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Articles

Trimesters and Technology: Revamping *Roe v. Wade*

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In her dissent in *Akron v. Akron Center for Reproductive Health*,¹ Justice O'Connor issued a dire warning. The trimester framework established by the Supreme Court in *Roe v. Wade*² to govern abortion regulation is, she said, no longer workable. Indeed, because the trimester framework was intimately linked to medical technology, recent medical advances have set it "on a collision course with itself."³ In *Roe*, the Court held that the Constitution protects a woman's right to choose to have an abortion. The Court found that during the first trimester, states lack a compelling interest that would justify regulation of abortion. In so finding, the Court relied heavily on the fact that up until the twelfth week of pregnancy, abortion had a lower mortality rate than childbirth.⁴ After the

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1. 462 U.S. 416 (1983) (striking down second trimester hospitalization requirement).

2. 410 U.S. 113 (1973).

3. *Akron*, 462 U.S. at 458 (O'Connor, J., dissenting).

4. 410 U.S. at 163. Obstetricians usually calculate the gestational age of a fetus from the first day of the woman's last menstrual period. J. PRITCHARD, P. MACDONALD & N. GANT, *WILLIAMS OBSTETRICS* 139 (17th ed. 1985). Using this method of calculation, the average duration of pregnancy is 40 weeks. *Id.* Medical convention is to divide pregnancy into three three-month intervals, called trimesters. See J. GREENHILL & E. FRIEDMAN, *BIOLOGICAL PRINCIPLES AND MODERN PRACTICE*

time during pregnancy when abortion became more hazardous for women than childbirth, the state's interest in the woman's health became compelling, and it could regulate to protect this interest.⁵ When the fetus became viable, *i.e.*, potentially able to survive outside the womb, albeit with artificial aid,⁶ the state's interest in potential life became compelling, and it could prohibit all abortions not necessary to preserve the woman's health.⁷ Thus, two medically determined times—the time when the hazards of abortion surpassed those of childbirth, and the time of fetal viability—appeared to form the structural foundation of the *Roe* trimester framework.⁸

It is this foundation that Justice O'Connor says is now crumbling. At the time of *Akron*, abortion had grown safer than childbirth through approximately week 16.⁹ Did this mean that the time when states could regulate abortion had moved from week 12 to week 16? The *Akron* majority said no,¹⁰ implying that the edifice erected on a base of medical facts could withstand this erosion of its underpinnings.¹¹ The Court in *Akron*

OF OBSTETRICS 122 (1974).

5. 410 U.S. at 163.

6. *Id.* at 160. This is simply the standard medical definition of the term. The Court relied for this definition on the then-current edition of a well-known medical text, L. HELLMAN & J. PRITCHARD, WILLIAMS OBSTETRICS 493 (14th ed. 1971).

7. 410 U.S. at 163-64.

8. Although I will speak here of the trimester framework, it is important to recognize that the Court in *Roe* never spoke of a second or third trimester. It spoke of a first trimester and then of stages demarcated by the time of viability. Although viability occurred in 1973 at approximately the end of the second trimester (in medical terminology), the Court never stated that the stage after viability would necessarily continue to correspond with the last third of pregnancy for legal purposes. For a useful discussion of this point, see *Special Project: Survey of Abortion Law*, 1980 ARIZ. ST. L.J. 67, 139-42 (emphasizing difference between medical trimesters, which are three equal divisions of pregnancy, and the three legal stages delineated in *Roe*, which were then, but would not necessarily continue to be, of roughly equal length) [hereinafter cited as *Survey of Abortion Law*]. The Court, however, has subsequently used the term "second trimester." *Akron*, 462 U.S. at 434-37.

9. 462 U.S. at 429 n.11. Abortion was actually safer than childbirth even beyond week 16 by 1983, but the data showing this were not yet available when the Court decided *Akron*. During the period of 1972-80, the reported maternal mortality rate was just under 10 per 100,000 live births, and the estimated maternal mortality rate (based on the widely recognized under-reporting of deaths associated with childbirth) was about 14 per 100,000. Only at 21 weeks or later did abortion mortality reach 14 per 100,000 procedures. During the 16 to 20 week interval, abortion mortality was about 12 per 100,000 procedures, higher than the reported maternal mortality rate but lower than the estimated rate. C. TIETZE, INDUCED ABORTION: A WORLD REVIEW 1983 92 figure 14 (5th ed. 1983). See also Smith, Hughes, Pekow & Rochat, *An Assessment of the Incidence of Maternal Mortality in the United States*, 74 AM. J. PUB. HEALTH 780 (1984) (actual maternal mortality rate for 1974-78 was 20-30 percent higher than reported rate). Between 1977 and 1981, the mortality rate for abortions performed between weeks 16 and 20 was 7.8 per 100,000 and was 3.6 per 100,000 for abortions performed at or beyond week 21. Center for Disease Control, *Abortion Surveillance 1981*, 40 table 19A. Both figures are lower than the reported maternal mortality rate for 1981, which was 8.5 deaths per 100,000. National Center for Health Statistics, U.S. Dep't of Health & Human Services, *Advance Report of Final Mortality Statistics*, 1982, 33 MONTHLY VITAL STATISTICS REP. No. 9, supplement at 6 (Dec. 20, 1984).

10. 462 U.S. at 429 n.11.

11. The Court gave as a revised justification for retaining the division at approximately week 12 the fact that second trimester abortions remain more dangerous than first. *Id.*

confronted a municipal requirement that *all* second trimester abortions be performed in a hospital—a requirement that was not considered medically necessary by professional medical standards until after week 16.¹² Given that the Court had retained the week 12 dividing line, could it then bifurcate the second trimester for purposes of analyzing this regulation? It could indeed, according to the majority, which invalidated the regulation.¹³ But this left a nagging and unanswered question: What is the purpose of differentiating between the first and second trimesters if regulations will be scrutinized for conformity with “accepted medical practice” on a month-to-month or even week-to-week basis?¹⁴

The second pillar of the trimester framework was the time of viability. In *Roe*, the Court noted that week 28 was the usual time of viability, although a fetus could be viable as early as week 24.¹⁵ It was not clear in *Roe* whether the crucial dividing line was the time period mentioned—week 28, or maybe 24—or fetal viability, whenever that occurred.¹⁶ Later cases clarified this. The Court identified viability as the important time, with the explicit recognition that viability could shift over the years.¹⁷ Thus medical advancement could relocate the second pillar but could not deprive it of significance. In predicting a trimester collision, Justice O’Connor implied that the time of viability was changing dramatically—that fetuses might even become viable in the first trimester in the not-too-distant future.¹⁸ This interpretation of medical advancement is exaggerated: The actual changes have been, and are likely to continue to be, small ones. Doctors are now likely to view the threshold of viability as 25 or 24 weeks,¹⁹ with a very few survivors a bit earlier.²⁰ But the threshold has nonetheless changed. In one sense, this poses no problem for the *Roe* framework; after all, the Court never said that the period after viability need be of any particular duration.²¹ But in a larger sense, these changes

12. *Id.* at 436–37.

13. *Id.* at 436–39.

14. Justice O’Connor charged that the majority has “blurred” the “bright line” that formerly divided the trimesters and was not in fact adhering to the trimester framework. *Id.* at 455 (O’Connor, J., dissenting).

15. 410 U.S. at 160. The Court relied on *L. HELLMAN & J. PRITCHARD*, *supra* note 6, at 493.

16. The plaintiffs in *Planned Parenthood v. Danforth* had objected to the challenged statute’s failure to refer to a gestational time period in defining viability. 428 U.S. 52, 63 (1976). This objection was emphatically rejected by the Court. *Id.* A district court decision, however, had previously interpreted *Roe* to mean that a state could not consider a fetus to be viable before week 24. *Planned Parenthood Ass’n v. Fitzpatrick*, 401 F. Supp. 554, 572 (E.D. Pa. 1975), *vacated and remanded sub nom.* *Beal v. Franklin*, 428 U.S. 701 (1976).

17. *Danforth*, 428 U.S. at 64 (viability is crucial time and is medical, not legislative, determination); *Colautti v. Franklin*, 439 U.S. 379, 387 (1979) (time of viability left flexible “for anticipated advancements in medical skill”).

18. 462 U.S. at 457 (O’Connor, J., dissenting).

19. See *infra* text accompanying notes 112–17.

20. See *infra* text accompanying notes 118–23.

21. See *supra* note 8; *Wolfe v. Schorering*, 388 F. Supp. 631, 635 (W.D. Ky. 1974), *aff’d* 541

are eroding the *Roe* foundation, warning us that more dramatic changes have the potential to erode the abortion right itself.

One question these medical advances raise concerns the remaining relevance, if any, of the respective mortality rates of abortion and childbirth. In *Akron*, the Court retained the first trimester/second trimester division at approximately week 12, thereby dismissing these mortality rates for purposes of distinguishing the first trimester from the second. The Court further stated, however, that, if a state tried to *prohibit* abortion based on maternal health concerns, the respective mortality rates of abortion and childbirth would still be relevant.²² The question this raises is whether states could still prohibit abortion to protect potential life if abortion becomes safer than childbirth past the point of fetal viability.²³ In other words, if the trimesters truly collide, such that the fetus is viable but abortion at that time is safer for the woman than childbirth, could states subordinate their compelling interest in maternal health to their likewise compelling interest in potential life, thus forcing women to run the increased risk of childbirth for the sake of the fetus? This collision might give the Court the new task of establishing a lexical ordering of compelling interests for this "impossible" time period.

Another problem (or advantage, depending upon one's perspective) presented by the effects of medical advances on the trimester system is that as viability moves earlier in gestation, the time during which women can choose to abort may become substantially shorter than it was in 1973. Because abortions following the detection of fetal defects through amniocentesis often cannot be performed until week 20 or 21,²⁴ the freedom to have these abortions could be threatened,²⁵ as could abortions for those young teenagers most likely to delay seeking medical care.²⁶ Even the fundamental principle for which *Roe* stands—that women have a constitutional right to choose to abort for a significant portion of preg-

F.2d 523 (6th Cir. 1976) (rejecting contention that *Roe* Court divided pregnancy into three equal, three-month segments and stating: "A close inspection of the language in the *Roe* decision reveals that the Court spoke only of a single trimester, the first. The Court used no language to indicate that the stages of pregnancy, divided by points of compelling state interests, were evenly divided.").

22. 462 U.S. at 429 n.11.

23. Given the increasing safety of abortion, this could quite soon become the case. As noted previously, the mortality rate for abortions performed at or beyond week 21 was 3.6 per 100,000 from 1977-81. *See supra* note 9. Although under *Roe*, elective abortions can be prohibited at any given time after viability (though the state can choose to permit them), if abortion at week 23 is or becomes less hazardous than childbirth, and the threshold of viability reaches week 23 or 22, then some post-viability abortions will be safer than childbirth.

24. *See infra* text accompanying notes 196-202 for a discussion of the time constraints involved in performing amniocentesis and obtaining the results.

25. A new technique of prenatal diagnosis, chorionic villi biopsy, may soon allow for abortions for genetic defects much earlier than amniocentesis. *See infra* text accompanying notes 203-06.

26. *See infra* text accompanying notes 209-12.

nancy—ultimately could be undermined if the time of viability someday does dramatically change.²⁷

This Article will first analyze the justification for, and utility of, the first trimester/second trimester division. It will then consider the thornier problem of the expanding “third trimester” and ask whether we should allow fetal viability, as commonly understood, to dictate the dimensions of the abortion right. I will argue that although medical technology is important, such technology (upon which viability depends) should not be allowed unilaterally to rule abortion law. The abortion framework in *Roe* had, I will suggest, important underpinnings that were not articulated explicitly—mainly, the assumption that a viable fetus was one that was substantially developed and had reached “late” gestation, and the ethical precept that late in gestation a fetus is so like a baby that elective abortion can be forbidden. If technology enables fetuses to survive *ex utero* so early in pregnancy that survivability and “late gestation” diverge, allowing technological viability to determine abortion law will therefore conflict with the spirit of the *Roe* decision. I will argue that if this occurs, the Court can retain the spirit of *Roe* by recognizing that: (1) viability as a normative dividing line in pregnancy represents not merely technological survivability, but also late gestation; and (2) there is a time in pregnancy that is simply “too early to be late,” such that, despite technological changes, abortions should not be restricted before this time. Although no dividing line drawn in the continuum of pregnancy will have the “logical and biological justification” originally claimed by the Court for its increasingly troubled trimesters, this does not render the task of drawing lines an arbitrary one. Consideration of medical factors, social realities, and the need for all women to have sufficient time to exercise their constitutional right will suggest a time range beyond which technology should not control.

I. THE FIRST TRIMESTER/SECOND TRIMESTER DIVISION

The Court in *Roe* held that the woman’s privacy right²⁸ was not absolute, but was to be balanced against state interests that became compelling at certain points in pregnancy.²⁹ The state interest in maternal health was

27. For a discussion of the potential impact of artificial gestation technology on the abortion right, see Note, *Choice Rights and Abortion: The Begetting Choice Right and State Obstacles to Choice in Light of Artificial Womb Technology*, 51 S. CAL. L. REV. 877 (1978).

28. This right was initially found to be of constitutional origin in *Griswold v. Connecticut*, 381 U.S. 479 (1965).

29. *Roe v. Wade*, 410 U.S. at 163–64. Laws infringing upon fundamental rights are presumptively unconstitutional. *Harris v. McRae*, 448 U.S. 297, 312 (1980). Once a plaintiff has shown the requisite degree of interference with a fundamental right, the defendant bears the burden of proving that the challenged law is narrowly tailored to further a compelling state interest. *Planned Parenthood*

held to become compelling at the end of the first trimester, at which point abortion became more hazardous than childbirth. First trimester abortion is performed by the relatively safe and simple procedure of dilatation and curettage, in which the cervix is dilated and the embryo or fetus removed, most commonly by vacuum aspiration (suction curettage).³⁰ In 1973, the only second trimester abortion technique available involved infusion of saline into the amniotic sac so as to cause premature labor.³¹ Because amniocentesis cannot be performed until week 16, physicians simply did not perform abortions between weeks 12 and 16.³² This difference in abortion procedures and associated mortality rates between the first and second trimesters created a major medical distinction between the two trimesters at the time of the *Roe* decision.

A. *Was This Division Ever Justified?*

In *Roe*, the Court gave only a sketchy explanation for why a state's interest in maternal health becomes compelling at the end of the first trimester. It simply stated:

This is so because of the now-established medical fact . . . that until the end of the first trimester mortality in abortion may be less than mortality in normal childbirth. It follows that, from and after this point, a State may regulate the abortion procedure to the extent that the regulation reasonably relates to the preservation and protection of maternal health.³³

It seems that a more substantial explanation was necessary, however, because granting this sort of weight to shifts in mortality statistics was a highly unusual approach to regulating medical practice.

The federal government and states clearly do have an interest in the health of their citizens.³⁴ This interest motivates significant regulation of, for example, environmental practices,³⁵ the pharmaceutical indus-

v. Danforth, 428 U.S. at 76-79; *Doe v. Bolton*, 410 U.S. 179, 195 (1973).

30. See J. PRITCHARD, P. MACDONALD & N. GANT, *supra* note 4, at 478-80.

31. See R. BOLOGNESE & S. CORSON, INTERRUPTION OF PREGNANCY—A TOTAL PATIENT APPROACH 126-28 (1975); Kerenyi, *Intraamniotic Techniques*, in ABORTION AND STERILIZATION: MEDICAL AND SOCIAL ASPECTS 359, 360 (J. Hodgson ed. 1981).

