citizen or class of citizens to beget children with an inherited tendency to crime, feeble-mindedness, idiocy, or imbecility?"[151]

This notion of a social contract sometimes led to the opposite result in sterilization cases. At least one state judge used the concept of a social contract to oppose mandatory sterilization. Dissenting from the Michigan Supreme Court decision quoted above, Justice Wiest declared: "The inherent right of mankind to pass through life without mutilation of organs or glands of generation . . . was not lost or surrendered to legislative control in the creation of government, and is beyond the reach of the governmental agency known as the police power."[152]

Thus, during the early years of this century the courts employed the image of a social contract both to uphold intrusive uses of new technologies and to suggest some constitutional limits on those technologies.[153] After 1940, these philosophical underpinnings of constitutional law changed radically. Judges no longer referred to a

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[148] *Id.*

[149] *Id.*

[150] State v. Troutman, 50 Idaho 673, 679, 299 P. 668, 670 (1931).

[151] Smith v. Command, 231 Mich. 409, 415, 204 N.W. 140, 142 (1925); *see also* State *ex rel.* Smith v. Schaffer, 126 Kan. 607, 608, 270 P. 604, 605 (1928) ("Procreation of defective and feeble-minded children with criminal tendencies does not advantage, but patently disadvantages, the race. . . . The race may insure its own perpetuation and such progeny may be prevented in the interest of the higher general welfare.").

[152] *Smith*, 231 Mich. at 436, 204 N.W. at 149.

[153] One of the most explicit connections between constitutional law and the idea of a social contract appears in *State v. Wordin*, 56 Conn. 216, 14 A. 801 (1887), a case upholding the constitutionality of an ordinance requiring physicians to report the names of patients infected with communicable diseases. The Connecticut Supreme Court observed there that the provisions of the fourteenth amendment "place no limitation upon the power of the legislature . . . other than that which would have been equally upon it in their absence, namely, that it shall not violate the fundamental principles and purposes of the social compact." *Id.* at 227, 14 A. at 803.

social contract or to an individual's communal duties. Instead, constitutional opinions began to focus on individual rights.[154]

The Supreme Court heralded this change in *Skinner v. Oklahoma*[155] by announcing that a challenge to eugenic sterilization "touche[d] a sensitive and important area of human rights."[156] These opening words of *Skinner* sent a clear signal that the Court had shifted the focal point of its analysis. Henceforth, the starting point for constitutional decisions would be individual rights,[157] not social duties. Indeed, *Skinner* contained no mention of the individual's duty to make sacrifices for the greater good.

The Supreme Court maintained this focus on individual rights when it confronted challenges to computerized record keeping. In *Whalen v. Roe*,[158] the Court catalogued two types of privacy rights: "the individual interest in avoiding disclosure of personal matters" and "the interest in independence in making certain kinds of important decisions."[159] Although the Court ultimately found no violation of either right, it is significant that the Court began its analysis

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[154] I have suggested elsewhere that the concept of a social contract retains some utility today, especially in helping define the protections conferred by the equal protection clause. *See* Merritt, *Communicable Disease and Constitutional Law: Controlling AIDS*, 61 N.Y.U. L. REV. 739 (1986). So far, however, most modern courts have avoided social contract analogies.

[155] 316 U.S. 535 (1942).

[156] *Id.* at 536; *see also id.* at 541 ("We are dealing here with legislation which involves one of the basic civil rights of man.").

[157] Modern sterilization opinions continue to acknowledge that the right of procreation is fundamental, *see* North Carolina Ass'n for Retarded Children v. North Carolina, 420 F. Supp. 451 (M.D.N.C. 1976); Motes v. Hall County Dep't of Family & Children Servs., 251 Ga. 373, 306 S.E.2d 260 (1983). *But cf. In re* Moore, 289 N.C. 95, 103, 221 S.E.2d 307, 312 (1976) ("The United States Supreme Court has also held that the welfare of all citizens should take precedence over the rights of individuals to procreate." (citing Buck v. Bell, 274 U.S. 200 (1927))).

Recent challenges to mandatory vaccination also invoke a panoply of rights. For example, in Brown v. City School Dist., 104 Misc. 2d 796, 429 N.Y.S.2d 355 (1980), *aff'd*, 83 A.D.2d 755, 444 N.Y.S.2d 878 (1981), the trial court observed that "the free exercise of religion is a fundamental right under the Constitution," and that the legislature had attempted to "preserve, whenever possible, a coexistence of public health protection and a recognition of the right of serious religious practice." *Id.* at 799-800, 429 N.Y.S.2d at 357. The court concluded that "[g]overnments have reason to consider each concern as fundamental to the best welfare of their people." *Id.* at 800, 429 N.Y.S.2d at 357.

[158] 429 U.S. 589 (1977).

[159] *Id.* at 599-600. The Court also referred to the doctors' "right to practice medicine free of unwarranted state interference," although it concluded that this right was no greater than the patients' privacy interests. *Id.* at 604; *see also* Peninsula Counseling Center v. Rahm, 105 Wash. 2d 929, 933-34, 719 P.2d 926, 928 (1986) (en banc) ("These privacy rights fall into two different categories. First, individuals should be allowed the autonomy to make certain fundamental decisions without government intrusion . . . .

by recognizing both rights. As Justice Stewart noted in his concurrence, the Court could have disposed of the case without acknowledging any constitutional right to oppose computerized recordkeeping.[160]

The numerous cases reviewing the use of life-sustaining medical technologies also center on the right of individuals to reject those technologies. In one decision, the New Jersey Supreme Court declared that "[t]he starting point in analyzing whether life-sustaining treatment may be withheld or withdrawn from an incompetent patient is to determine what rights a competent patient has to accept or reject medical care."[161] The court recognized both a common law right to control one's body and a federal constitutional right to make those decisions.[162] Only after establishing both of those rights did the court consider whether any societal interests might override them. It concluded, moreover, that "the right to self-determination ordinarily outweighs any countervailing state interests."[163]

One commentator has observed that this practice of "attributing 'rights' to [irreversibly comatose] patients is somewhat problematic" because these patients can "make no decisions about how to exercise any such rights."[164] Courts, however, continue to find a "right of privacy,"[165] a "right to be free of bodily invasion,"[166] and a "right of self-determination"[167] in cases involving the withdrawal of life-prolonging medical treatment. These constant references to rights underscore the extent to which courts tie their constitutional philosophy to a taxonomy of individual rights.