32. *Akron*, 462 U.S. at 436. Before week 16 there is not sufficient amniotic fluid to perform amniocentesis. R. BOLOGNESE & S. CORSON, *supra* note 31, at 126.

33. 410 U.S. at 163.

34. See, e.g., *Barsky v. Board of Regents*, 347 U.S. 442, 449 (1954) (states have broad powers to establish standards for purpose of protecting citizens' health); *People ex rel. Barmore v. Robertson*, 302 Ill. 422, 427 (1922) (no governmental objective more important than preservation of public health). See generally T. CHRISTOFFEL, HEALTH AND THE LAW: A HANDBOOK FOR HEALTH PROFESSIONALS 61-72 (1982) (discussing state's broad powers to protect public health).

35. See, e.g., National Environmental Policy Act of 1969, 42 U.S.C. §§ 4321-4370 (1982); Clean Air Act of 1969, 42 U.S.C. §§ 7403-7642 (1982). See generally T. CHRISTOFFEL, *supra* note 34, at

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try,³⁶ and medical research.³⁷ The medical profession is also subject to regulation. States license physicians and hospitals,³⁸ establish requirements for hospital construction and funding,³⁹ and so on. However, states rely on the medical profession to establish and monitor medical practices and procedures and to ensure their safety.⁴⁰ One does not find, for example, state regulations prescribing the number of doctors and nurses who must be present at a tonsillectomy.⁴¹ Even when hospital requirements are challenged by physicians or staff, courts generally will not second-guess hospital boards, preferring to leave questions of staff qualifications and safety practices to these representatives of the medical profession itself.⁴²

224-36 (discussing environmental regulation as means of protecting public health).

36. See, e.g., Federal Food, Drug, and Cosmetic Act, 21 U.S.C. §§ 301-392 (1982). See generally G. ANNAS, L. GLANTZ & B. KATZ, *THE RIGHTS OF DOCTORS, NURSES, AND ALLIED HEALTH PROFESSIONALS* 111-28 (1981) (describing complex set of state and federal regulations governing use and distribution of drugs).

37. For example, every federally funded research project involving human subjects must have a written protocol approved by an institutional review board (IRB). 45 C.F.R. § 46.101-409 (1984).

38. See G. ANNAS, L. GLANTZ & B. KATZ, *supra* note 36, at 3 (physicians, nurses and many allied health professionals must be licensed to practice their professions); R. MILLER, *PROBLEMS IN HOSPITAL LAW* 46 (4th ed. 1983) (hospital as institution is subject to regulation by state through licensure).

39. See R. MILLER, *supra* note 38, at 48 (approval of integrity of hospital buildings is major part of hospital licensure).

40. Governing boards of hospitals play a large role in ensuring safety. See, e.g., *Khan v. Suburban Community Hosp.*, 45 Ohio St. 2d 39, 43-45, 340 N.E.2d 398, 402-03 (1976). This practice has been described by one commentator as follows:

By tacit agreement, the U.S. approach to guaranteeing quality and competence in the provision of health services has been a two-level approach—very minimal reliance on licensing and very considerable reliance on the standards set by voluntary and professional organizations and institutions.

Ball, *Background of Regulation in Health Care*, in *INSTITUTE OF MEDICINE, CONTROL ON HEALTH CARE: PAPERS OF THE CONFERENCE ON REGULATION IN THE HEALTH INDUSTRY, JANUARY 7-9, 1974*, at 17 (1975). In another context, the Supreme Court has emphasized the importance of reliance on physicians: "The mode and procedure of medical diagnostic procedures is not the business of judges." *Parham v. J.R.*, 442 U.S. 584, 607-08 (1979) (holding that physician and hospital determination sufficient for commitment of mentally ill child; formal due process hearing not necessary).

41. The court in *Friendship Medical Center v. Chicago Bd. of Health*, 505 F.2d 1141, 1152-53 (7th Cir. 1974), *cert. denied*, 421 U.S. 997 (1975), contrasted Chicago's treatment of dispensaries, which are subjected to very minimal regulation, with Chicago's attempt to regulate comprehensively even first trimester abortions, and relied on this disparity in striking down Chicago's regulations. The Seventh Circuit was influenced by the fact that the details of medical safety are ordinarily left to physician discretion. *Id.*

42. See, e.g., *Khan v. Suburban Community Hosp.*, 45 Ohio St. 2d 39, 43-45, 340 N.E.2d 398, 402-03 (1976) (hospital boards are responsible for hospital's health care standards; court's responsibility is narrow one of assuring that qualifications imposed by Board on staff members are reasonably related to hospital's operation and fairly administered); *Sosa v. Board of Managers of Val Verde Memorial Hosp.*, 437 F.2d 173, 177 (5th Cir. 1971) (court should not substitute its evaluation regarding staff members for that of Board). According to one authority:

Challenges to hospital rules are almost universally unsuccessful in the courts. This is because the courts have found that hospitals have a duty to provide high quality patient care and will uphold almost any hospital rule that arguably has as its purpose the protection of the health and safety of patients, or the improvement of patient care.

G. ANNAS, L. GLANTZ & B. KATZ, *supra* note 36, at 16.

In *Doe v. Bolton*, the Court noted that no medical procedure other than abortion was made subject to committee approval or two doctor concurrence as a matter of state law,⁴³ and held the restrictions to be unconstitutional, reaffirming the traditional reliance upon the medical profession to assure patient safety.⁴⁴ Hence, the imposition of significant state regulation to protect maternal health was itself somewhat unusual.

More importantly, medical mortality rates ordinarily do not determine the degree of a state's interest in a patient's health.⁴⁵ This interest is always present and legitimate. But in no other context has the Court asserted that a shift in mortality rates, without more, transforms the state's interest in an individual's health from un compelling to compelling, thereby justifying greater than usual regulation of the medical profession. To see how inappropriate according such import to mortality rates would be in the context of other medical procedures, let us suppose that the mortality rate for radical mastectomies is lower than that for simple mastectomies or "lumpectomies." This fact alone would not be likely to alter patients' rights to choose among types of breast cancer treatment. Nor would it give states a justification for imposing additional safety regulations that would make procedures other than radical mastectomy more difficult to obtain. As long as the alternatives being offered are accepted medical practices, it is the function of the medical profession to ascertain their safety, efficacy, etc. and to convey this risk/benefit information to the patient.⁴⁶ It is the patient, in consultation with her physician, who chooses among accepted forms of treatment. If abortion, prior to the time that the state's interest in potential life becomes compelling, is to be treated at least substantially like other medical procedures,⁴⁷ then the greater risk in-

43. 410 U.S. 179, 197, 199 (1973).

44. *Id.* at 200.

45. See Tribe, *The Supreme Court, 1972 Term—Foreword: Toward a Model of Roles in the Due Process of Life and Law*, 87 HARV. L. REV. 1, 30 (1973) (throughout pregnancy, state interest in maternal health justifies some regulation; fact that childbirth is more dangerous than first trimester abortion "obviously does not warrant the Court's conclusion that state controls over first trimester abortion procedures must be [particularly] limited . . ."); see also Note, *Technological Advances and Roe v. Wade: The Need to Rethink Abortion Law*, 29 UCLA L. REV. 1194, 1199 n.41 (1982) (Court gave no reason why mortality rates of abortion versus childbirth should matter; noted that analogously, although open heart surgery may be safer for particular patient than foregoing surgery, state has interest in ensuring that operation is performed as safely as possible).

46. Governmental treatment of medical practices is in stark contrast to the much greater degree of regulation of new drugs. See G. ANNAS, L. GLANTZ & B. KATZ, *INFORMED CONSENT TO HUMAN EXPERIMENTATION: THE SUBJECT'S DILEMMA* 222 (1977) ("Before a new drug is put on the market, the manufacturer is required to demonstrate to the satisfaction of the Food and Drug Administration that it is both safe and effective. If one wishes to experiment with a new surgical technique, however, no prior approval of any governmental or professional agency is generally needed before its use is promoted.")

47. Abortion need not be treated exactly the same as other medical procedures. See *Planned Parenthood v. Danforth*, 428 U.S. 52 (1976) (prior written consent requirement for abortion constitutional even though similar requirement not imposed upon any other medical procedures). For further

volved in second trimester terminations should not be viewed as transforming the state's interest in the woman's health from unconvincing to compelling.

The holding in *Akron* that the shift in mortality rates was sufficient to alter the state's degree of interest in the woman's health reflected, I believe, a conceptual confusion between a change in the state's interest itself and a change in the sorts of safety practices that are warranted to protect its interest. States do have an interest in women's health throughout pregnancy.⁴⁸ The increasing danger of later abortions clearly warrants physicians' taking greater medical precautions. But just as we would not think that doctors have a greater interest in the health of a patient undergoing a more dangerous operation, such as open heart surgery, than in one having a hysterectomy, the fact that late abortions are more hazardous than earlier ones or than childbirth is inadequate to alter a state's quantum of interest in the health of a patient undergoing a late abortion. More hazardous procedures warrant more stringent safeguards, but it would take much more argument to show that the state's interest itself, and not merely the appropriate level of precautions, had been transformed.⁴⁹

Perhaps the Court believed that its holding in *Roe* would appear more legitimate if abortion, even when permitted, was distinguished from other medical procedures. Or perhaps it believed that a heavy emphasis on the medical components of the abortion issue would increase public acceptance of its decisions.⁵⁰ It is understandable that the Court held that the interest in maternal health became compelling at a particular time in pregnancy, inasmuch as this rationale (1) reflected the increasing dangers of later abortions; (2) resulted in a satisfying symmetry with the holding that the interest in potential life becomes compelling at viability; and (3) coincided with the widely held belief that very early abortions are the

discussion of this point, see *infra* text accompanying notes 175-76.

48. See 462 U.S. at 459-61 (1983) (O'Connor, J., dissenting).

49. This general type of confusion is illustrated in cases involving termination of treatment. Courts often imply that a patient's right to privacy (so as to avoid treatment) increases as his or her prognosis dims. See *Superintendent of Belchertown State School v. Saikewicz*, 373 Mass. 728, 742, 370 N.E.2d 417, 426 (1977); *In re Quinlan*, 70 N.J. 10, 41, 355 A.2d 647, 664, *cert. denied*, 429 U.S. 922 (1976). But as has been pointed out by many of the Commissioners and staff of the former President's Commission for the Study of Ethical Problems in Medicine, the privacy right does not fluctuate. Rather, medical prognosis simply influences the sorts of actions that are medically and ethically justifiable. Brief and Appendix for Amicus Curiae, Commissioners and Professional Staff of the Recent President's Commission for the Study of Ethical Problems in Medicine and Biomedical and Behavioral Research at 12, *In re Conroy*, 98 N.J. 321, 486 A.2d 1209 (1985).

50. As Laurence Tribe suggests:

Perhaps the Court simply believed that the public acceptability of its result would be enhanced if it couched the abortion holding in medical rather than ethical terms. Or perhaps the language chosen reflects little beyond the medical interests and associations of particular Justices.

In no event does the medical terminology alter the substantive result.

Tribe, *supra* note 45, at 38 n.168.

most justifiable, very late ones the least, and mid-pregnancy ones somewhere in between.⁵¹ But the continuum of pregnancy contains no magic moment at which the maternal health interest becomes compelling, and the Court's implying that it does created unnecessary problems. The knowledge that after week 12 a compelling state interest will be presumed may have tempted anti-abortion legislatures to impose unnecessarily strict second trimester regulations in the name of health.⁵² This presumption has also obscured the fact that what the state should be required to prove is simply that it has a compelling interest (the only available candidate being maternal health) in the particular regulation. In other words, all presumptions aside, before the time that states can protect fetal life, a state should have to prove that a challenged abortion regulation is necessary to promote women's health. If abortion before this time is to be treated essentially like any other medical procedure, a presumption that increases or decreases this burden at a particular date seems both unnecessary and unjustified.

B. *Technology and the Erosion of the Division's Function*

Even though the Court in *Roe* failed to provide an adequate justification for the line it drew at approximately week 12, it appeared nonetheless to have set up a workable system for judicial scrutiny of abortion regulation. By the early 1980's, however, both technological advances and other Supreme Court decisions were raising additional questions about the meaning and continued validity of the first trimester/second trimester division. These new threats to the logic of the *Roe* schema came to a head in the *Akron* case.

Among the numerous provisions of Akron's abortion law challenged by plaintiffs was one that required that all second trimester abortions be performed in a hospital. Although many provisions of Akron's ordinance were thinly disguised attempts to chill the abortion right,⁵³ this provision was of a somewhat different character. It presumably would have been constitutional in the mid-1970's, when both the American Public Health Association (APHA) and the American College of Obstetricians and Gy-

51. For surveys illustrating the strength of public belief on this issue, and for a brief description of attempts to establish its ethical foundations and justifications, see *infra* notes 160-66 and accompanying text.

52. See, e.g., the consent requirements in the *Akron* statute, which required the physician to inform the woman "[t]hat the unborn child is a human life from the moment of conception" and to describe in detail its physiological characteristics, including its "appearance, mobility, tactile sensitivity, including pain, perception or response, brain and heart function, the presence of internal organs and the presence of external members." 462 U.S. at 423 n.5 (citing Akron Codified Ordinances, ch. 1870, § 1870.06 (B)(3)).

53. See *supra* note 52.

necologists (ACOG) recommended hospitalization for all second trimester procedures. But by the time of the *Akron* case, both second trimester procedures and safety rates had changed considerably. Doctors had begun to use a new second trimester procedure, dilatation and evacuation (D & E), in which the cervix is dilated and large forceps are used to remove the fetus.⁵⁴ Second trimester abortions no longer had to be postponed until week 16, when amniocentesis could be performed, because D & E can be performed between weeks 12 and 16.⁵⁵ Thus, by the late 1970's abortion was safer than childbirth through week 16.⁵⁶ Moreover, by the early 1980's, the APHA and ACOG no longer recommended hospitalization for abortions done before 16 weeks.⁵⁷ Hence the problem with Akron's ordinance was that it was medically out of date and unnecessarily restrictive for the first four weeks of the second trimester.

The Supreme Court invalidated Akron's in-hospital requirement, holding that by imposing stricter safety requirements upon early second trimester abortions than were medically necessary, Akron impermissibly infringed upon the abortion right.⁵⁸ In the course of analyzing this regulation, however, the Court had to face several troubling questions about the trimester schema. The first was the impact of the change in mortality rates, i.e., that abortion was now safer than childbirth through approximately week 16. In recognition of this, several lower courts had held that the state's interest in maternal health no longer became compelling at week 12, but instead at a later time,⁵⁹ while other courts had adhered to the original dividing line.⁶⁰ The Court forthrightly faced the

54. See Grimes & Cates, *Dilatation and Evacuation*, in SECOND TRIMESTER ABORTION 119, 128-31 (G. Berger ed. 1981) (discussing safety of D & E procedure).

55. *Akron*, 462 U.S. at 436.

56. *Id.* at 429 n.11, relying on LeBolt, Grimes & Cates, *Mortality from Abortion and Childbirth: Are the Populations Comparable?*, 248 J. A.M.A. 188, 191 (1982) (abortion safer than childbirth up to gestational age of 16 weeks). In fact, prior to 16 weeks abortions are seven times safer than continuing the pregnancy to term. Cates & Grimes, *Morbidity and Mortality of Abortion in the United States*, in ABORTION AND STERILIZATION: MEDICAL AND SOCIAL ASPECTS 155, 170-71 (J. Hodgson ed. 1981). Statistics now show that D & E is the safest and most common method of abortion even during the 16-20 week interval. See Center for Disease Control, *Abortion Surveillance: Preliminary Analysis, 1979-1980—United States*, 32 MORBIDITY AND MORTALITY WEEKLY REP. 63, 64 (1983); Cates, Schulz, Grimes, Horowitz, Lyon, Kravitz & Frisch, *Dilatation and Evacuation Procedures and Second-Trimester Abortions*, 248 J. A.M.A. 559, 560 (1982). As noted previously, today abortions are safer than childbirth even past week 16. See *supra* note 9.

57. See *Akron*, 462 U.S. at 436-37.

58. *Id.* at 437.

59. See, e.g., *Wolfe v. Stumbo*, 519 F. Supp. 22, 26 (W.D. Ky. 1980) (as new medical techniques evolve, trimester limitations may not always be controlling); *Margaret S. v. Edwards*, 488 F. Supp. 181, 194-96 (E.D. La. 1980) (because abortion safer than childbirth through week 18, state cannot regulate until then).

60. See *Gary-Northwest Indiana Women's Servs. v. Bowen*, 496 F. Supp. 894, 899 (N.D. Ind. 1980), *aff'd sub nom. Gary-Northwest Indiana Women's Servs. v. Orr*, 451 U.S. 934 (1981) (under *Roe*, courts cannot subdivide a trimester for purposes of constitutional scrutiny).

question of whether the state's interest in maternal health should now become compelling a month later:

Roe identified the end of the first trimester as the compelling point because until that time—according to the medical literature available in 1973—'mortality in abortion may be less than mortality in normal childbirth.' There is substantial evidence that developments in the past decade, particularly the development of a much safer method for performing second-trimester abortions . . . have extended the period in which abortions are safer than childbirth.⁶¹

But the Court dismissed this problem rather peremptorily, noting that second trimester procedures will likely remain more hazardous and traumatic than earlier ones, and stated:

We think it prudent, however, to retain *Roe's* identification of the beginning of the second trimester as the approximate time at which the State's interest in maternal health becomes sufficiently compelling to justify significant regulation of abortion. We note that the medical evidence suggests that until approximately the end of the first trimester, the State's interest in maternal health would not be served by regulations that restrict the manner in which abortions are performed by a licensed physician.⁶²

With this less than compelling reasoning, the Court simply adhered to the original framework of *Roe*, concluding that it "continues to provide a reasonable legal framework for limiting a State's authority to regulate abortions."⁶³

The Court's retention of the original dividing line demonstrates that mortality rates are insufficient to transform a state's interest from un compelling to compelling. If the mortality rates were truly crucial, then the state interest would change with them. Of course, if mortality rates do not affect the state's degree of interest, then neither should the fact that late abortions remain more hazardous than earlier ones. Retention of the week 12 line in spite of the changing medical facts implies that the trimester schema is more important to the Court than are its purported justifications. This view is bolstered by the Court's current justification for the division, which is based primarily on functional grounds—the division provides a workable framework for abortion scrutiny. A closer look at

61. *Akron*, 462 U.S. at 429 n.11 (citation omitted).

62. *Id.* Respective mortality rates would, the Court stated, be relevant only if a state sought to prohibit abortion based on maternal health concerns. *Id.*

63. *Id.*

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Akron will show, however, that even this pragmatic approach has significant weaknesses.

The second trimester hospitalization requirement was unusual in that it was a reasonable safeguard for the latter two months of the second trimester. Hospitalization was medically unnecessary only from week 12 until about week 16. Thus, the Court's task was unlike the typical scrutiny of abortion regulations, which, since *Roe*, had ordinarily been written along trimester lines,⁶⁴ and had likewise been scrutinized as they applied to the trimester as a unit.⁶⁵ As Justice O'Connor put it, there had until *Akron* been a "bright line" dividing the trimesters, a line which the *Akron* mode of analysis, despite its verbal homage to the trimester system, had now blurred.⁶⁶

In one sense, Justice O'Connor's criticism is simply misplaced: *Roe v. Wade* never guaranteed that trimesters were, in every instance, indivisible, or that a regulation would be constitutional if it was valid for any portion of the trimester to which it applied. A hypothetical should help illustrate this. Suppose a state, noting that D & E has become the safest abortion method through week 20, enacted a statute requiring doctors to perform *all* second trimester abortions by D & E. But suppose also that few physicians in that particular state actually used D & E later than week 16. Such a regulation would be valid from weeks 12 through 16. However, if a court upheld it based upon the supposed unity of the trimester, it would effectively eliminate second trimester abortions after week 16. There is no doubt that, under the strict scrutiny of abortion regulations utilized in *Roe* and subsequent cases, such a hypothetical regulation would be invalid as prohibiting abortions prior to fetal viability.⁶⁷ Trimesters, therefore, need not always be treated as units.

64. See, e.g., S. C. CODE ANN. § 44-41 (Law. Co-op 1985) (using terminology of first, second, and third trimesters); IND. CODE ANN. § 35-1-58.5-1(a) (Burns 1979 & Supp. 1984) (pregnancy divided into three equal parts of three months each); 18 PA. CONS. STAT. ANN. § 3201-20 (Purdon 1983) (first trimester and subsequent stages divided by viability); N.D. CENT. CODE § 14-02.1-01-12 (1981) (same); TENN. CODE ANN. § 39-4-201-08 (1982) (same); UTAH CODE ANN. § 76-7-301-325 (1978) (same).

65. For example, in *Danforth*, the Court invalidated Missouri's prohibition of saline amniocentesis beginning after week 12. 428 U.S. at 75-79. Had the Court subdivided the second trimester for purposes of constitutional analysis here, it would still have invalidated this requirement. It should at least have noted, however, that for the first month of the second trimester this prohibition conformed with accepted medical practice, because amniocentesis cannot safely be performed prior to week 16.

66. 462 U.S. at 455 (O'Connor, J., dissenting).

67. In *Danforth*, the court invalidated a regulation prohibiting the use of saline for second trimester abortions, holding that saline was a commonly used method of abortion that was relatively safe. It also noted that the major alternative, prostaglandin, had not been widely available when the statute was enacted. 428 U.S. at 77-79. Similarly, in *Colautti v. Franklin*, the Court invalidated a regulation requiring the physician, if he or she believed a fetus may be viable, to use the technique safest for the fetus unless another method was *necessary* to the woman's health, a regulation that was likewise thought to prohibit saline amnioinfusion. 439 U.S. 379, 397-401 (1979).

In another sense, however, Justice O'Connor has a point. If the original mortality rate justification for the division is gone, and if being valid for two thirds of the trimester is not enough to legitimize a regulation, what is the continuing relevance of trimesters? Akron's hospitalization requirement was invalidated because, for one month of pregnancy, it did not conform with accepted medical practice. Verbiage aside, what does the Court's analysis have to do with trimesters? For that matter, what precisely *is* the difference in constitutional analysis between first trimester and second trimester regulations?

In *Roe v. Wade*, the Court said that states could enact *no* abortion regulation in the first trimester—that physician and patient must be free to terminate any pregnancy during that time “without regulation by the State.”⁶⁸ But ever since *Roe*, a variety of first trimester regulations have gained judicial approval. For example, in *Planned Parenthood v. Danforth*, the Court upheld both written informed consent requirements and record-keeping requirements that were imposed in the first trimester.⁶⁹ In *Planned Parenthood v. Ashcroft*, it upheld first trimester pathology report requirements.⁷⁰ Although the Court in *Akron* invalidated the requirement that physicians themselves perform the abortion counseling, it noted that a state may require a physician to verify that counseling has been provided and may establish reasonable minimum requirements for counselors, with no stated trimester restrictions.⁷¹ Clearly, states can regulate even first trimester abortions to at least some extent.

In *Akron*, the Court sought to clarify the meaning of the 12th week dividing line by explaining that, in the first trimester, states can regulate abortion in minor respects but may not restrict it—*i.e.*, states may not interfere with the physician-patient consultation or the woman's choice between abortion and childbirth.⁷² In the second trimester, however, states can enact “significant” (*i.e.*, somewhat restrictive) abortion regulations,⁷³ as long as the restriction is legitimately related to the maternal health object the state seeks to accomplish.⁷⁴ Examples of permissible subjects for second trimester regulations include:

[R]equirements as to the qualifications of the person who is to perform the abortion; as to the licensure of that person; as to the facility in which the procedure is to be performed, that is, whether it must

68. 410 U.S. at 163.

69. 428 U.S. at 65–67.

70. 462 U.S. 476, 489–90 (1983).

71. 462 U.S. at 448–49.

72. *Id.* at 430.

73. *Id.* at 429 n.11.

74. *Id.* at 430–31.

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be a hospital or may be a clinic or some other place of less-than-hospital status; as to the licensing of the facility; and the like.⁷⁵

The Court further explained that medical evidence suggests that until the end of the first trimester, the state's interest in health would not be served by regulations that restrict the manner in which abortions are performed by a licensed physician.⁷⁶

Although this "significant/insignificant" formulation initially sounds plausible, the Court has already upheld first trimester regulations on most of the topics that it described as appropriate for second trimester regulation. States have always been allowed to require that only licensed physicians perform abortions, no matter what trimester it is. They can also specify, to some extent, where abortions can be performed: Although medically unnecessary hospitalization cannot be required, first trimester abortions in private homes can unquestionably be proscribed. In fact, a section of Akron's ordinance that was presumed constitutional required that first trimester abortions be performed in "a hospital or an abortion facility."⁷⁷ Even if a first trimester regulation dealt with abortion methods, it would probably not be found invalid if it conformed with medical practice, e.g., if it simply stated that first trimester abortions should be performed by suction curettage or another medically approved method.⁷⁸ Redundant, yes, but probably not invalid.⁷⁹ Thus, trying to distinguish "significant" regulations from "insignificant" ones by topic is wholly unworkable.

Another way of seeking to describe a difference in judicial approach to first and second trimester regulations is as follows: In the first trimester, a regulation that has any impact on the abortion right will be strictly scrutinized and upheld only if it has a minimal effect (e.g., general informed consent or record keeping requirements) and if the state proves that it furthers important health concerns.⁸⁰ In the second trimester, strict scrutiny still applies, but because the state is now presumed to have a compelling interest, a regulation that is neither vague, overly broad nor unnecessarily burdensome, and that furthers the state's health interest, will be

75. *Id.* at 431 n.14.

76. *Id.* at 429 n.11.

77. *Id.* at 432 n.17.

78. Suction curettage is a standard first trimester abortion method. See J. PRITCHARD, P. MACDONALD & N. GANT, *supra* note 4, at 478-80 (1985).

79. Justice O'Connor makes this same point in her dissent in *Akron*. She notes that standards of the American College of Obstetricians and Gynecologists provide that physicians performing first trimester abortions in their offices should have certain types of equipment available and should have provisions for emergency treatment or hospitalization in the event of complications. She states: "I have no doubt that the State has a compelling interest to ensure that these or other requirements are met, and that this legitimate concern would justify state regulation for health reasons even in the first trimester of pregnancy." *Id.* at 460 n.7 (O'Connor, J., dissenting).

80. *Akron*, 462 U.S. at 428-30.

upheld.⁸¹ This description, it might be argued, shows that there is indeed a real difference between the trimesters under *Roe*. The impact of first trimester regulations must be minimal, while the impact of second trimester ones can be greater than minimal as long as they are not unnecessarily burdensome.

Although this distinction has a ring of verbal clarity to it, close analysis reveals it to be more apparent than real, at least insofar as it is meant to suggest that there is some difference in *approach* to first and second trimester regulations and not merely to reflect the fact that the different abortion methods used in the second trimester render some precautions appropriate that would be unnecessary earlier on. The Court in *Akron* said that first trimester regulations may not interfere with the physician-patient consultation or with the woman's choice between abortion and childbirth. But surely second trimester ones cannot interfere with these important interests either. Indeed, by analyzing the medical need for hospitalization at different times throughout the second trimester, and by requiring that second trimester regulations conform to accepted medical practice, the Court in *Akron* substantially undermined its claim that the trimester division is a useful and functional one. A regulation that conforms with medical practice does not restrict, in any meaningful sense, the abortion right. Rather, such a regulation seems to have no more than a minimal impact on that right. Indeed, this "conformity with medical practice" requirement has rendered the standard for second trimester regulations virtually identical to that used for first trimester ones: Regulations that restrict abortions are permissible only if they ensure the existence of the medical standards that underlie the finding in *Roe* regarding the safety of first trimester abortions.⁸² Thus, verbal protestations to the contrary, the Court's analysis of second trimester regulations is becoming indistinguishable from its analysis of first trimester ones.

To the extent that any difference remains between the first and second trimesters under the Court's analytical schema, it is probably that the state has a greater evidentiary burden in proving medical necessity for first trimester regulations than for second. Presuming first trimester regulations invalid, but allowing greater leeway for legitimate maternal protection in the second trimester, may have seemed a reasonable way to avoid scrutinizing the legislative motive behind innumerable state statutes. But in 1973, the Court probably did not expect that abortion would remain such a passionately contested issue or that anti-abortion legislatures

81. *Id.* at 430-31.

82. *Connecticut v. Menillo*, 423 U.S. 9, 11 (1975). See Comment, *City of Akron v. Akron Center for Reproductive Health, Inc.*, 22 DUQ. L. REV. 767, 779 (1984) (noting that although purporting to retain trimester framework, *Akron* decision significantly modified it).

would show such unflagging zeal in enacting complex and restrictive abortion regulations. This legislative activity has required the Court to scrutinize all aspects, including motive and medical necessity, of even second trimester regulations. Evidentiary burdens and trimester divisions play a modest role in these examinations, with the crucial aspect being a thorough evaluation of the regulation's medical justification. Given this reality, the Court should openly discard the presumption of a compelling state interest and simply hold that before viability, states must demonstrate a compelling interest in the challenged regulation—i.e., that it is necessary to ensure the woman's safety—and that the regulation conforms with accepted medical practice.⁸³

In summary, the state's degree of interest in the health of abortion patients does not fluctuate: It is instead the level of appropriate precautions that changes. But as the analysis of Akron's hospitalization requirement shows, changes in the necessity for precautions need not correspond to the trimester division. Although adhering verbally to the first trimester/second trimester division, the Court today is very close to simply requiring that the state prove that any pre-viability regulation is necessary to preserve women's health. Many needless complexities would be eliminated if the Court would adopt this unified standard and forthrightly relinquish its verbal adherence to the unjustified and illusory trimester division.