Secondly, they should also be protected from disclosure of certain personal matters to the government.").

[160] 429 U.S. at 609 (previous Court decisions do "not recognize a general interest in freedom from disclosure of private information," and *Whalen* should not be read to create such an interest).

[161] *In re* Conroy, 98 N.J. 321, 346, 486 A.2d 1209, 1221 (1985).

[162] *Id.* at 348, 486 A.2d at 1222. Although the court recognized the existence of this constitutional right, it subsequently rested its decision solely on common-law grounds. *Id.*, 486 A.2d at 1223.

[163] *Id.* at 353, 486 A.2d at 1225.

[164] L. TRIBE, *supra* note 54, § 15-11, at 1368 n.25.

[165] *See, e.g.*, Leach v. Akron Gen. Medical Center, 68 Ohio Misc. 1, 8-9, 426 N.E.2d 809, 814 (1980).

[166] *See, e.g.*, *In re* Grant, 109 Wash. 2d 545, 553, 747 P.2d 445, 449 (1987), *amended*, 757 P.2d 534 (1988) (correcting list of concurring justices); *see also* Gray v. Romeo, 697 F. Supp. 580, 584 (D.R.I. 1988) ("right of an individual to control his or her own body"); Rasmussen v. Fleming, 154 Ariz. 207, 216, 741 P.2d 674, 683 (1987) ("right to be free from nonconsensual physical invasions").

[167] *Gray*, 697 F. Supp. at 585; *see also* Satz v. Perlmutter, 362 So. 2d 160, 164 (Fla. Dist. Ct. App. 1978) ("right to self-determine"), *aff'd*, 379 So. 2d 359 (Fla. 1980).

This attachment to rights in medical treatment cases has prompted courts to allow third parties to assert those rights on behalf of incompetent patients. Courts reaching this result have stressed that patients should not lose an important constitutional right merely because they are unconscious or incompetent. As the New Jersey Supreme Court recognized in *Quinlan*, if a decision to reject life-sustaining medical treatment "is regarded as a valuable incident of [the] right of privacy, . . . then it should not be discarded solely on the basis that [the patient's] condition prevents her conscious exercise of the choice."[168] Thus, the preoccupation with rights has led to a paradoxical result: a comatose patient's right of self-determination is assigned to third parties so the patient will not lose that right.[169] This position demonstrates the courts' commitment to individual rights as the focal point of constitutional analysis.

Thus, the doctrinal foundations of constitutional law have undergone a subtle, yet significant, shift during the last hundred years. Although courts once stressed an implicit social contract setting forth social duties, today they concentrate on individual rights. As the following section demonstrates, this focus on individual rights has prompted the expansion of constitutional doctrine in many cases involving new technologies.

C. The Creation of New Constitutional Doctrine

One of the most striking characteristics of cases pitting constitutional law against technological change is the frequency with which courts have used these cases to recognize novel constitutional principles. Controversies over eugenic sterilization, computerized databanks, and life-sustaining medical techniques have all contributed important new dimensions to constitutional law.[170]

In *Skinner v. Oklahoma*,[171] the Supreme Court radically reworked equal protection principles at the same time it reversed its

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[168] *In re* Quinlan, 70 N.J. 10, 41, 355 A.2d 647, 664, *cert. denied*, 429 U.S. 922 (1976).

[169] The Missouri Supreme Court denounced this position as "logically inconsistent" in *Cruzan v. Harmon*, 760 S.W.2d 408, 425 (Mo. 1988) (en banc), *cert. granted sub nom.* Cruzan v. Director, Mo. Dep't of Health, 109 S. Ct. 3240 (1989).

[170] Although early decisions involving mandatory vaccination did not create any new constitutional principles, those cases did provide important crucibles for the refinement of emerging constitutional doctrines. The courts, for example, repeatedly defined the scope of the police power in vaccination cases and used those cases to articulate their view of the social contract. *See supra* notes 135-45 and accompanying text.

[171] 316 U.S. 535 (1942).

position on eugenic sterilization. Before *Skinner*, the Court routinely rejected equal protection challenges, upholding legislation if it could find any reasonable basis for the legislature's actions.[172] Indeed, in *Buck v. Bell*, the Court had denigrated equal protection challenges as "the usual last resort of constitutional arguments."[173] In *Skinner*, however, the Court created a more searching form of scrutiny for the "basic civil right" of procreation[174] and struck down the offending legislation. *Skinner* thus pioneered the Court's modern theory that statutes affecting fundamental rights require a stricter form of equal protection scrutiny than the "rational basis" review reserved for most legislation.[175]

The fundamental rights doctrine outlined in *Skinner* has proven exceedingly fruitful. Since 1942, the Supreme Court has cited *Skinner* more than eighty-five times.[176] The Court has relied on this case to protect constitutional rights to marry,[177] to obtain contraceptives,[178] to vote in state elections,[179] and to choose whether to terminate a pregnancy.[180] Lower courts have found *Skinner* equally instructive. The New Jersey courts, for example, recently invoked *Skinner* to sketch competing constitutional rights of a surrogate mother and her contractual partner.[181] Few cases have had

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[172] Lindsley v. Natural Carbonic Gas Co., 220 U.S. 61 (1911); *see also* New York *ex rel.* Bryant v. Zimmerman, 278 U.S. 63, 73-75 (1928) (citing cases).

[173] 274 U.S. 200, 208 (1927).

[174] 316 U.S. at 541.

[175] *See generally* 2 R. ROTUNDA, J. NOWAK & J. YOUNG, *supra* note 54, § 18.3.

Chief Justice Stone, concurring in *Skinner*, underscored the extent to which the case departed from traditional equal protection analysis. Under longstanding equal protection doctrine, Stone reasoned, Oklahoma should have been able to apply its sterilization remedy to any recognized class of felons. 316 U.S. at 543-44 (citing Keokee Coke Co. v. Taylor, 234 U.S. 224, 227 (1914); Patsone v. Pennsylvania, 232 U.S. 138, 144 (1914); Rosenthal v. New York, 226 U.S. 260, 271 (1912)). In addition, Stone believed that the Court's precedents compelled the Court to presume that the legislature, even in the absence of concrete evidence, knew "that the criminal tendencies of some classes of offenders [were] more likely to be transmitted than those of others." *Id.* at 544.

[176] This count, drawn from SHEPARD'S UNITED STATES CITATIONS, includes citations found in majority, concurring, and dissenting opinions. An even larger number of citations appear in lower court opinions. 3 SHEPARD'S UNITED STATES CITATIONS 58-60 (5th ed. 1984, Supp. 1984-1986, Supp. 1986-1988).

[177] Zablocki v. Redhail, 434 U.S. 374, 383-85 (1978); Loving v. Virginia, 388 U.S. 1, 12 (1967).

[178] Eisenstadt v. Baird, 405 U.S. 438, 453-54 (1972); Griswold v. Connecticut, 381 U.S. 479, 485 (1965); Poe v. Ullman, 367 U.S. 497, 545 (1961) (Harlan, J., dissenting).

[179] Harper v. Virginia Bd. of Elections, 383 U.S. 663, 670 (1966).

[180] Roe v. Wade, 410 U.S. 113, 152-153 (1973).

[181] In the celebrated *Baby "M"* case, the trial court held that the sperm donor father and surrogate mother had a fundamental right to execute a surrogate parenting agreement. *In re* Baby M, 217 N.J. Super. 313, 385-88, 525 A.2d 1128, 1163-65 (1987), *aff'd*

a more lasting impact on modern constitutional law than *Skinner v. Oklahoma*.

The Supreme Court in *Skinner* did not simply use the Constitution to adjudicate a social controversy prompted by modern technology. In resolving that controversy, it modified equal protection doctrine in a manner holding implications for a wide range of constitutional cases. Similarly, the Supreme Court's consideration of computerized data banks in *Whalen v. Roe*[182] led to the recognition of a new constitutional "interest in avoiding disclosure of personal matters."[183] As Justice Stewart recognized in his *Whalen* concurrence, this right was completely unprecedented. Previous Supreme Court opinions had denied the existence of any "general constitutional 'right to privacy' "[184] that might include a right to withhold confidential information from government data banks. *Whalen* was the first case to intimate that the constitutional right of privacy might be this broad.

Like the fundamental rights doctrine established by *Skinner*, the right of privacy recognized in *Whalen* has proven to be a vital force in modern constitutional law. During the decade since the Supreme Court decided *Whalen*, lower courts have recognized a right of privacy to restrain police departments from probing the private sexual activities of their officers,[185] to restrict the ability of government

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in part, rev'd in part, 109 N.J. 396, 537 A.2d 1227 (1988). The state's highest court agreed that the sperm donor and surrogate mother had a fundamental constitutional right to procreate. It held, however, that the father did not have a fundamental right to custody when the mother opposed that claim. *In re* Baby M, 109 N.J. at 447-49, 537 A.2d at 1253-54. On the other hand, the state supreme court found that the surrogate mother had a fundamental interest, derived in part from *Skinner*, to the companionship of her child. *Id.* at 450, 537 A.2d at 1255. The court did not have to decide how far this right might reach because it restored the surrogate mother's parental rights on nonconstitutional grounds. *Id.*

[182] 429 U.S. 589 (1977).

[183] *Id.* at 599.

[184] *Id.* at 607-08 (Stewart, J., concurring) (quoting Katz v. United States, 389 U.S. 347, 350 (1967)); *see also* A. MILLER, *supra* note 57, at 200 (observing, several years before *Whalen*, that constitutional privacy principles "were formulated before the advent of computer technology and need further judicial development before they can meet the challenge presented by the new information systems"); Boyer, *supra* note 113, at 89 (noting two years before *Whalen*, that the possibility of constitutional limits on computerized recordkeeping "remains largely unrealized").

[185] Thorne v. City of El Segundo, 726 F.2d 459 (9th Cir. 1983), *cert. denied*, 469 U.S. 979 (1984); Shuman v. City of Philadelphia, 470 F. Supp. 449 (E.D. Pa. 1979); *cf.* McKenna v. Fargo, 451 F. Supp. 1355 (D.N.J. 1978) (city's psychological testing of fire fighters implicated the constitutional right of privacy, but survived strict scrutiny because the city had a compelling interest in protecting citizens from incompetent fire

agencies to inspect private medical records,[186] and to shield blood banks from disclosing the names of donors who might have been infected with the AIDS virus.[187] *Whalen*'s right of privacy, therefore, has affected cases far removed from the abuses of computer technology.

Respirators, feeding tubes, and other medical technologies have also prompted the creation of new constitutional doctrine. *Quinlan* and other lower court decisions pioneered the concept of a constitutional right to refuse life-sustaining medical treatment. Although the Supreme Court recognizes a constitutional right of privacy, that right has been limited to decisions respecting family life and procreation.[188] The Court, moreover, has cautioned lower courts and litigants against reading this right of privacy too broadly.[189] Under these circumstances, the creation of a constitutional right to refuse lifesaving treatment was novel and controversial.[190]

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fighters and could adopt regulations narrowly tailoring access to the testing data), *aff'd*, 601 F.2d 575 (3d Cir. 1979).

[186] United States v. Westinghouse Elec. Corp., 638 F.2d 570 (3d Cir. 1980); Hawaii Psychiatric Soc'y v. Ariyoshi, 481 F. Supp. 1028 (D. Haw. 1979); Division of Medical Quality v. Gherardini, 93 Cal. App. 3d 669, 156 Cal. Rptr. 55 (1979). Other courts have recognized that unlimited governmental inspection of private medical records would invade the constitutional right of privacy, but have found that the intrusions before them were sufficiently justified by weighty governmental interests to withstand constitutional scrutiny. *See, e.g.*, General Motors Corp. v. Director of the Nat'l Inst. for Occupational Safety and Health, 636 F.2d 163 (6th Cir. 1980), *cert. denied*, 454 U.S. 877 (1981); E.I. du Pont de Nemours & Co. v. Finklea, 442 F. Supp. 821 (S.D. W. Va. 1977).