II. THE SECOND TRIMESTER/THIRD TRIMESTER DIVISION

According to the Court in *Roe*, fetal viability marks the stage after which states can prohibit abortions (unless the woman's health is threatened).⁸⁴ Relying on medical technology in 1973, the Court noted that fetuses ordinarily became viable at around 28 weeks, but can sometimes achieve viability as early as week 24.⁸⁵ In noting these specific times, however, the Court did not intend to imply that they had significance independent of current medical knowledge and technology. Some lower courts thought that the *Roe* Court did intend to hold that, for purposes of the law, trimesters were necessarily of a fixed duration,⁸⁶ as did

83. The knowledge that second trimester regulations will be scrutinized as strictly as first trimester ones might help discourage states and municipalities from enacting excessively restrictive abortion regulations. But even if my suggestion that the first and second trimesters be scrutinized equally strictly is not accepted, the Court's emphasis on conformity with accepted medical practice should itself be useful in discouraging excessive regulation. As one *Akron* commentator notes,

In light of frequent changes in medical techniques, it may be that laws such as Nebraska's, which outlaw the performing of an abortion 'by using anything other than accepted medical procedures . . .' are the only ones which are safe from constitutional invalidation.

Comment, *supra* note 82, at 784 n.111. See NEB. REV. STAT. § 28-336 (1979).

84. 410 U.S. at 163-65.

85. *Id.* at 160.

86. See, e.g., *Doe v. Rampton*, 366 F. Supp. 189, 192 (D. Utah 1973). "[U]ntil the end of the

some state legislatures, which deemed fetuses presumptively viable after a certain number of weeks.⁸⁷ The Supreme Court made clear in *Planned Parenthood v. Danforth*, however, that viability was a medical determination and that "it is not the proper function of the legislature or the courts to place viability . . . at a specific point in the gestation period."⁸⁸ It likewise emphasized in *Colautti v. Franklin* that the point of viability must be left flexible "for anticipated advancements in medical skill."⁸⁹ Thus, in establishing fetal viability as a dividing line, the Supreme Court never promised that this division would continue to coincide with the last third of pregnancy, or that the second and third trimesters (in legal terms) would necessarily remain of roughly equal lengths.⁹⁰

The line the Court drew at viability (which for convenience will be called the second trimester/third trimester division) is legally far more significant than the first trimester/second trimester division. Prior to viability, state regulation can look only to the woman's health. If the state's true motivation is to protect her health, the regulation should seldom seriously conflict with the woman's right to choose a common and relatively safe medical procedure. But after viability, states can promote their now compelling interest in potential life.⁹¹ This interest is fundamentally at odds with the woman's right to abort, at least as long as an abortion entails both removing and destroying the fetus.⁹² To protect potential life, a

second trimester . . . the state's right to regulate the abortion decision . . . is limited to regulations reasonably related to maternal health. . . . After the second trimester . . . at the stage of viability of the fetus, the state may regulate the abortion decision for the purpose of protecting the fetus. . . ." See also *Planned Parenthood Ass'n v. Fitzpatrick*, 401 F. Supp. 554, 572 (E.D. Pa. 1975), *vacated and remanded sub nom.* *Beal v. Franklin*, 428 U.S. 901 (1976) (incorrectly interpreting *Roe* to have held that state could not consider any fetus to be viable before 24th week of pregnancy).

87. See *Hodgson v. Anderson*, 378 F. Supp. 1008, 1016 (D. Minn. 1974), *appeal dismissed for want of jurisdiction sub nom.* *Spannaus v. Hodgson*, 420 U.S. 903 (1975), *aff'd in part, rev'd in part sub nom.* *Hodgson v. Lawson*, 542 F.2d 1350 (8th Cir. 1976) (invalidating statute stating fetus shall be considered potentially viable at 20 weeks). Some such statutes remain on the books. See, e.g., CAL. HEALTH & SAFETY CODE § 25953 (West 1984) (retaining 1967 statute prohibiting abortion after week 20); S.C. CODE ANN. § 44-41-10(l) (Law. Co-op 1985) (creating legal presumption that viability occurs no earlier than 24 weeks).

88. 428 U.S. at 64.

89. 439 U.S. at 387.

90. Although it divided pregnancy into three stages, the Court spoke of only one trimester—the first. See *Survey of Abortion Law*, *supra* note 8, at 141. But because state legislatures, reasonably enough, enacted regulations that spoke in terms of trimesters, the Court, in subsequent cases such as *Akron*, has referred to the "second trimester." 462 U.S. at 434-39.

91. It is clear that regulation to protect potential life is appropriate only after viability. In *Colautti*, the Supreme Court held void for vagueness a regulation that required the physician to use the abortion technique which would provide the best opportunity for the fetus to be aborted alive so long as a different technique would not be necessary to preserve the life or health of the mother. 439 U.S. at 389. Because the statute required this when the physician either determined the fetus to be viable or when there was "sufficient reason to believe that the fetus may be viable," the Court found it unclear whether the phrase "may be viable" referred to an undefined gray area prior to viability. *Id.* at 379. If it did, the statute would impose an inappropriate requirement upon the physician.

92. The only circumstance under which protection of fetal life and the woman's right to choose would not conflict with each other is if a fetus could be removed without harming it in a manner that

state can regulate post-viability abortions up to the point of prohibiting them entirely, unless the woman's health is threatened.⁹³ Moreover, post-viability regulations need not conform with accepted medical practice, as illustrated by the Court's treatment in *Planned Parenthood Association v. Ashcroft*⁹⁴ of a requirement that a second physician be present at all post-viability abortions in order to protect any fetus unexpectedly born alive.⁹⁵ This requirement was not standard medical practice, but it was nonetheless held constitutional.⁹⁶

While clearly granted great legal significance, the line drawn at viability has certain peculiar features. It is a legal standard that is defined entirely by medical professionals and that varies with advances in medical technology. Although viability is merely a medical or technological fact (or, more accurately, a statistical prediction) the Court relies on this fact alone as the basis for the value judgment that the state's interest in the fetus is now compelling. These peculiarities render the viability standard suspicious, for they suggest that control over the dimensions of a constitutional right has been wholly delegated to medical technology and the physicians who develop, utilize and assess this technology. As one critic has put it, under the *Roe* analysis the American College of Obstetricians and Gynecologists holds a "continuing constitutional convention."⁹⁷ These un-

was safe for the woman. See, e.g., Favole, *Artificial Gestation: New Meaning for the Right to Terminate Pregnancy*, 21 ARIZ. L. REV. 755, 766-67 (1979) (suggesting that if artificial gestation were possible from week 12 on, a method of pregnancy termination after that time that did not involve feticide would protect both woman's privacy right and state's interest in potential life). Although it could be argued that the woman's privacy right entails a right to feticide, this argument would face strong opposition. See *id.* at 766; see also Bok, *Ethical Problems of Abortion*, 2 HASTINGS CENTER STUDIES 33, 35 (1974) (if non-harmful severance of fetus and mother is feasible, it would be wrong to insist on technique that kills fetus and prevents others from assuming burden of its care).

93. The Court has emphasized that doctors cannot be required to make "trade-offs" between the woman's health and the life of the fetus. See, e.g., *Colautti*, 439 U.S. at 400-01 (holding void for vagueness post-viability requirement that physician use least fetocidal technique unless alternative was necessary to preserve woman's health and noting lack of clarity as to whether such "trade-offs" were required under statute).

94. 462 U.S. 476 (1983).

95. *Id.* at 485-86. Under Missouri law, post-viability abortions were allowed only to protect the woman's life or health. The plaintiffs argued that the second-physician requirement distorted the traditional doctor-patient relationship, was impracticable and costly, and that the state did not require a second physician to be present for any other medical procedure, including childbirth and premature delivery. *Id.* at 483-85.

96. *Id.* at 485-86. According to the Court, although preserving the life of a viable fetus that is aborted may seldom be possible, "the State legitimately may choose to provide safeguards for the comparatively few instances of live birth that occur." *Id.* at 486. A strong dissent by Justices Blackmun, Brennan, Marshall and Stevens would have invalidated this requirement as well, on the grounds that it is at least possible that for some post-viability abortions, D & E, which never results in a live birth, would be the method safest for the woman. In such cases, the second physician requirement would be futile and overbroad, and consequently not tailored to the state's legitimate interests. The dissent would require post-viability regulations, like earlier ones, to have at least some reasonable medical basis. *Id.* at 499-501.

97. Wilkins, *State Legislative Authority and the Continuing Constitutional Convention of the American College of Obstetricians and Gynecologists* 1 (May 28, 1985) (unpublished paper presented

usual features of the viability standard likewise imply that although technology could conceivably develop in such a way that the abortion right would be greatly circumscribed, avoiding such an outcome is out of the Court's control. Because it is highly unusual for the law to allow another discipline such control over a legal standard,⁹⁸ or to imply that a technological fact is imbued with inherent value, close scrutiny of the meaning and relevance of the viability standard is warranted.

I will begin my scrutiny of viability by briefly describing the well-known practical difficulties with the viability standard. I will then critique the Court's suggestion, in *Roe*, that viability has "logical and biological justifications," and conclude that there is neither logical nor biological significance in the fact that a fetus could potentially survive with the aid of massive high-technology support. The critique of the viability standard is complex, however, because in 1973 it was virtually inconceivable that a viable fetus would be anything other than one that was substantially developed and had survived to the last stage of pregnancy. I will argue that the concept of late gestation, with the accompanying moral, emotional, and social implication that the fetus has become substantially similar to a baby, was a necessary, albeit unarticulated, component of the *Roe* viability standard. The legal concept of viability, in other words, has not only a technological definition but a significant symbolic meaning. Only now are we taking seriously the possibility that medical advances could someday deprive viability of this symbolic meaning, thereby undermining the very foundation of *Roe*. But this threat is easily addressed. Retaining the right recognized in *Roe* requires nothing more than making explicit the multiple meanings implicit in the viability standard.

A. *The Relevance of Viability*

1. *Practical Difficulties with the Division*

Using viability as the point after which prohibition of abortion is permissible presents well-known practical difficulties. First, viability is very hard to assess *in utero*.⁹⁹ The most important determinant of viability of a newborn is the capacity for some degree of pulmonary function.¹⁰⁰ Lung function, however, cannot be ascertained *in utero*. Analyses of survival

at the American Association for the Advancement of Sciences Annual Convention, Los Angeles, California) (on file with author).

98. For a brief discussion of the way the law ordinarily retains control and refuses to allow the determinations of other disciplines to preempt legal analysis, see *infra* Part IV.

99. Numerous commentators have remarked upon the difficulty of estimating viability *in utero*. See, e.g., King, *The Juridical Status of the Fetus: A Proposal for Legal Protection of the Unborn*, 77 MICH. L. REV. 1647, 1678 (1979); *Survey of Abortion Law*, *supra* note 8, at 130-33.

100. See *Survey of Abortion Law*, *supra* note 8, at 130-31.

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rates for premature babies, which at their lowest extreme indicate the threshold of viability, most commonly rest on birthweight,¹⁰¹ a factor that correlates highly with fetal lung development. But fetal weight likewise cannot be accurately determined *in utero*.¹⁰² Birthweight, however, also correlates with gestational age.¹⁰³ Physicians therefore use gestational age to assess viability *in utero*.¹⁰⁴

Estimates of gestational age today are far more precise than they were in the past, when doctors had to rely solely upon the woman's estimate in conjunction with a physical examination. Ultrasonography now allows physicians to measure the biparietal diameter (BPD) of the fetus' head and compare the measurement with charts that correlate BPD in normally developing fetuses with their gestational age.¹⁰⁵ This method, though quite accurate early in pregnancy,¹⁰⁶ becomes somewhat less accurate later on, so that after about 20 weeks an estimate may be inaccurate by plus or minus ten days or even two weeks.¹⁰⁷ Thus a competent physician could estimate the fetal gestational age to be 22 weeks when it was really almost 24. Moreover, estimates of gestational age can be incorrect by a much wider margin if the fetus is microcephalic (i.e., has an unusually small head) or growth-retarded.¹⁰⁸

A second difficulty arises from the fact that assessment of viability *in*

101. See Yu, Orgill, Bajuk & Astbury, *Survival and 2-Year Outcome of Extremely Preterm Infants*, 91 BRIT. J. OBSTETRICS & GYNECOLOGY 640, 640 (1984).

102. See *id.* at 640, stating that:

The use of birthweight as a framework for the presentation of survival and late morbidity data is a convenient system for the neonatologist who has an accurate measurement on which to base his analysis. However, gestation, not birthweight, is the parameter that must be used by the obstetrician to guide him in making critical decisions on the management of the mother and fetus.

103. See Lubchenco, Hansman, Dressler & Boyd, *Intrauterine Growth as Estimated from Live Born Birth-Weight Data at 24 to 42 Weeks of Gestation*, 32 PEDIATRICS 793 (1963); J. PRITCHARD, P. MACDONALD & N. GANT, *supra* note 4, at 746-47 figure 37-1.

104. Other factors, however, are relevant. In *Colautti*, the Court noted that in assessing the viability of a fetus, doctors will rely on various factors, including the woman's menstrual history, the size of the uterus, the woman's general health and nutrition, etc. 439 U.S. at 395-96. The Court noted that the imprecision of these factors made accurate prediction difficult. *Id.* at 396.

105. See G. AVERY, *NEONATOLOGY: PATHOPHYSIOLOGY AND MANAGEMENT OF THE NEWBORN* 108 (2d ed. 1981); Stubblefield, *Abortion vs. Manslaughter*, 110 ARCHIVES SURGERY 790 (1975).

106. According to one authority, up to the 20th week, this method is accurate by a factor of plus or minus three days. G. AVERY, *supra* note 105, at 108.

107. Stubblefield, *supra* note 105, at 791; Grimes, *Second-Trimester Abortions in the United States*, 16 FAMILY PLANNING PERSPS. 260, 264 (1984) (from weeks 16-26, ultrasound can determine gestation age with accuracy of plus or minus 11 days in 95% of cases).

108. Because the charts used for correlations are based on measurements of normally developing fetuses, fetuses whose development is abnormal may deviate much more from such predictions. Stubblefield, *supra* note 105; Grimes, *supra* note 107; see J. PRITCHARD, P. MACDONALD, & N. GANT, *supra* note 4, at 746 (although in normal pregnancies there is a strong correlation between fetal age and size, correlation becomes much weaker when infant is large or small (growth-retarded) for gestational age). Poor maternal nutrition plays an important causative role in abnormally slow fetal development. See *Survey of Abortion Law*, *supra* note 8, at 132.

utero is simply the prediction that a particular fetus may survive because infants of its gestational age have previously done so. But what percentage of infants of its age must have survived to make the fetus viable? Should a 5 or 10 percent chance suffice, or should 30 to 50 percent be required? Physicians' failure to agree on this issue¹⁰⁹ seriously complicates their estimates of fetal viability.

Finally, even if doctors did agree about what chance of survival makes a fetus viable, the chances inevitably vary as medical technology advances. The medical textbook the Supreme Court relied on in *Roe v. Wade* listed the general limit of viability as 28 weeks and 1000 grams.¹¹⁰ Today, however, infants weighing more than 1000 grams (the mean weight at 28 weeks), almost routinely survive,¹¹¹ and the survival rate for infants born between 750 and 1000 grams is reportedly around 50 percent.¹¹² The mean birth weight at 25 weeks is 750 grams, though birth weights of infants of similar gestational ages can vary significantly.¹¹³ Although few infants of between 500 and 750 grams in the past have lived, an increasing number of babies even this small are surviving. Some very recent studies have reported survival rates for such infants of up to 42 percent.¹¹⁴ More studies focus on weight than gestational age, making it possible that some extremely low birth weight survivors are small for gestational age (i.e., the fetuses might be more advanced in terms of weeks than their

109. One physician may consider an infant not viable unless its chances of survival are 50 percent, while another may believe that a 30, or 20, or even 10 percent chance will suffice. *But see* King, *supra* note 99, at 1679-87 (proposing moving official time of viability if one infant has survived at gestational age). *See also* Fost, Chudwin & Wikler, *The Limited Moral Significance of 'Fetal Viability'*, HASTINGS CENTER REP., Dec. 1980, at 10. (discussing various types of ambiguity in concept of viability); King, *supra* note 99, at 1678 (noting the "extraordinary complexity of determining a particular fetus' viability").