[187] Rasmussen v. South Fla. Blood Serv., Inc., 500 So. 2d 533 (Fla. 1987); Doe v. University of Cincinnati, 42 Ohio App. 3d 227, 538 N.E.2d 419 (1988); *cf.* Tarrant County Hosp. Dist. v. Hughes, 734 S.W.2d 675 (Tex. Ct. App. 1987) (recognizing that disclosure of the names of blood donors implicates the constitutional right of privacy, but holding that the need for disclosure and provisions for confidentiality outweighed the donors' privacy interests).

[188] *See, e.g.*, Zablocki v. Redhail, 434 U.S. 374 (1978) (right to marry); Roe v. Wade, 410 U.S. 113 (1973) (right to choose abortion over childbirth); Griswold v. Connecticut, 381 U.S. 479 (1965) (right to choose whether to use contraceptives).

[189] *See, e.g.*, Bowers v. Hardwick, 478 U.S. 186, 195 (1986) ("There should be . . . great resistance to expand the substantive reach of [the due process] Clauses, particularly if it requires redefining the category of rights deemed to be fundamental.").

[190] *Cf.* Cruzan v. Harmon, 760 S.W.2d 408, 418 (Mo. 1988) (en banc) ("Based on our analysis of the right to privacy decisions of the Supreme Court, we carry grave doubts as to the applicability of privacy rights to decisions to terminate the provision of food and water to an incompetent patient."), *cert. granted sub nom.* Cruzan v. Director, Mo. Dep't of Health, 109 S. Ct. 3240 (1989); *In re* Storar, 52 N.Y.2d 363, 376, 420 N.E.2d 64, 70, 438 N.Y.S.2d 266, 272-73 (the existence of a constitutional right to decline lifesaving treatment "is a disputed question . . . which the Supreme Court has repeatedly declined to consider"), *cert. denied*, 454 U.S. 858 (1981); *see also* People v. Privitera, 23 Cal. 3d 697, 702-03, 591 P.2d 919, 921-22, 153 Cal. Rptr. 431, 433-34 (en banc) (refus-

Once again, this expansion of constitutional doctrine affected litigants seeking remedies far different from the withdrawal of life-prolonging medical treatment. During the thirteen years since *Quinlan*, courts have relied upon that decision to strike down restrictions on the practice of acupuncture,[191] to recognize a right to obtain laetrile for cancer treatment,[192] and, ironically, to hold that parents have a constitutional right to seek sterilization of their retarded children.[193] The right of privacy recognized in *Quinlan*, therefore, has grown into a broad constitutional right to control all aspects of medical care.

The courts' willingness to inaugurate this right in cases involving life-prolonging medical technologies is particularly remarkable because constitutional principles were unnecessary to resolve many of these disputes. The imposition of medical treatment against a patient's wishes is common law battery, for which nominal, actual, and even punitive damages are available.[194] Most right-to-die cases, therefore, could be analyzed as simple battery suits in which the patient or a guardian acting on behalf of an incompetent patient asserts that continued medical treatment would be tortious.[195] Unless the patient is confined in a public hospital, or the state mandates continued treatment, it is unnecessary for the courts to address any constitutional issues.[196] Indeed, in some cases the

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ing to recognize a constitutional right to use laetrile as a treatment for cancer), *cert. denied*, 444 U.S. 949 (1979); Superintendent of Belchertown State School v. Saikewicz, 373 Mass. 728, 736, 370 N.E.2d 417, 422 (1977) (patient's claim to reject life saving medical technology "presents novel issues of fundamental importance that should not be resolved by mechanical reliance on [existing] legal doctrine").

[191] Andrews v. Ballard, 498 F. Supp. 1038, 1048-49 (S.D. Tex. 1980).

[192] Rizzo v. United States, 432 F. Supp. 356, 358 (E.D.N.Y. 1977); Suenram v. Society of Valley Hosp., 155 N.J. Super. 593, 383 A.2d 143 (1977).

[193] Ruby v. Massey, 452 F. Supp. 361, 370-71 (D. Conn. 1978).

[194] *See, e.g.*, Cathemer v. Hunter, 27 Ariz. App. 780, 558 P.2d 975 (1976); Rainer v. Buena Community Memorial Hosp., 18 Cal. App. 3d 240, 95 Cal. Rptr. 901 (1971); Mohr v. Williams, 95 Minn. 261, 104 N.W. 12 (1905); Hershley v. Brown, 655 S.W.2d 671, 676 (Mo. Ct. App. 1983); PROSSER AND KEETON, *supra* note 126, § 18, at 117.

[195] A few courts have analyzed right-to-die cases in this manner. *See supra* notes 86-88 and accompanying text. The vast majority of courts, however, continue to rely exclusively or partially on constitutional grounds.

[196] *Cf.* Cruzan v. Harmon, 760 S.W.2d 408, 427 (Mo. 1988) (en banc) (Blackmar, J., dissenting) (constitutional issues are "of primary importance only if the case [is] governed by legislation"), *cert. granted sub nom.* Cruzan v. Director, Mo. Dep't of Health, 109 S. Ct. 3240 (1989). Litigants may prefer to phrase their complaints in constitutional terms because of the availability of attorney's fees under 42 U.S.C. § 1988. *See* Gray v. Romeo, 709 F. Supp. 325 (D.R.I. 1989) (awarding attorney's fees to a lawyer who successfully represented a patient in a lawsuit to disconnect the patient's feeding tube).

courts have struggled to find sufficient state action to support a constitutional right.[197]

The right-to-die cases, therefore, provide an extreme example of the courts' willingness to fashion novel constitutional principles in controversies over new technologies. Even when constitutional adjudication might not have been necessary, the courts have expanded constitutional doctrine to meet the challenges of modern technology. As with eugenic sterilization and computerized recordkeeping, the new constitutional principles recognized in right-to-die cases are sure to invigorate other areas of constitutional law.

D. Emergence of a New Judicial Role

One hundred years ago, courts perceived technological change as an inevitable and beneficial process. Judges confined their interaction with technology to the passive endorsement of legislative initiatives or the systematic removal of constitutional barriers to those initiatives.[198]

These courts were willing to tolerate technological advances even at the expense of individual rights. Indeed, some courts believed that individual hardship was the regrettable, but unavoidable, byproduct of progress. The Michigan Supreme Court concluded "that every forward step in the progress of the race is marked by an interference with individual liberties."[199] With this chilling pronouncement, the court upheld the constitutionality of a statute authorizing the sterilization of mentally defective persons.[200]

During the last seventy-five years, however, courts have gradu-

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[197] *See* Rasmussen v. Fleming, 154 Ariz. 207, 215 n.9, 741 P.2d 674, 682 n.9 (1987); Eichner v. Dillon, 73 A.D.2d 431, 461, 426 N.Y.S.2d 517, 540 (1980), *modified on other grounds sub nom. In re* Storar, 52 N.Y.2d 363, 420 N.E.2d 64, 438 N.Y.S.2d 266, *cert. denied*, 454 U.S. 858 (1981); *In re* Colyer, 99 Wash. 2d 114, 120-21, 660 P.2d 738, 742 (1983) (en banc), *modified on other grounds*, *In re* Hamlin, 102 Wash. 2d 810, 689 P.2d 1372 (1984) (en banc). In these cases the courts premised state action on the state's pervasive regulation of doctors and hospitals, the court's involvement in appointing a guardian, the state's *parens patriae* responsibility for incompetents, and the possibility of criminal prosecution if the state wrongfully withheld medical treatment.

[198] For examples of this complacent attitude, see Morris v. City of Columbus, 102 Ga. 792, 796, 30 S.E. 850, 852 (1898) ("With the wisdom or policy of vaccination, the courts have nothing to do. . . . The legislature has seen fit to adopt the opinion of those scientists who insist that it is efficacious, and this is conclusive upon us."); Duffield v. School Dist. of Williamsport, 162 Pa. 476, 483, 29 A. 742, 742 (1894) ("Vaccination may be or may not be a preventive of smallpox. That is a question about which medical men differ, and which the law affords no means of determining in a summary manner.").

[199] Smith v. Command, 231 Mich. 409, 425, 204 N.W. 140, 145 (1925).

[200] *Id.*

ally adopted a more aggressive attitude toward technology. Today, judges are not only willing to question the benefits of new technologies, but they are eager to assume an active role as mediators of the conflicts between individual rights and technological gains.

This trend began in 1913, when the New Jersey Supreme Court parted company with many of its sister courts and invalidated a eugenic sterilization statute. The court struck down the statute on the relatively narrow ground that it violated the equal protection clause by authorizing the sterilization of some, but not all, epileptics.[201] The judges, however, did not confine themselves to a narrow discussion of this technical legal ground. Instead, the court considered at length the ramifications of a governmental power to sterilize undesirables. Under such a regime, the court noted, a legislature might choose to sterilize individuals afflicted with tuberculosis, syphilis, or other communicable diseases. The government might even use such a power to mandate the extinction of unpopular racial groups or to limit population growth.[202] "Evidently the large and underlying question," the court concluded, "is, How far is government constitutionally justified in the theoretical betterment of society by means of the surgical sterilization of certain of its unoffending, but undesirable, members?"[203] The court thus attempted not only to adjudicate the controversy before it, but to evaluate the broader implications of a new technology.

The United States Supreme Court adopted a similar attitude when it invalidated a eugenic sterilization statute in *Skinner v. Oklahoma*.[204] The Court stated that "[t]he power to sterilize, if exercised, may have subtle, far-reaching and devastating effects. In evil or reckless hands it can cause races or types which are inimical to the dominant group to wither and disappear."[205] Like the New Jersey Supreme Court before it, the Court thus reviewed some of the social repercussions of eugenic sterilization.

This new judicial willingness to police the achievements of technology became even more marked when the courts considered the constitutionality of computerized data banks. In *Whalen v. Roe*,[206]

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[201] Smith v. Board of Examiners, 85 N.J.L. 46, 88 A. 963 (1913). The court's decision foreshadowed the United States Supreme Court's eventual decision in *Skinner v. Oklahoma*. *See supra* notes 49-53 and accompanying text.

[202] 85 N.J.L. at 52-53, 88 A. at 966.

[203] *Id.* at 53, 88 A. at 966.

[204] 316 U.S. 535 (1942).

[205] *Id.* at 541.

[206] 429 U.S. 589 (1977).

the Supreme Court's sensitivity to the potential abuses of computerized data banks produced the following observations:

> The collection of taxes, the distribution of welfare and social security benefits, the supervision of public health, the direction of our Armed Forces, and the enforcement of the criminal laws all require the orderly preservation of great quantities of information, much of which is personal in character and potentially embarrassing or harmful if disclosed.[207]

The Court then suggested in dicta that, without some statutory assurance of confidentiality, maintenance of these massive data banks might violate a constitutional right of privacy.[208] Once again, the Court used a particular controversy to explore the wider social implications of a new technology and to suggest how society might adapt to that technology.

Two lower court judges, confronting similar challenges to computerized recordkeeping, more explicitly recognized that the courts have a special role to play in regulating the tide of technological innovations. In a dissenting opinion, Justice Pearson of the Washington Supreme Court expressed concern that when "[c]onfronted with ever-advancing technological developments, we have resigned ourselves to the inevitability of our private affairs appearing on silicon micro-chips in computers too numerous to count."[209] Pearson entreated his colleagues that these "infringements upon privacy cannot be accepted as an inevitable outgrowth of technological advancement."[210] The courts, "[a]s the final arbiter of [the] state's constitution," should instead restrain technological developments that might destroy personal privacy.[211]

Similarly, Justice Fuchsberg of the New York Court of Appeals urged that, "cautious and careful step-by-step investigation"[212] should accompany computerized technology. Fuchsberg warned

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[207] *Id.* at 605.

[208] *Id.*

[209] Peninsula Counseling Center v. Rahm, 105 Wash. 2d 929, 937, 719 P.2d 926, 930 (1986) (en banc).

[210] *Id.* at 939, 719 P.2d at 931.