110. *See* L. HELLMAN & J. PRITCHARD, *supra* note 6, at 493. At that time, approximately 50 percent of infants of this age and weight survived. *See* Favole, *supra* note 92, at 765 n.73; King, *supra* note 99, at 1679. In *Colautti*, the Court referred to viability as the "reasonable likelihood . . . [of] survival." 439 U.S. at 388.

111. Mortality rates for infants weighing between 1001 and 1500 grams fell from greater than 50 percent in the 1960's to less than 20 percent in the 1970's. P. BUDETTI, P. MCMANUS, N. BARRAND & L. HEINEN, *THE COSTS AND EFFECTIVENESS OF NEONATAL INTENSIVE CARE 30* (U.S. Office of Technology Assessment, *The Implications of Cost-Effectiveness Analysis of Medical Technology*, Background Paper #2; Case Studies of Medical Technologies, Case Study #10, Aug. 1981).

112. *See* Ross, *Mortality and Morbidity in Very Low Birthweight Infants*, 12 PEDIATRIC ANNALS 32, 37 (1983) (listing survival statistics from various centers).

113. The 90th percentile of birth weight at 25 weeks is slightly over 1000 grams, and the 10th percentile is just below 500 grams. Goldenberg, Nelson, Hale, Wayne, Bartolucci & Koski, *Survival of Infants with Low Birth Weight and Early Gestational Age*, 149 AM. J. OBSTETRICS & GYNECOLOGY 508, 509 figure 1 (1984) [hereinafter cited as Goldenberg]. *See also* J. PRITCHARD, P. MACDONALD, & N. GANT, *supra* note 4, at 746 figure 37-1 (chart gives slightly higher weights than Goldenberg chart). Fetal weight from different charts may vary because such factors as race and socioeconomic status affect birth weight. *See id.* at 926; G. AVERY, *supra* note 105, at 206-07.

114. Hirata, Epcar, Walsh, Mednick, Harris, McGinnis, Sehring & Papedo, *Survival and Outcome of Infants 501 to 750 gm: A Six-Year Experience*, 102 J. PEDIATRICS 741 (1983) (survival rate of 36%); Orgill, Astbury, Bajuk & Yu, *Early Development of Infants 1000 g or Less at Birth*, 57 ARCHIVES DISEASE IN CHILDHOOD 823, 825 (1982) (survival rate of 42%).

weight would otherwise suggest).¹¹⁵ However, in one recent study that did focus upon age, 29 percent of infants born at 25 weeks survived.¹¹⁶

The current threshold of viability is usually estimated at about 24 weeks,¹¹⁷ with survival before this time exceedingly unlikely. However, a few infants have survived at 23 weeks,¹¹⁸ and there is the occasional report of a survival at 22 weeks.¹¹⁹ According to at least one expert, the threshold of viability is now 23 weeks.¹²⁰ Outcomes for infants weighing 500 to 750 grams are the subject of much study today. With 500 grams the mean birth weight at 22 weeks,¹²¹ this intense scrutiny suggests that physicians are attempting to push the threshold of viability back even further. In recognition of this new frontier, the World Health Organization, in its revised recommendations for the collection of perinatal data, has reduced from 28 to 22 weeks the age that marks the division between spontaneous abortion and birth.¹²² Many experts believe that because of the extreme immaturity of a fetus of less than about 23 weeks, 22 or 23 weeks represents an absolute lower limit on fetal viability absent development of an artificial placenta.¹²³ One authority, however, has questioned the meaningfulness of the notion of a "lower limit" on viability.¹²⁴

Given the practical difficulties in assessing viability *in utero*, along with

115. In the Hirata study, it is significant that the mean gestational age in weeks of survivors was 26.5 plus or minus 1.6, while the mean age of babies who died was 25.1 plus or minus 1.3. Hirata, Epcar, Walsh, Mednick, Harris, McGinnis, Sehring & Papedo, *supra* note 114, at 744 table II.

116. Goldenberg, *supra* note 113, at 510 (29% of infants born at 25 weeks survived).

117. See, e.g., J. PRITCHARD, P. MACDONALD & N. GANT, *supra* note 4, at 143 (fetuses born at 24th week almost always die shortly after birth); M. HARRISON, M. GOLBUS & R. FILLY, *THE UNBORN PATIENT: PRENATAL DIAGNOSIS AND TREATMENT* 15 (1984) (immaturity of respiratory system usually prohibits extrauterine life prior to 24 weeks); Ross, *supra* note 112, at 38 (infants less than 700 grams at birth usually not viable—this would be between 24 and 25 weeks).

118. Milligan, Shennan & Hoskins, *Perinatal Intensive Care: Where and How to Draw the Line*, 148 *AM. J. OBSTETRICS & GYNECOLOGY* 499, 500 table II (1984) (reporting survival rates of 14.3% at 23 weeks, 39.1% at 24 weeks and 63.6% at 25 weeks). Goldenberg, *supra* note 113, at 510 (10–20% survival rate for infants classified as 22–24 weeks gestational age). Of course, birth weight is a very important factor here. An infant of 24 weeks gestation but in the 90th percentile for weight would have a greater than 50 percent chance of survival, whereas one in the 10th percentile would have only an 11% chance. Goldenberg, *supra* note 113, at 511.

119. See, e.g., Dunn & Stirrat, *Capable of Being Born Alive?*, 1984 *THE LANCET* 553, 554 (22 weeks the lowest age at which survival has been recorded); Williams, Creasy, Cunningham, Hawes, Norris & Tashiro, *Fetal Growth and Perinatal Viability in California*, 59 *OBSTETRICS & GYNECOLOGY* 624 figure 1 (1982) (survival statistics showing some survivals down to 22 weeks).

120. Stubblefield, *Some Medical Considerations*, in *Symposium, Late Abortion and Technological Advances in Fetal Viability*, 17 *FAMILY PLANNING PERSPS.* 161, 162 (1985).

121. Stubblefield, *Late Abortion and Fetal Viability* 8 (unpublished paper presented at Planned Parenthood Symposium, Dec. 14 & 15, 1984) (on file with author). See also Goldenberg, *supra* note 113, at 510 Fig. 2.

122. World Health Organization, *Definitions and Recommendations: International Classification of Disease*, Vol. 1, pp. 763–68 (1979).

123. See, e.g., Dunn & Stirrat, *supra* note 119, at 554.

124. Campbell, *Which Infants Should Not Receive Intensive Care?*, 57 *ARCHIVES DISEASE IN CHILDHOOD* 569, 569 (1982) (threshold of viability has changed so strikingly that it is arguable whether any lower limit is valid concept).

the slow but seemingly continuing changes in the time of viability, it is clear that statutes regulating post-viability abortion will also affect late second trimester abortions. The Supreme Court recognized this likelihood in *Colautti*, noting that in the face of difficulties in assessing fetal age and disagreement in equating a particular chance of survival with viability, "it is not unlikely that experts will disagree over whether a particular fetus in the second trimester has advanced to the stage of viability."¹²⁵ Thus physicians could have legitimate disagreements both as to whether an abortion could be performed at 23 weeks in the absence of a threat to the woman's life or health, and whether, if an abortion is performed at twenty-three weeks, post-viability requirements concerning abortion technique, the presence of a second physician, etc., should apply.

The tendency for strict third trimester regulations to have a chilling effect on late second trimester abortions can be mitigated, to a certain extent, by making clear that a physician assessing viability cannot be penalized for being incorrect, but can only be required to act in good faith.¹²⁶ Even under a good faith medical judgment standard, however, post-viability regulations will increasingly affect the availability of second trimester abortions. Many physicians and hospitals adopt an abortion cut-off a bit earlier than viability, to avoid testing the limits of the law. Furthermore, if viability continues to inch earlier, the second trimester (in legal terms) necessarily will continue to shrink. The technological implication of the viability standard—that if viability grows earlier, the time during which women can choose to abort decreases—has long been recognized.¹²⁷ The Court, by leaving the viability standard flexible for advances in medical technology,¹²⁸ has appeared to accept this implication, at least to some extent. Indeed, the Court's view that viability as a dividing point in pregnancy has "logical and biological justifications" seems to allow technology to define the parameters of the abortion right.¹²⁹ But does viability's importance stem from logic and biology, or does its importance instead depend on social context, convention, and mores?

125. 439 U.S. at 396.

126. In *Colautti*, because the Court held the viability determination provision void on its face, it did not reach the issue of whether, under a properly drafted statute, the Constitution requires a finding of bad faith or scienter for holding a physician criminally responsible for an erroneous determination of viability. However, the Court strongly hinted that scienter would be required, stating that: "The prospect of such disagreement, in conjunction with a statute imposing strict civil and criminal liability for an erroneous determination of viability, could have a profound chilling effect on the willingness of physicians to perform abortions near the point of viability in the manner indicated by their best medical judgment." *Id.* Moreover, the Court has frequently emphasized that physicians must be given room to make their best medical judgments. *Id.* at 397; *Akron*, 462 U.S. at 427.

127. See Bok, *supra* note 92, at 44-45; Tribe, *supra* note 45, at 3 n.18; Comment, *Viability and Abortion*, 64 Ky. L.J. 146, 161 (1975).

128. *Colautti*, 439 U.S. at 387.

129. *Roe*, 410 U.S. at 163.

2. *Assessing the Claims of Biological and Logical Relevance*

What change occurs at the point when a fetus becomes viable? To consider this, we must recognize that fetal development is inherently a continuum. Approximately a week after fertilization (the union of the sperm and egg) the embryo implants itself in the uterine wall.¹³⁰ Twinning can still occur for about two weeks after fertilization.¹³¹ Organs begin to form in the developing fetus quite early, and by ten weeks all organs exist in the rudimentary form.¹³² Some minor, unorganized electrical activity in the fetal brain is detectable as early as between weeks 8 and 12,¹³³ although such rudimentary activity does not indicate a capacity for human consciousness.¹³⁴ As development continues, quickening—the maternal awareness of fetal movement—occurs, usually sometime between weeks 17 and 20.¹³⁵ With current technology, the fetus then becomes viable at around week 24.

As this brief summary shows, viability does not mark a particular biological change in the fetus. The viable fetus has no more capability for self-awareness or feeling pain than a pre-viable fetus. This conclusion follows from the fact that viability advances with medical technology, while fetal development remains the same over time. A viable fetus has simply acquired the capacity to survive ex utero if given appropriate life supports, whereas survival of a pre-viable fetus will depend upon it remaining in the womb for an additional period prior to removal. But at the threshold of viability, even this newfound capacity to survive signifies nothing more than a statistical prediction that with months of intensive care, this infant just might make it. Given the continuity of fetal development over time, and the dependence of viability on medical technology

130. J. PRITCHARD, P. MACDONALD & N. GANT, *supra* note 4, at 139 figure 8-1, 140.

131. Grobstein, *The Moral Uses of 'Spare' Embryos*, HASTINGS CENTER REP., June 1982, at 5, 6.

132. By 8 weeks, fingers and toes are present. After 10 weeks, few if any new major structures are formed. J. PRITCHARD, P. MACDONALD & N. GANT, *supra* note 4, at 140. Embryologists consider 10 weeks to mark the end of the embryonic period and the beginning of the fetal period. *Id.*

133. Sokol & Rosen, *The Fetal Electronencephalogram*, 1 CLINICS OBSTETRICS & GYNECOLOGY 123, 124 (1974). For a general description of fetal brain development and an argument in favor of basing abortion policy on fetal neurological development, see Note, *supra* note 45. That writer suggests that, because the time of most rapid brain development is from 19 to 30 weeks, the capacity for consciousness probably develops then, such that abortions should be prohibited once such development begins. *Id.* at 1207-08, 1214.

134. It is not until between weeks 24 and 28 that the cerebral cortex (the part of the brain responsible for rational thought) takes on the structure that is characteristic of a normal human being. See R. LEMIRE, J. LOESER, R. LEECH & E. ALVORD, NORMAL AND ABNORMAL DEVELOPMENT OF THE HUMAN NERVOUS SYSTEM 235 (1975). Even writers recommending "brain birth" as the biological criterion to determine abortion policy recognize that correlating electrical activity with thought processes is at this point in time impossible. Note, *supra* note 45, at 1209.

135. Reynolds, *Fetal Physiology*, in OBSTETRICAL PRACTICE 78, 95 (S. Aladjem ed. 1980).

rather than on any change in the fetus, the *biological* significance of viability seems questionable at best—a better term would be *technological*.

What about viability's *logical* significance, though? The *Roe* Court said only that at viability the fetus could potentially survive outside the mother's womb, albeit with artificial aid. But this, of course, is nothing more than the definition of viability. As John Hart Ely has eloquently argued, the Court simply "mis[took] a definition for a syllogism."¹³⁶ Other scholars have even suggested that viability's logical significance is in fact the opposite of what the Court implies. As one group asks: "Why should a fetus' capacity to live independently be a reason to forbid the mother from forcing it to live independently?"¹³⁷ John Robertson suggests that logically, the pre-viable fetus should have the greater claim on the woman, because its life depends on her, whereas the viable fetus can be removed and still survive.¹³⁸

This logic, however, ignores the medical realities of premature delivery. An eight month fetus can be removed and simply survive, given ordinary care. But the issue is not aborting eight month fetuses.¹³⁹ It is whether the threshold of viability should constitute the cut-off point for abortions, and fetuses delivered at the threshold of viability do not simply survive upon removal. They live, if at all, only with months of highly sophisticated, aggressive, and costly treatment,¹⁴⁰ which causes suffering to infant and parents alike.¹⁴¹ Moreover, infants born extremely prematurely face a great risk of physical and mental handicap: In one study, 26 percent of survivors born between weeks 24 and 26 had a significant functional handicap.¹⁴² Thus, given today's medical realities, it would be irresponsi-

136. Ely, *The Wages of Crying Wolf: A Comment on Roe v. Wade*, 82 YALE L.J. 920, 924 (1973).

137. Post, Chudwin & Wikler, *supra* note 109, at 12-13.

138. See Robertson, *Medicolegal Implications of a Human Life Amendment*, in *DEFINING HUMAN LIFE: MEDICAL, LEGAL AND ETHICAL IMPLICATIONS* 161, 166 (M. Shaw & E. Doudera eds. 1983).

139. According to Dr. Kenneth Ryan, before the Supreme Court decision in *Roe*, doctors would not even have considered a third trimester procedure to induce, for medical reasons, an early delivery to be an abortion. Statement of Dr. Kenneth Ryan, Chairman, Department of Obstetrics and Gynecology, Harvard Medical School at Hastings Center Conference on Abortion and Scientific Change (May 23-24, 1985). Beyond the time of viability, the procedures for removal ordinarily present the same risks to the woman whether the fetus is saved or destroyed. Tribe, *supra* note 45, at 4 n.24.