[211] *Id.*; *see also id.* at 948, 719 P.2d at 936 (" 'It is not technology, as such, which affects society for good or bad, but its uses, which are . . . shaped by the values of society and by the historical context in which the technology is used. . . . We must remember that we are not trapped helplessly in front of an unstoppable technological steamroller.' ") (quoting Weingarten, *Privacy: A Terminal Idea*, 10 HUM. RTS. 18, 56 (1982))).

[212] Schulman v. New York City Health & Hosp. Corp., 38 N.Y.2d 234, 256, 342 N.E.2d 501, 515, 379 N.Y.S.2d 702, 721 (1975) (Fuchsberg, J., joined by Cooke, J., dissenting).

that, although society should welcome computerized recordkeeping when it "serves a vital and otherwise unattainable goal," technology "ought not be used just 'because it is there.' "[213] Instead, he suggested that courts should vigorously enforce the constitutional right to privacy and assume "an increasingly powerful and pervasive antidotal role in keeping the potential abuses of electronic and other scientific devices in check."[214]

The right-to-die cases provide even clearer illustrations of the courts' new role as social referees of technological advances. In the *Quinlan* case, for example, the trial judge noted that society traditionally had placed responsibility for the "nature, extent and duration of [medical] care . . . in the hands of the physician."[215] The New Jersey Supreme Court rejected this allocation of responsibility. Instead, the court concluded that decisions about patients like Karen Quinlan "must . . . be responsive not only to the concepts of medicine but also to the common moral judgment of the community at large. In the latter respect the Court has a nondelegable judicial responsibility."[216]

In subsequent cases, the New Jersey Supreme Court continued to stress its unique judicial role in policing potential abuses of medical technology. In 1985, the court observed that "[t]he courts, as guardians of our personal rights, have a special responsibility to place appropriate constraints on . . . private decision-making [about medical treatment] and to create guideposts that will help protect people's interests in determining the course of their own lives."[217]

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[213] *Id.*

[214] *Id.*, 379 N.Y.S.2d at 720.

[215] *In re* Quinlan, 137 N.J. Super. 227, 259, 348 A.2d 801, 818 (Ch. Div. 1975), *modified and remanded*, 70 N.J. 10, 355 A.2d 647, *cert. denied*, 429 U.S. 922 (1976).

[216] *In re* Quinlan, 70 N.J. 10, 44, 355 A.2d 647, 665, *cert. denied*, 429 U.S. 922 (1976). The Court continued: "Put in another way, the law, equity and justice must not themselves quail and be helpless in the face of modern technological marvels presenting questions hitherto unthought of." *Id.* The court then declared itself able to "reevaluate the applicability of the medical standards," and overrule the medical decision-makers if their position was inconsistent with emerging social views. *Id.* at 45, 355 A.2d at 666.

[217] *In re* Conroy, 98 N.J. 321, 345, 486 A.2d 1209, 1221 (1985); *see also In re* Storar, 52 N.Y.2d 363, 384, 420 N.E.2d 64, 74-75, 438 N.Y.S.2d 266, 276-77 (Jones, J., dissenting in part):

> There are . . . abundant manifestations of both the breadth and depth of interest and concern on the part of the medical profession, theologians, ethicists, moralists, sociologists and criminologists, as well as of the public at large [in the withdrawal of life-sustaining medical technology]. In this circumstance I am persuaded that we have a special responsibility to express our views with respect to judicial participation [on these issues] . . . .

Two years later, Justice O'Hern justified this role by noting that " '[l]aw is one of the basic means through which a society translates its values into policies and applies them to human conduct.' "[218]

Since *Quinlan*, the New Jersey Supreme Court has developed a code of procedures and standards to govern the withdrawal of life-supporting medical care under a variety of circumstances.[219] In producing this canon, the court aggressively sought opportunities to guide decisionmaking for incapacitated patients. Even when patients died before the court could render its decision, the justices refused to dismiss the controversies as moot and used the cases to inform future patients and their families of their rights. In *In re Farrell*,[220] for example, the court reviewed the petition of a deceased patient to "formulate guidelines that might aid future patients, their loved ones, and their physicians in dealing with similar situations."[221] The court comprehensively surveyed the rights of competent patients to refuse life-saving medical treatment, addressing such details as standards for determining competence, special protections for patients treated at home, and the need for judicial review.[222]

Other courts have displayed the same willingness to specify the

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[218] *In re* Farrell, 108 N.J. 335, 361, 529 A.2d 404, 417 (1987) (O'Hern, J., concurring) (citing President's Commission for the Study of Ethical Problems in Medicine and Biomedical and Behavioral Research, *Deciding to Forego Life-Sustaining Treatment* 30 (1983)).

[219] *See In re* Jobes, 108 N.J. 394, 529 A.2d 434 (1987) (removal of treatment from patient in a persistent vegetative state who failed to express her preferences before becoming incompetent); *In re* Peter, 108 N.J. 365, 529 A.2d 419 (1987) (removal of treatment from patient in a persistent vegetative state who had expressed her unwillingness to be kept alive in such a state); *In re* Farrell, 108 N.J. 335, 529 A.2d 404 (1987) (withdrawal of treatment from competent patient); *In re* Conroy, 98 N.J. 321, 486 A.2d 1209 (1985) (withdrawal of treatment from severely impaired, incompetent patient who was not comatose).

[220] 108 N.J. 335, 529 A.2d 404 (1987).

[221] *Id.* at 347, 529 A.2d at 410; *see also id.* at 353, 529 A.2d at 413 ("We heard this case in order to help future patients like Mrs. Farrell, and their families and doctors . . . .").