140. See P. BUDETTI, P. MCGMANUS, N. BARRAND & L. HEINEN, *supra* note 111, at 19-23; Pomerance, Ukrainski, Ukra, Henderson, Nash & Meredith, *Cost of Living for Infants Weighing 1000 Grams or Less at Birth*, 61 PEDIATRICS 908, 909 (1978).

141. See generally R. STINSON & P. STINSON, *THE LONG DYING OF BABY ANDREW* (1983) (parents describing premature infant's suffering and anguish over his lengthy, and ultimately futile, treatment in intensive care unit).

142. Yu, Orgill, Bajuk & Astbury, *supra* note 101, at 643 table 5. Another 8 percent had a milder degree of physical disability. At 27-28 weeks, 14 percent had a significant functional handicap and another 3 percent had a lesser physical disability. *Id.* See also Orgill, Astbury, Bajuk & Yu, *supra* note 114, at 824 (of infants weighing between 501 and 750 grams who survived, 27 percent were handicapped upon follow-up).

ble and even cruel to advocate simply allowing viable fetuses to be removed, especially since the removal process itself can harm the fragile, premature fetus.¹⁴³

We can, however, readily imagine a more sophisticated medical context in which artificial gestation after a particular time were as benign as natural gestation. If this time occurred relatively early in pregnancy, it might be reasonable to encourage women to nurture fetuses until viability, after which they could be transferred elsewhere. Such a different medical context would indeed make viability's import the opposite of what the Court found it to be in *Roe*. This hypothetical suggests that the viability standard lacks a logical or universal basis, but is instead situation-specific in its importance.¹⁴⁴

Once it is recognized that the relevance of viability depends upon the medical context, the claim of "logical" justification for the viability standard sounds a trifle grandiose.¹⁴⁵ Perhaps, in assessing viability's true (albeit more limited) importance, it will help to spell out briefly the ways in which today's medical context renders viability relevant. First, a post-viability abortion may result in a live birth, in which case the physician will be under an ethical and legal obligation to treat the infant if viable as she would an infant delivered in planned childbirth.¹⁴⁶ Yet the premature delivery and its artificial induction may have caused severe and irrevocable harm. Intentionally inducing an extremely premature delivery in the absence of maternal health reasons would be malpractice of the grossest kind, and the occasional live birth from a late abortion creates medical and ethical dilemmas of a harrowing nature.¹⁴⁷ Live births from abortions

143. In general, the more immature the fetus, the greater the risks from labor and delivery. J. PRITCHARD, P. MACDONALD & N. GANT, *supra* note 4, at 756.

144. Of course, the Court could have meant "logical" not in the strong sense of being subject to logical proof or, at least, argument, but in the weaker sense of being a practical or justifiable place to draw a line. If the weaker interpretation is used, then viability could be considered a "logical" point at which to draw a line under one set of medical facts, but be a completely irrelevant point under another. See *infra* text accompanying notes 146-57.

145. In regard to the claim of "logical and biological justification," one writer has stated:

First, the mind boggles when Blackmun tells us that the holding has multiple justifications, one logical and one biological. Neither the principles of logic nor the facts of biology could individually yield a justification; only by combining the two can even an enthymatic argument be produced. Anyway, the cited premise—"the fetus then presumably has the capability of meaningful life outside the mother's womb"—is not a bit of biology or logic, but only a bare definition.

Wertheimer, *Understanding Blackmun's Argument: The Reasoning of Roe v. Wade*, in *ABORTION: MORAL AND LEGAL PERSPECTIVES* 105, 120 (J. Garfield & P. Hennessey eds. 1984).

146. See Rhoden, *The New Neonatal Dilemma: Live Births from Late Abortions*, 72 *Geo. L.J.* 1451, 1470-72 (1984).

147. See generally Rhoden, *supra* note 146. The dilemma about treatment, the harsh violation of the expectations of the woman, physician and staff, and the strong possibility of resulting brain damage combine to make this situation agonizing. See also Kleiman, *When Abortion Becomes Birth: A Dilemma of Medical Ethics Shaken by New Advances*, *N.Y. Times*, Feb. 15, 1984, at B1, col. 1. (offering statistics and differing approaches to problem).

thus should, if at all possible, be avoided, and allowing states to prohibit post-viability abortions assists such avoidance.

The post-viability abortion of fetuses in such a way that they are born alive but sustain severe damage is not, however, a necessary consequence of allowing some post-viability abortions. If the threshold of viability occurs earlier, it may approach the time during which D & E is a safe abortion method. Even under the existing threshold, doctors often, when performing abortions late in the second trimester, add some saline or urea to the prostaglandin, in order to reduce the possibility of live birth. This combination has medical justification as well in that it reduces the gastrointestinal side effects of prostaglandin.¹⁴⁸ Additionally, some physicians advocate injecting digoxin into the fetus' heart to cause cardiac arrest *in utero*,¹⁴⁹ an action that is unrelated to the woman's health and is solely designed to ensure fetal death *in utero*.

Because its sole purpose is to ensure fetal death *in utero*, this last method makes us uncomfortably aware of what post-viability abortion is all about. The graphic nature of the digoxin procedure also highlights the second way in which viability is important. Before viability, removing an unwanted fetus from the womb necessarily entails its destruction. After viability, however, these dual functions of removal and destruction diverge. It is no longer severance alone that is fatal, but severance via a particular abortion method. If the fetus could live if removed by method A, then removing it by lethal method B becomes more morally problematic, because fetal destruction is no longer a necessary consequence of premature removal. As Laurence Tribe has stated:

Once the fetus can be severed from the womb by a process which enables it to survive, leaving the abortion decision to private choice would confer not only a right to *remove* an unwanted fetus from one's body but also an entirely separate right to *ensure its death*.¹⁵⁰

Thus the time of viability marks the point at which the distinction between abortion (the termination of pregnancy) and feticide (destruction of the fetus) becomes "practical and meaningful."¹⁵¹

Recognition of this distinction suggests that perhaps the Court was not confusing a definition with a syllogism, but was merely being a bit cryptic

148. See Kerenyi, *supra* note 31, at 359, 371. However, there may still occasionally be a live birth with these combination methods. *Id.* at 372.

149. See Waters, *Digoxin Induction Abortion*, Paper presented at Eighth Annual Meeting, The National Abortion Federation, in Los Angeles, California (May 14, 1984).

150. Tribe, *supra* note 45, at 27 (emphasis in original).

151. Wertheimer, *supra* note 145, at 121 ("there seems to be nothing significant about viability independent of its being the condition in which the distinction between abortion and feticide is practical and meaningful").

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in explicating viability's significance. Writers defending the viability standard have addressed this judicial omission, arguing that because a viable fetus has the capacity for *ex utero* survival (not merely the potential if left to develop longer), it is similar in all relevant respects to an infant.¹⁵² Unlike the pre-viable fetus, which will perish absent the womb's sustenance, the viable fetus can "move outdoors" if medical assistance is provided. After viability, the argument goes, it is mere happenstance, an accident of geography, that distinguishes the fetus from the independently existing infant.¹⁵³ It is, as one writer puts it, "only due to this fetus' bad luck that it is not already a person."¹⁵⁴ Thus, if this argument is accepted, a state could justifiably conclude that post-viability abortions are uncomfortably similar to infanticide. After that point, according to Tribe, abortion could be prohibited:

not because of some illusion that this biologically arbitrary point signals 'any morally significant change in the developing human,' and certainly not because of any (necessarily religious) notion that the fetus is intrinsically a human being from that technology-dependent point forward, but rather on the secular and quite practical ground that a state wishing to prevent the killing of infants simply has no way to distinguish the deliberate destruction of the latter from what is involved in postviability abortions.¹⁵⁵

This explication of the significance of viability sounds quite persuasive. It suggests that the importance of viability—the point at which a fetus could potentially survive *ex utero* if removed in a harmless manner—may be unrelated to the time in pregnancy at which viability occurs, and thus that viability is of logical, and not just medical, significance. Tribe, however, suggests that this is not the case. He argues that viability's significance is indeed dependent upon the existing medical context. According to Tribe, the use of viability as a legal standard:

assumes a technology in which viability occurs so late in pregnancy that removing the fetus in a manner consistent with its survival is no more onerous for the woman than removing it in a way that leads to its destruction. If this ceases to be the case, however, then the woman's legitimate interest may come to encompass a claim to sever even the viable fetus in a manner dangerous to it.¹⁵⁶

152. King, *supra* note 99, at 1676.

153. Zaitchik, *Viability and the Morality of Abortion*, 10 PHIL. & PUB. AFF. 18, 20–21 (1981).

154. *Id.* at 21 (emphasis omitted).

155. Tribe, *supra* note 45, at 28.

156. *Id.* at 27 n.118.

Is Tribe correct that the significance of viability could be diminished or eliminated entirely if technology, and hence the medical context, change? This is a crucial question, inasmuch as the threshold of viability is approaching week 23, but abortion is now safer than childbirth past week 21. In other words, we are approaching precisely that medical context that Tribe suggested could undermine viability's importance. If viability's relevance is neither logical nor biological, but preeminently contextual, then it is no violation of *Roe*'s principles to rethink the viability standard once the medical context changes.

I will argue that the medical context *is* crucial. The safety of available abortion methods referred to by Tribe is an important part of this context, although this alone is not determinative. Neonatal intensive care technology is also important, though not necessarily decisive. The idea that a viable fetus differs from a baby only in geography is most persuasive for late, *i.e.*, 7 or 8 month old fetuses. It seems far less compelling when the fetus is "viable" only if provided 5 months of incubation in an artificial placenta. I will argue that this is because the scientific meaning of viability—*ex utero* survivability—is only one component of the complex ethical judgment that a viable (under current technology) fetus has a somewhat different status vis-a-vis the woman than does a less developed fetus.

B. *Distinguishing the Scientific from the Ethical*

To avoid holding that abortion must be permitted up to the time of birth, the *Roe* Court needed somehow to divide the continuum of pregnancy. Yet the Court quite reasonably wished to avoid discussions of when life begins¹⁵⁷ or the definition of personhood, that murky, unscientific conglomerate of biological, philosophical and theological claims.¹⁵⁸ Rather than exploring the idea that personhood evolves gradually throughout the entire pregnancy, the Court instead selected viability, a verifiable, empirical, scientific concept, by which to draw its line.¹⁵⁹

157. 410 U.S. at 159.

158. "Personhood" is intended here in its philosophical sense, not in the sense of whether X is a "person" for purposes of a particular legal statute. Although the Court engaged in no discussion of the meaning of personhood, it did hold that a fetus was not a person for purposes of the Fourteenth Amendment. For a helpful discussion of the problems associated with trying to solve issues in bioethics through definitions of personhood, see Macklin, *Personhood in the Bioethics Literature*, 61 *MILBANK MEMORIAL FUND Q.* 35 (1983).

159. 410 U.S. at 162-63. The Court believed that if a fetus is a person under the Fourteenth Amendment, then abortion cannot be justified. 410 U.S. at 156-57. Judith Jarvis Thomson argues, however, that even if fetuses are persons, continuation of an unwanted pregnancy can be viewed as an act of "Good Samaritanism," and persons are not ordinarily under an obligation to be Good Samaritans and subordinate their bodily interests for the benefit of others. See Thomson, *A Defense of Abortion*, 1 *PHIL. & PUB. AFF.* 47 (1971). Donald Regan has built an equal protection argument upon Thomson's analysis, arguing that it would violate equal protection to require pregnant women to sacrifice their bodily interests to benefit third parties when persons in general in our society do not

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In 1973 viability conveniently coincided roughly with the last third of pregnancy. By the third trimester, the woman's pregnancy is visible to the world. And much of the world (at least, much of the United States population) feels differently about pregnancy at this stage than at earlier ones. The majority of Americans support the abortion right under at least some circumstances.¹⁶⁰ Consistently, however, there is substantially less support for third trimester abortions than for second, and less for second than for first.¹⁶¹ It is beyond the scope of this Article to consider fully the justifications for either abortion in general or the widespread difference in attitude about early and late termination. But I will note that scholars have sought to defend this societal intuition. For example, Edward Langerak fully recognizes the weakness of pinpointing any "magic moment" before which a fetus has no claim for protection and after which it does.¹⁶² He argues, however, that the potential to become a person is exceedingly important. Because the late-term fetus is both more likely to achieve this potential¹⁶³ and already much closer to achieving it, a state can justifiably confer upon the late-term fetus, though not its less developed cousin, a claim to societal protection.¹⁶⁴ Other writers have likewise stressed that "[b]ecause human life is a developmental continuum it is also morally relevant to advert to the level of development that an individual has reached or can reach."¹⁶⁵ Whether or not this dichotomy between late and early abortion is fully justified, it commands much scholarly respect, probably influenced the *Roe* Court, and is perhaps the closest this society has come to a consensus about the morality of abortion.¹⁶⁶

The congruence of viability and late gestation was fortunate because it enhanced the acceptability of the line the *Roe* Court established. But in a very important sense it was unfortunate, because it gave the impression that the newfound capacity for *ex utero* survival was all that the viability

have these sorts of legal obligations. Regan, *Rewriting Roe v. Wade*, 77 MICH. L. REV. 1569 (1979).

160. J. BURTCHAELL, RACHEL WEeping 100-02 (1982) (reprinting results of 1979 REDBOOK poll, & 1977 & 1979 Gallup polls).

161. *Id.* at 102.

162. Langerak, *Abortion: Listening to the Middle*, in ETHICAL ISSUES IN MODERN MEDICINE 174, 174 (J. Arras & R. Hunt 2d ed. 1983).

163. Langerak notes that the incidence of first trimester spontaneous abortion is variously estimated to be from 15 to greater than 50 percent. *Id.* at 177.

164. Langerak considers both quickening and viability to be morally relevant times at which the fetus' claim to societal protection increases. *Id.* at 178-79. Bok, *supra* note 92, at 44, takes a similar position.

165. Mahowald, *Abortion and Equality*, in ABORTION: UNDERSTANDING DIFFERENCES 177, 183 (S. Callahan & D. Callahan eds. 1984); see also Cahill, *Abortion, Autonomy and Community*, in ABORTION: UNDERSTANDING DIFFERENCES 261, 270 ("increasingly human appearance of offspring during gestation may be relevant to their developing status within the community of persons"); Bok, *supra* note 92, at 44 (after viability, only abortions necessary to save woman's life should be allowed "because the reasons to protect life may now be thought to be partially present").

166. Langerak, *supra* note 162, at 174.

standard stood for. The impression given in *Roe* (and later in *Danforth* and *Colautti*) was that the actual *time* of viability (the last third of pregnancy) was an accidental characteristic irrelevant to the legal cut-off, which was determined solely by the *fact* of survivability. But while technological survivability exhausts the medical definition of viability, the viability standard as an ethical or normative dividing line is more complicated. It encompasses, as a necessary, non-accidental characteristic, the idea that the fetus has reached the societally-significant stage of "late gestation." Because survivability happened to coincide with late gestation in 1973, the importance of late gestation for the *Roe* dividing line has subsequently been taken for granted or overlooked. Only now, as the specter of the divergence of viability and late gestation looms increasingly large, is it becoming apparent that the continuing relevance of the viability standard is dependent upon the medical context remaining substantially similar to that which prevailed in 1973.