[222] *Id.* at 354-58 & n.7, 529 A.2d at 413-15 & n.7. The court repeatedly has urged the legislature to enact standards to govern this field. *Jobes*, 108 N.J. at 428, 529 A.2d at 452; *Peter*, 108 N.J. at 385, 529 A.2d at 429; *Farrell*, 108 N.J. at 341-42, 486 A.2d at 407; *Conroy*, 98 N.J. at 344-45, 486 A.2d at 1220-21. In the absence of legislative guidance, however, the court has not hesitated to promulgate its own standards. Indeed, Justice O'Hern recently suggested that "[a]lthough in some cases we have awaited legislative formulation of standards to vindicate important rights, . . . it may be that we cannot avoid setting the substantive standard in these cases. In a society of diverse views, the Legislature may be unable to reach any majoritarian judgment." *Peter*, 108 N.J. at 393, 529 A.2d at 433 (O'Hern, J., dissenting).

circumstances under which life-sustaining medical care can be withdrawn. In one case, the Massachusetts Supreme Court identified its task as "establishing a framework in the law on which the activities of health care personnel and other persons can find support."[223] The court then spelled out the nature of any patient's right to decline potentially life-prolonging treatment, the legal standards that control the administration of life-prolonging treatment to incompetent patients, and the procedures that must be followed in making those decisions.[224] The court's exhaustive opinion gave Massachusetts families and physicians a detailed blueprint to follow in deciding whether to withdraw life-supporting technology from incompetent patients.[225]

In framing procedures to govern the withdrawal of life-sustaining medical treatment, courts have insured that judges or other nonmedical personnel will retain the ultimate decisionmaking power. For example, the Massachusetts Supreme Court ruled that a probate court must determine whether to withhold life-prolonging treatment from an incompetent patient. The court noted:

> [J]udicial resolution of this most difficult and awesome question [does not] constitut[e] a 'gratuitous encroachment' on the domain of medical expertise. Rather, such questions of life and death . . . require the process of detached but passionate investigation and decision that forms the ideal on which the judicial branch of government was created. Achieving this ideal is our responsibility and that of the lower court . . . .[226]

A New York trial court agreed that the courts have a special role to play in supervising the withdrawal of life-prolonging treatment. Ideally, the court suggested, these choices should be made by the family members of an incompetent patient after consulting with the

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223 Superintendent of Belchertown State School v. Saikewicz, 373 Mass. 728, 736, 370 N.E.2d 417, 422 (1977).

224 *Id.*, 370 N.E.2d at 422-423.

225 *See also* Rasmussen v. Fleming, 154 Ariz. 207, 224, 741 P.2d 674, 691 (1987) (en banc) ("The case under immediate consideration concerns only Mildred Rasmussen. Yet, the principles and procedures articulated herein undoubtedly will govern future similar cases."); Barber v. Superior Court, 147 Cal. App. 3d 1006, 1018, 195 Cal. Rptr. 484, 491 (1983) ("We would be derelict in our duties if we did not provide some general guidelines for future conduct in the absence of . . . legislation."); *In re* Colyer, 99 Wash. 2d 114, 128, 660 P.2d 738, 746 (1983) ("establish[ing] guidelines to be followed to ensure that the rights of all parties are adequately protected" in future cases), *modified on other grounds*, *In re* Hamlin, 102 Wash. 2d 810, 689 P.2d 1372 (1984) (en banc).

226 *Superintendent of Belchertown*, 373 Mass. at 759, 370 N.E.2d at 435.

patient's doctor.[227] In some cases, however, family members may be unavailable to decide an incompetent patient's fate or "there [may be] a dispute or uncertainty as to which course to take."[228] Under these circumstances, judicial review is necessary. "Perhaps, this is as it should be," the court mused, because judges possess the " 'detached but passionate' " investigative power identified by the Massachusetts Supreme Court.[229]

Even when courts have rejected routine judicial review of right-to-die cases as "impossibly cumbersome,"[230] they have refused to leave the patient's fate in medical hands. For example, the New Jersey Supreme Court suggested that hospitals establish "Ethics Committee[s] composed of physicians, social workers, attorneys, and theologians" to review the medical prognoses of incompetent patients and to oversee treatment decisions for those patients.[231] If hospitals and family members followed this course, their decisions to withdraw life-prolonging treatment from incompetent patients would "be without any civil or criminal liability."[232] The New Jersey Supreme Court thus guaranteed that, even without ongoing judicial involvement, nonmedical personnel would help control the use of life-sustaining medical technology.

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227 *In re* Beth Israel Medical Center, 136 Misc. 2d 931, 937, 519 N.Y.S.2d 511, 515 (1987).

228 *Id.*

229 *Id.* (quoting *Superintendent of Belchertown*, 373 Mass. at 759, 370 N.E.2d at 435); *see also* Rasmussen v. Fleming, 154 Ariz. 207, 225, 741 P.2d 674, 692 (1987) (en banc) (Feldman, J., concurring) (urging that a judicial hearing should be required before termination of an incompetent patient's life support); *In re* Colyer, 99 Wash. 2d 114, 136, 660 P.2d 738, 750 (1983) (en banc) ("detached opinion of the judiciary" will be necessary before withdrawal of life-prolonging treatment when there is disagreement among family members or physicians, when the patient has always been incompetent, when there is evidence of wrongful motives or malpractice, or when there is no family member to serve as guardian), *modified on other grounds*, *In re* Hamlin, 102 Wash. 2d 810, 689 P.2d 1372 (1984) (en banc).

230 *Quinlan*, 70 N.J. at 50, 355 A.2d at 669.

231 *Id.* at 49, 355 A.2d at 668 (quoting Teel, *The Physician's Dilemma: A Doctor's View: What the Law Should Be*, 27 BAYLOR L. REV. 6, 8 (1975)). For an overview of ethics committees and their roles, see Merritt, *The Tort Liability of Hospital Ethics Committees*, 60 S. CAL. L. REV. 1239 (1987).

232 *Quinlan*, 70 N.J. at 54, 355 A.2d at 671. The court's decision to entrust nonmedical committee members with the review of medical prognoses has proven extremely controversial. *See In re* Colyer, 99 Wash. 2d 114, 134, 660 P.2d 738, 749 (1983) (en banc) (citing authorities), *modified on other grounds*, *In re* Hamlin, 102 Wash. 2d 810, 689 P.2d 1372 (1984) (en banc). This delegation of medical decisionmaking to nonmedical personnel, however, underscores the court's determination to place control of medical technology in lay hands. Almost one-third of all ethics committees continue to review medical prognoses. *See* Merritt, *supra* note 231, at 1244 n.26.