A hypothetical medical scenario helps to demonstrate that potential survivability would hold less legal significance if it occurred much earlier than it does now. Assume that surfactant (a substance necessary for lung inflatability) has unexpectedly been discovered to be present in fetal lungs between weeks 18 and 20. Assume also that medical technology has advanced sufficiently that infants possessing this substance can be sustained by artificial means.¹⁶⁷ Suppose, however, that: (1) fetal development is such that surfactant is absent between weeks 21 and 23; and (2) efforts to insert surfactant in infants' lungs are invariably unsuccessful. Given these assumptions, an 18-to-20 week fetus would be viable, while a 21-to-23 week fetus would not. If viability is determinative in every context, then given these assumptions the state could reasonably deny a 19-week pregnant woman an abortion, but would be bound to let her return for the procedure at week 21. Because D & E at week 19 is probably the safest procedure for the woman and is inevitably fetocidal, this outcome is ludicrous. Its absurdity suggests that survivability alone cannot be determinative.

The new technology of embryo transfer may also illustrate the importance of the medical context. Doctors are now able, prior to implantation, to flush an embryo out of one woman and insert it into the uterus of a second woman.¹⁶⁸ If the second woman's womb is considered an "artificial aid,"¹⁶⁹ the embryo during that brief time span is viable—i.e., medical

167. These assumptions are, of course, completely hypothetical.

168. See Blakeslee, *Infertile Woman Has Baby Through Embryo Transfer*, N.Y. Times, Feb. 4, 1984, at 6, col. 1. See generally L. ANDREWS, *NEW CONCEPTIONS* 246-58 (1984).

169. Embryo transfer technology, as it exists at present, does not pose problems for the viability standard, because one can readily argue that an embryo is not viable if it must be inside *some* woman's womb. This scenario could become more complicated, however, if the embryo could remain

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technology has already created a brief "window of viability." But again, were a woman somehow sure that she was pregnant so early on that an embryo transfer was feasible, it would be absurd to deny her an abortion (or a menstrual extraction)¹⁷⁰ and make her wait until transfer was no longer possible so that her embryo would not be viable. These examples illustrate that the significance of viability depends upon a specific set of medical facts. If these facts change, so too does viability's significance.

The importance of viability could likewise be undermined from the opposite direction. Suppose that infant mortality research yielded the dramatic and surprising discovery that infants with a certain genetic defect will inevitably die if born more than 2 weeks before term. This rare (indeed fictional) defect impairs only *in utero* development—babies with this defect born at 8½ months or more will be fine, but are non-viable before this time. Assume also that this defect can be diagnosed prenatally. A supporter of the viability standard would probably not feel comfortable about an elective abortion of such a fetus at 8 months. But this response is inconsistent with the notion that technological survivability is all that matters. If *Roe* really stands for survivability being determinative, then the woman carrying this fetus should have a constitutional right to abort it even at 8 months gestation.

The point of this example, like the surfactant one, is to illustrate the importance of the fact that the two threads—survivability and late gestation—coincided in 1973 at the time of viability, thereby making viability *look* determinative. Viability as simple technological survivability (let's call this Viability₁) does not accord with our intuitions about the morality of abortion in either the surfactant hypothetical or the case of the 8 month non-viable fetus. This is because it has been severed from its conceptual sister—late gestation. Viability as a normative concept thus has at least two major components. It is not merely technological, but rather encompasses the idea that the fetus is so substantially developed that it has a claim to societal protection. This latter sense of viability (Viability₂) is, I believe, what the court really meant in *Roe*, or at least what it would have

outside of the first woman for a significant period of time before being implanted in the second woman.

In *in vitro* fertilization, the egg is fertilized in the test tube and develops there until it reaches about the eight-cell stage, which is the best time to be implanted in the woman's womb. COUNCIL FOR SCIENCE AND SOCIETY, HUMAN PROCREATION: ETHICAL ASPECTS OF THE NEW TECHNIQUES 16 (1984). It has been noted that extra embryos (ones not being implanted) could possibly be allowed to continue to develop in the test-tube, perhaps to the stage where cells separate into primitive specialized tissue (nerve, muscle, etc.). *Id.* at 18. If this became possible, would the embryo that could go without a womb for 3 or 4 weeks be viable for this time?

170. Aspiration of the endometrial cavity within 1 to 3 weeks after failure to menstruate is called menstrual extraction or menstrual induction. J. PRITCHARD, P. MACDONALD & N. GANT, *supra* note 4, at 481.

meant had it thoroughly analyzed viability's significance. Viability simply designated that time after which a fetus, although not a person in a constitutional sense, has nonetheless progressed so far in development that the state could legitimately protect its potential for independent life despite the woman's privacy right.

Separating Viability₁ (technological survivability) from Viability₂ (the complex, value-laden notion that once a fetus can survive *ex utero* and is substantially developed, its claim to societal protection increases) helps explain the confusion that the viability standard has engendered among commentators. Claiming significance for mere survivability is to mistake a definition for a syllogism. It is likewise to suggest that from a technological fact alone (that the fetus could survive) one can derive the value judgment that abortion can properly be proscribed.¹⁷¹ But claiming significance for Viability₂ is not a mistake. Rather, it is to understand that because developmental status is relevant, late abortion is more morally problematic than earlier abortion. It is then to seek conscientiously some way to distinguish early from late. Viability₂ is what is known in philosophy as a "cluster concept"—a concept made up of several important components, none of which is sufficient to define it.¹⁷² The surfactant hypothetical illustrates that survivability is not a sufficient condition to give a fetus Viability₂, that is, to give it an ethical claim upon society. Nor is survivability a necessary condition for Viability₂: The hypothetical nonviable 8 month fetus seems too fully developed to be aborted, even though it still needs shelter in the woman's womb. Survivability is of course important, but it is not determinative, because late gestation is likewise an important (and, it seems, necessary) component of the normative concept, Viability₂. We must distinguish Viability₁ from Viability₂ if we are to make sense of viability's true importance and the nature of its limitations.

Inasmuch as there is no word for the complex ethical concept called Viability₂, and inasmuch as there was no reason for the Court to imagine, in 1973, that fetuses would become viable substantially earlier in gestation, it is understandable that the Court did not distinguish the technological concept from the ethical one. Yet by implying, and by continuing to imply, that technological survivability is itself determinative, the Court's decisions have created the misleading impression that a scientific or technological fact can give rise to a normative legal standard without being

171. For the classic statement of the view that moral conclusions cannot be deduced from factual premises, see D. HUME, *TREATISE OF HUMAN NATURE*, Book III, pt. I, § I (L.A. Selby-Bigge ed. 1951). See generally *Ethical Naturalism*, in 3 *THE ENCYCLOPEDIA OF PHILOSOPHY* 69-71 (P. Edwards ed. 1967).

172. See Putnam, *The Analytic and the Synthetic*, in 3 *MINNESOTA STUDIES IN THE PHILOSOPHY OF SCIENCE* 358, 378 (H. Feigl & G. Maxwell eds. 1962) (for some words, such as "man", the meaning is given by a cluster of properties).

influenced by moral values and analysis. An abortion cut-off should not depend on one aspect of the medical context while ignoring others. Nor can it leap from facts to values without the mediating influence of prevailing societal mores. Perhaps the most one can expect of an abortion cut-off is, as one writer puts it, that it:

allow[s] women self-determination, the preservation of their lives and health, the effective use of pre-natal diagnosis, and the achievement of other societal goals such as the prevention of the births of unwanted children, while avoiding undue insult to practices of parenthood and of attention and kindness toward children, etc.¹⁷³

In 1973, the time of technological viability was a very good place to draw a line marking the boundary of the abortion right. But if viability ceases to coincide with late gestation, it will no longer achieve the same goals. *Roe* does not, however, require the law to abdicate control of women's constitutional fate to technology. To avoid such technological tyranny, the Court need merely recognize the important, albeit silent and largely implicit, role that late gestation played in forming the foundation of the *Roe* framework.

III. REVAMPING *Roe v. Wade*

A. *Abandoning the First Trimester/Second Trimester Distinction*

The serious problems plaguing each prong of the trimester system dictate reconsideration of the *Roe* schema. The first, and by far the simplest, part of this task is to recognize that the division between the first and second trimesters is unnecessary and confusing, and should be abandoned. As shown in Part I, statistical variations in abortion safety at different times in pregnancy are inadequate to justify changes in the state's degree of interest in an abortion patient's health. Drawing a distinction between early abortion and abortion in mid-pregnancy may well have increased *Roe's* societal acceptance.¹⁷⁴ By allowing increased state regulation after week 12, the Court both distanced its decision from the much maligned notion of legalizing "abortion on demand" and implied that abortion, even prior to viability, could be treated differently from other medical procedures. This difference in treatment is indefensible. Although abortion is ethically different from other medical procedures, this difference has to do with the potential life of the fetus, not with the woman's health. There-

173. Engelhardt, *Viability and the Use of the Fetus*, in *ABORTION AND THE STATUS OF THE FETUS* 183, 193 (W. Bondeson, H. Engelhardt, S. Spicker & D. Winship eds. 1983).

174. See Tribe, *supra* note 45, at 38 n.168.

fore, up until the time that potential life can be protected, there is no justification for treating abortion differently from other medical procedures. Because the week 12 division suggests that there is a justification, it encourages anti-abortion legislatures to enact restrictive second trimester abortion regulations, and obscures the important questions of why particular requirements are being imposed (especially if the contrast with other health regulations is marked) and whether regulations purportedly promoting health really represent attempts to discourage abortions.¹⁷⁵

This focus on the purpose behind abortion regulations permeated *Doe v. Bolton*, where the Court emphasized that Georgia had no requirement of two-doctor concurrence or committee approval for medical procedures other than abortions.¹⁷⁶ *Doe v. Bolton* does not stand for the proposition that *any* abortion regulation that lacks an existing statutory parallel must be declared invalid. In *Danforth*, the Court noted that Missouri did not require the patient's prior written consent to any surgical procedure other than abortion, but stated that this "is not in itself an unconstitutional requirement. The decision to abort, indeed, is an important, and often a stressful one, and it is desirable and imperative that it be made with full knowledge of its nature and consequences."¹⁷⁷

As the Seventh Circuit in *Friendship Medical Center v. Chicago Board of Health*¹⁷⁸ noted, however, a wide disparity between abortion regulations and all other medical regulations should be grounds for suspicion.¹⁷⁹ Thus the Seventh Circuit was rightfully suspicious when the Chicago

175. The Third Circuit has held that courts may not invalidate an entire abortion statute simply because of a pervasive invalid intent, but must review its separate provisions on their merits. *American College of Obstetricians v. Thornburgh*, 737 F.2d 283, 292 (3d Cir. 1984), *argued*, 54 U.S.L.W. 3343 (U.S. Nov. 5, 1985). The court felt it was obliged, based on the Supreme Court's review of abortion statutes, to take this approach, even though the Pennsylvania act clearly was inspired by strong anti-abortion motives. *See id.* at 288.

176. 410 U.S. 179, 197, 199 (1973).

177. *Planned Parenthood v. Danforth*, 428 U.S. 52, 67 (1975). The Court continued:

We could not say that a requirement imposed by the State that a prior written consent for any surgery would be unconstitutional. As a consequence, we see no constitutional defect in requiring it only for some types of surgery as, for example, an intracardiac procedure, or where the surgical risk is elevated above a specified mortality level, or, for that matter, for abortions.

Id. Many medical decisions are stressful. Informed consent to medical procedure is ethically and legally desirable, and a state could readily require general informed consent to medical procedures. The fact that it has not enacted such a requirement for other procedures does not invalidate a non-specific and unbiased informed consent requirement for abortions.

178. 505 F.2d 1141 (7th Cir. 1974), *cert. denied*, 420 U.S. 997 (1975).

179. The court stated that:

Where fundamental rights are involved, it is impermissible to treat differently two classes which do not differ on any ground related to the purpose of the challenged statute. Given the Supreme Court's acceptance of the medical fact that the mortality rate of women receiving legal abortions is 'as low or lower than the rates for normal childbirth,' there would seem to be little justification for more extensive governmental regulations, purportedly based on health considerations, for one procedure than the other.

Id. at 1152 (citations omitted).

Board of Health enacted abortion regulations requiring the performance of particular medical tests, the availability of certain equipment and supplies, and the postponement of the abortion procedure for a specific interval after the initial examination, but left the safety of all other medical procedures to the good judgment of the physician.¹⁸⁰ Although the court did not proscribe all differences between regulation of abortion and other medical procedures,¹⁸¹ it refused to ignore the disparity. It held that “the state will bear a heavy burden in justifying any such regulation, both with respect to showing the existence of a unique medical complication and with respect to showing that the problem is of such a nature as to be beyond the general scope of a doctor’s professional judgment.”¹⁸² In that case, not only did the abortion regulations lack statutory parallels in other areas, but such detailed regulation of other medical procedures was exceedingly unlikely. This type of comparison is valuable, and is made much easier by discarding the notion that a compelling interest in maternal health springs into existence at a particular point in pregnancy.

The cases since *Roe*, however, have paid little heed to one implication of the original first trimester/second trimester division—the notion that as long as abortion is safer than childbirth, women must be free to choose this safer alternative without state interference. *Akron*, of course, modified *Roe* somewhat by holding that the state could still enact significant regulations after week 12 even though some abortions past this time were now safer than childbirth. But the Court in *Akron* was not presented with the issue of whether a state could *prohibit* abortions safer than childbirth based on fetal viability. With the latest figures showing abortion safer than childbirth even after week 21, however, the collision of trimesters of which Justice O’Connor warned is close upon us. The retention of the week 12 dividing line will avoid only the appearance of this clash, not its reality. It will not decide the question of whether, if medical advances make some post-viability abortions safer than childbirth, states will be able to subordinate their interest in maternal health and the woman’s interest in avoiding health risks to the goal of protecting potential life.

180. *Id.* Also, in *Hallmark Clinic v. Department of Human Resources*, 380 F. Supp. 1153, 1157–58 (E.D.N.C. 1974), the court, in discussing regulation of abortion procedures, stated: “That the state is ordinarily willing to leave such matters to the professional judgment of the attending physician strongly suggests that the program for regulating abortion clinics is a thinly disguised effort to evade *Roe* and *Doe*.”

181. The Court stated:

We do not, however, completely rule out the possibility that there exist some inherent aspects of an abortion procedure which make it unique from other medical procedures of substantially the same risk. For such aspects, the Board of Health may be able to show that a narrowly drawn health regulation is compelling.

Friendship Medical Center, 505 F.2d at 1154.

182. *Id.*

Abandoning the notion that the state's degree of interest in the woman's health changes with fluctuations in abortion safety also does not fully resolve this issue. It does, however, suggest that medical technology, which determines the safety of abortion with respect to both childbirth and the time of fetal viability, is best viewed as an important, but not necessarily controlling, concern. The increased safety of late second trimester abortions is probably best incorporated into our discussion of how to fashion a reasonable and justifiable limitation on elective abortions.

B. *Constitutionalizing Viability*₂

Despite all its problems, allowing states to use fetal survivability as a cut-off for elective abortion has one significant practical advantage: It is a time that can be empirically determined. But while medical statistics can show that 15, 30 or 50 percent of fetuses born at a particular gestational age survive, Viability₂ cannot be so readily ascertained. "Late gestation" is a far less precise concept, and one that is, in large part, in the eye of the beholder. Even if late gestation was an important (albeit implicit) component of the Supreme Court's viability standard, how could the Court implement a standard as subjective as late gestation if viability becomes possible significantly earlier in pregnancy?