Finally, courts adjudicating right-to-die cases have viewed those cases as unique opportunities to welcome experts from other disciplines into the courtroom. As a result, the courts have fostered their role as fora where representatives of medicine, ethics, sociology, and other disciplines can meet to resolve the intractable problems of modern technology. The Massachusetts Supreme Court observed: " 'The law always lags behind the most advanced thinking in every area. It must wait until the theologians and the moral leaders and events have created some common ground, some consensus.' "[233] Legal decisionmaking, therefore, "is furthered by seeking the collective guidance of those in health care, moral ethics, philosophy, and other disciplines."[234] Another court agreed that the withdrawal of life-prolonging medical treatment "raises moral, social, technological, philosophical, and legal questions involving the interplay of many disciplines. No one person or profession has all the answers."[235]

As a result of these wide-ranging inquiries, lawsuits involving life-sustaining medical technologies sometimes serve as a focal point of public debate. During 1975 and 1976, the *New York Times* published more than one hundred articles about Karen Quinlan as her case wound its way through the New Jersey courts.[236] The *Quinlan* suit prompted individuals around the country to formulate their own views on the use of life-prolonging medical technologies. In *Gray v. Romeo*,[237] for example, a family member reported that the incompetent patient had discussed the plight of Karen Quinlan and concluded that "she would not want a respirator or a feeding tube if she were in the same circumstances."[238]

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[233] *Superintendent of Belchertown*, 373 Mass. at 737, 370 N.E.2d at 423 (quoting Burger, *The Law and Medical Advances*, 67 ANNALS INTERNAL MED. SUPP. 7, 15, 17 (1967)).

[234] *Id.* at 736, 370 N.E.2d at 422.

[235] *In re* Conroy, 98 N.J. 321, 344, 486 A.2d 1209, 1220 (1985); *see also* Rasmussen v. Fleming, 154 Ariz. 207, 211, 741 P.2d 674, 678 (1987) ("As more individuals assert their right to refuse medical treatment, more frequently do the disciplines of medicine, law, philosophy, technology, and religion collide. This interdisciplinary interplay raises many questions to which no single person or profession has all the answers."); *In re* Jobes, 108 N.J. 394, 418 n.11, 529 A.2d 434, 446 n.11 (1987) ("Public opinion is relevant in the withdrawal-of-treatment cases that we decide today because they present society with moral, social, technological, and philosophical problems that transcend legal issues.").

[236] *See* The New York Times Index 1976, at 1406; 2 The New York Times Index 1975, at 2041.

[237] 697 F. Supp. 580 (D.R.I. 1988), *attorney's fees awarded*, 709 F. Supp. 325 (D.R.I. 1989).

[238] *Id.* at 583.

Courts have recognized this potential for lawsuits to stimulate public debate over life-sustaining medical technologies. Justice O'Hern, of the New Jersey Supreme Court, reminded his colleagues that "as painful as the publicity [surrounding right-to-die cases] is, the cases provoke 'continuing and widespread public dialogue. Gradually, such dialogue may develop lines of consensus regarding societal values upon which the courts can draw.' "[239] The courts, therefore, have welcomed their new role as instigators and moderators of public debate.

In sum, cases challenging modern technology have prompted courts to cultivate a multi-faceted judicial role. Judges have moved beyond the confines of particular controversies to consider the broader social implications of technological innovation and recommend appropriate responses to that change. In reaching those decisions, courts have invited representatives of science, medicine, ethics, and philosophy to test their competing perspectives in the courtroom. By creating these fora for the interplay of many disciplines, judges have used courtroom controversies to focus public debate on the social implications of modern technology. Through this innovation, courts have assured their place as mediators of the ongoing conflict between technological change and social mores.

CONCLUSION

In 1789, shortly after ratification of the Constitution, Thomas Jefferson looked ahead to the benefits a constitutional government would bring. "We have spent the prime of our lives," Jefferson wrote, "in procurring [for the young] the precious blessing of liberty. Let them spend theirs in showing that it is the great parent of *science* and of virtue; and that a nation will be great in both, always in proportion as it is free."[240] Jefferson grasped the fundamental connection between constitutional liberty and technology, but he underestimated the complexity of their relationship.

As Jefferson expected, the Constitution has fostered technological

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[239] *In re* Peter, 108 N.J. 365, 393, 529 A.2d 419, 433-34 (1987) (O'Hern, J., dissenting) (quoting Baron, *Medicine and Human Rights: Emerging Substantive Standards and Procedural Protections for Medical Decision Making Within the American Family*, 17 FAM. L.Q. 1, 22 (1983)); *see also In re* Farrell, 108 N.J. 335, 362, 529 A.2d 404, 417 (1987) (O'Hern, J., concurring) (Case-by-case adjudication may "[g]radually . . . develop lines of consensus regarding the moral and social values upon which future courts can draw.").

[240] Letter from Thomas Jefferson to Joseph Willard (Mar. 24, 1789), *quoted in* D. MALONE, JEFFERSON AND THE RIGHTS OF MAN 84-85 (1951).

growth. During the last hundred years, the courts have upheld the constitutionality of technologies as diverse as universal vaccination and computerized recordkeeping. At the same time, however, judges have restrained the use of technological improvements when those changes threatened to overwhelm individual liberties. Today, courts approach technological change with caution, approving innovations that promise social benefits while restricting inventions that compromise individual rights.

Jefferson, moreover, overlooked the role that technology would play in altering the course of constitutional law. The potential abuses of eugenic sterilization, computerized data banks, and life-prolonging medical treatments led courts to embrace a constitutional philosophy centered on individual rights rather than one premised on social duties. These controversies prompted judges to expand constitutional principles by recognizing important new constitutional interests. Technology, therefore, has enriched constitutional law just as the Constitution has encouraged technology.

Finally, technological change has cultivated new judicial roles. Unwilling to countenance every technological advance, courts have attempted to probe the social repercussions of new technologies. In order to fulfill this function, judges have invited scientists, philosophers, ethicists, and other social thinkers into the courtroom. These wide-ranging judicial inquiries, in turn, have stimulated public debate over the uses of technology and helped forge new social attitudes.

Technology has spawned a new world of computers, mechanical respirators, and genetic manipulation. Constitutional adjudication has insured that society maintained individual rights while still benefiting from these advances. As Thomas Jefferson hoped, the magnitude of our science has remained *proportionate* to the greatness of our freedom.