There are two potential responses to the question of how to proceed if technological survivability and late gestation diverge, and each has certain advantages. The first would be analogous to the Court's retention, in *Akron*, of the week 12 dividing line despite the demise of its maternal mortality rate justification. Just as the Court adhered to the original trimester framework in that instance, the Court could hold that week 24 constitutes a workable lower limit on a state's ability to prohibit abortions. This approach would, of course, constitute a deviation from the Court's previous insistence that viability, and not any particular number of weeks, is the crucial factor. But it would have the advantage of retaining a limit that many doctors have for some time viewed as the *de facto* cut-off, and that is explicitly (though probably inappropriately) incorporated into some state statutes.¹⁸³ Because amniocentesis results are usually available by about week 20,¹⁸⁴ a week 24 limitation allows sufficient leeway for most abortions for genetic defects and thus neither makes such abortions unavailable nor requires that they be treated differently in the law from other abortions.

The second approach is to focus specifically on what constitutes the

183. See, e.g., N.Y. PENAL LAW § 125.05(3) (McKinney 1975); MASS. ANN. LAWS ch. 112, § 12M (Michie/Law. Co-op 1981).

184. See text accompanying notes 196-202 for the time parameters involved in amniocentesis.

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lower limit beyond which viability loses its dual meanings of survivability and late gestation. This approach would become necessary only if simply adhering to week 24 is rejected and if medical advances were to render fetuses viable earlier than 24 weeks. In other words, we may never have to ask how early in gestation cannot reasonably be deemed late. Nonetheless, in the event it does become necessary to do so, it is useful to consider briefly the medical, ethical, psychological, and social factors that inform the judgment that we should not allow technology to limit a woman's privacy right earlier than a particular time in pregnancy.¹⁸⁵

It should be recognized that consideration of relevant factors will undoubtedly identify a range of time that is significant, rather than a particular week. But this is not an unusual result in the realm of judicial or legislative line drawing. For example, no one would argue that a 55 mile per hour speed limit, as opposed to 56 or 54, has any special significance. However, a speed limit somewhere between 50 and 70, given current automobile technology, highway conditions and driving customs, can be justified as being within a range that effectively represents "not too fast." Persons approving of any speed limit at all could probably agree that 15 m.p.h. is too slow and 90 m.p.h. too fast. Similarly, there can be a time period which, given current social conditions, modes of contraception, neonatal care technology, etc., represents "not too late." Persons favoring at least some access to abortion could probably agree that 8 weeks is too

185. This approach does not imply that a state has no interest in potential life prior to the time when it chooses to limit a woman's privacy right. Instead it recognizes that a state cannot act on its interest without infringing the woman's right, just as a father clearly has an interest in the decision between abortion and childbirth, but protecting his interest would necessarily infringe upon the woman's right to decide. See *Danforth*, 428 U.S. at 71. Justice O'Connor would ignore the irreconcilable conflict between protecting potential life and allowing the woman an unencumbered abortion right. She would allow states to regulate abortion for the purpose of protecting potential life at any time during pregnancy and would uphold regulations that "inhibit" abortions as long as they do not "unduly burden" them. *Akron*, 462 U.S. at 461-64. In the absence of an undue burden, she would eschew strict scrutiny and would uphold a regulation if it bears a rational relationship to a legitimate state purpose. *Id.* at 462-65. This "undue burden" standard was the one used in the abortion funding cases. See *Harris v. McRae*, 448 U.S. 297, 314 (1980); *Maher v. Roe*, 432 U.S. 464, 473-74 (1977). Several lower courts used this method of review in abortion cases dealing with state regulations rather than with the refusal to fund abortions. See, e.g., *Akron Center for Reproductive Health v. Akron*, 479 F. Supp. 1172, 1200 (N.D. Ohio 1979), *aff'd in part and rev'd in part*, 651 F.2d 1198 (1981), *aff'd in part and rev'd in part*, 462 U.S. 416 (1983); *Women's Community Health Center v. Cohen*, 477 F. Supp. 542, 545 (D. Me. 1979). The Supreme Court majority in *Akron*, however, emphatically rejected this less stringent standard of review in favor of the straightforward strict scrutiny utilized in *Roe*. 462 U.S. at 420 n.1. This is more in keeping with standard constitutional analysis than O'Connor's proposed method of scrutiny. Ordinarily the character of the affected right, i.e., whether it is fundamental, determines the degree of scrutiny. See, e.g., *Schad v. Mount Ephraim*, 452 U.S. 61, 68 (1981); *Akron*, 651 F.2d 1198, 1204 (6th Cir. 1981); see also Note, *Hospitalization Requirements for Second Trimester Abortions: For the Purpose of Health or Hindrance?*, 71 GEO. L.J. 991, 1012 (1983). The question of whether the burden is undue is typically the ultimate constitutional issue, rather than the initial barrier to obtaining strict scrutiny. *Charles v. Carey*, 627 F.2d 772, 777 (7th Cir. 1980); Ford, *The Evolution of a Constitutional Right to an Abortion* 4 J. LEGAL MED. 271, 291 (1983); Note, *supra*, at 1011-12.

early and 8 months too late. Thus it is appropriate that Viability₂ be viewed as a time range rather than a specific point in time.

One of the most important considerations in demarcating this range is the looming issue of infanticide. States undoubtedly can protect the lives of infants.¹⁸⁶ Hence it is reasonable to allow states to prohibit the intentional destruction of fetuses that are virtually indistinguishable from infants. As we have seen, probably the strongest argument for adhering to technological survivability as a limitation is that once a fetus can survive *ex utero*, it is virtually indistinguishable from a baby. We have also seen, however, that this fetus-baby similarity is much more convincing for very late term, substantially developed fetuses than for those at the threshold of viability, who require vast amounts of high technology medical care in order to survive.

Babies born at 24–25 weeks have been referred to as “fetal infants,”¹⁸⁷ in recognition of their developmental immaturity. Because technology, whatever its promise, cannot affect *in utero* development, if in the future babies born before week 24 can survive, they will still be at a far earlier stage of development than that which we ordinarily associate with a baby.¹⁸⁸ Technology is also unlikely to alter society’s perceptions of when a pregnant woman crosses that fuzzy boundary into “late gestation.”¹⁸⁹ It

186. See, e.g., *In re Green*, 448 Pa. 338, 292 A.2d 387 (1972) (overriding parental refusal of blood transfusions for child); *State v. Perricone*, 37 N.J. 463, 181 A.2d 751 (1962) (same). See generally Goldstein, *Medical Care for the Child at Risk: On State Supervention of Parental Autonomy*, 86 YALE L.J. 645 (1977).

187. Hack, Fanaroff & Merkat, *The Low-Birth-Weight Infant—Evolution of a Changing Outlook*, 301 NEW ENG. J. MED. 1162, 1164 (1979).

188. As noted previously, many experts believe that the extreme immaturity of fetal lungs and other organs before 22 weeks gestation makes survival exceedingly unlikely either now or in the future, at least without recourse to an artificial placenta. Dunn & Stirrat, *supra* note 119, at 554. Several writers have suggested that the Supreme Court make a distinction between those fetuses whose lungs have matured sufficiently for them to survive if given the type of intensive care currently available, and those that someday may be “viable” if placed in artificial wombs. See *Survey of Abortion Law*, *supra* note 8, at 144.

189. It has been suggested that the use of ultrasound to see the fetus early in pregnancy creates an earlier maternal/fetal bonding. Statements of Dan Callahan, Director, The Hastings Center, and Dr. Alan Fleischman, Director, Division of Neonatology and Associate Professor of Pediatrics, Albert Einstein College of Medicine, at Hastings Center Conference on Abortion and Scientific Change (May 23–24, 1985). Thus it is at least theoretically possible that women themselves could consider “late gestation” to occur earlier. However, an individual woman bonding with a wanted fetus is very different from the state re-interpreting the time-line of pregnancy to view “late gestation” as occurring before the midpoint. Moreover, the woman’s viewpoint naturally focuses more on changes in her body than on milestones created by medical advances. Hence, although the Court in *Roe* was correct in asserting that physicians are not interested in quickening, 410 U.S. at 160, perhaps the Court “over-medicalized” pregnancy through its too ready dismissal of quickening. Pregnant women undoubtedly are more interested in quickening (which occurs between weeks 17 and 20), than they are in the threshold of viability. Indeed most women are probably unaware of when their fetus has crossed this threshold. See M. HARRISON, M. GOLBUS & R. FILLY, *supra* note 117, at 19 (abortions for genetic defects cause less psychological trauma when performed before quickening). It similarly would be medically presumptuous to believe that technological advances could so radically alter women’s views about when late gestation begins.

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would be highly unlikely for a pregnant woman, questions of abortion aside, to consider "late gestation" as occurring earlier than the mid-point of pregnancy (week 20) or for persons who support some right to abortion to feel that, before this time, a fetus is virtually indistinguishable from a baby. Thus, even if the threshold of viability changes, refusing to allow states to proscribe abortion much earlier than the current cut-off would not encroach on the ability of states to prohibit infanticide or abortions that are uncomfortably similar to it, because the public's perception of "late gestation" probably would not have changed.¹⁹⁰

Of course, regardless of how fetal development is perceived, abortions performed after the fetuses could survive *ex utero* may lead to tragic situations where unexpected survivals result in neurologically damaged children. As long as abortions are performed in a manner that does not preclude live births, avoiding such harms supports the idea that the abortion cut-off could follow viability if it were to occur earlier in gestation. Neonatal care technology is not the only relevant concern here, however. Technological viability must be balanced against the woman's right to abort for a substantial time in pregnancy and, of course, her right to have the procedure done in the manner safest for her.¹⁹¹ If major abdominal surgery could remove an embryo prior to 8 weeks in such a way that it could be transplanted to another woman's womb, women could not be required to submit to this risky procedure rather than having a safe and simple suction curettage. Dilatation and evacuation has become the most common and safest abortion method through week 20 and is being used by some doctors a few weeks later than this.¹⁹² The increasing use of this method is significant in several ways. First, it shows that even in the ex-

190. Michael Perry, who argues that the ethical function of substantive due process is to ascertain and incorporate evolving societal beliefs and ideals into the law, supports the *Roe* standard on the ground that "conventional moral sensibilities appear to hold that a postviability abortion is more like infanticide than contraception . . ." Perry, *Abortion, the Public Morals, and the Police Power: The Ethical Function of Substantive Due Process*, 23 UCLA L. REV. 689, 734-36 (1976). Conventional moral sensibilities, in turn, are tied far more intimately to how pregnancy is felt and viewed than to the latest developments in neonatal intensive care.

191. See, e.g., *Colautti v. Franklin*, 439 U.S. 317, 397-401 (1979) (holding void for vagueness requirement that physician use abortion technique giving fetus best opportunity for live birth unless different technique necessary to preserve woman's life, and suggesting that statute appeared to impermissibly require physician to make "trade-offs" between woman's health and additional chances of fetal survival); *Planned Parenthood v. Danforth*, 428 U.S. at 54, 77-79 (invalidating statute that appeared to ban second trimester saline abortions despite their safety). After viability, if two methods are equally safe for the woman, the state constitutionally can require that the one least hazardous for the fetus be used. The constitutionality of such a provision, contained in Missouri law, see MO. ANN. STAT. § 188.030 (Vernon 1983), was upheld by the Eighth Circuit and not challenged on appeal. See *Planned Parenthood v. Ashcroft*, 655 F.2d 848, 862-63 (8th Cir. 1981), *aff'd in part, rev'd in part, vacated in part, remanded*, 462 U.S. 476 (1983).

192. See Grimes, *Second-Trimester Abortions in the United States*, 16 FAM. PLAN. PERSPS. 260, 263 (1984) (D & E has lower mortality rate than instillation methods throughout second trimester, although at 21 or more weeks difference is small).

ceedingly unlikely event that the threshold of viability becomes week 19, abortions need not be restricted in deference to the problem of live births earlier than week 20 or 21. Second, if the method comes to be used even a few weeks later, it raises the question of how to proceed if a fetocidal method of abortion is safer for the woman than childbirth even after the time the fetus is viable.

Now that abortion even after week 21 is safer than childbirth, it could be argued that any time abortion is safer, it must be made available, because the state cannot impose undesired health risks on a woman. Letting technology control in this manner is, however, the corollary of following survivability wherever it might lead. Just as following survivability could erode the abortion right, requiring that abortion be allowed whenever it is statistically safer than childbirth could lead to the disquieting conclusion that a woman has a right to choose a lethal mode of childbirth, such as craniotomy,¹⁹³ if this reduction in fetal head size affords her a slight statistical increase in safety. An absolutist stance in regard to letting the woman decide whether to undergo health risks might be warranted when the issue is the affirmative state imposition of such risks—e.g., requiring her to deliver by Cesarean in cases where vaginal delivery is hazardous to the baby.¹⁹⁴ When the issue is how late in pregnancy abortions must be made available, however, technology and statistical variations in safety should not completely control. Thus, were abortion to become safer than childbirth through week 32, this would not mandate that it be permitted until then. But recognizing that the relative levels of safety are not conclusive in establishing a time frame does not mean that this factor is irrelevant or that the fact that virtually all second trimester abortions are now safer than childbirth can be ignored. Rather, this fact should increase the burden on those who would circumscribe the abortion right significantly more than it is today.

Another important consideration is that whatever cut-off point is chosen will affect the availability of abortions immediately prior to the cut-off. Although gestational age is easier to estimate *in utero* than is viability, as noted previously, estimates of gestational age can still be inaccurate by plus or minus about eleven days. Because of this, doctors often refuse to perform abortions even for women whose pregnancy appears to be a week

193. Craniotomy is the surgical perforation and compression of the cranium of a fetus in order to reduce its head size. ILLUSTRATED STEDMAN'S MEDICAL DICTIONARY 334 (24th ed. 1982). It is done when natural delivery is impossible, *id.*, or when the fetus has died *in utero*. SCHMIDT'S ATTORNEYS' DICTIONARY OF MEDICINE AND WORD FINDER C-253 (1982).

194. A few courts have imposed Cesareans on unwilling women so as to save the fetus. *See, e.g.,* Jefferson v. Griffin Spalding County Hosp. Auth., 247 Ga. 86, 274 S.E.2d 457 (1981). For a cogent criticism of this case, see Annas, *Forced Cesareans: The Most Unkindest Cut of All*, HASTINGS CENTER REP., June 1982, at 16.

or two less advanced than the upper limits.¹⁹⁵ Although recognition of this impact on earlier abortions does not suggest any particular cut-off, it does indicate that in practice any cut-off will be somewhat more conservative than it looks. Because it would be surprising if the Court, given its emphasis on the fundamental nature of the woman's right to abortion, would find this right adequately protected if it could be exercised for less than half of pregnancy, the negative impact of any cut-off on earlier abortions justifies a reluctance to let fetal viability set the abortion limit if fetuses ever become viable earlier than week 22.

Finally, looking not to women in general but to those particular women most likely to seek late abortions, two groups warrant particular concern: those facing diagnoses of fetal defects, and the very young. As will be discussed below, some fetal defects are unexpectedly discovered later than the standard time for genetic diagnoses. A few of these may merit special treatment no matter where the elective abortion cut-off is set. But the time frame in which fetal defects are typically diagnosed is nonetheless relevant to determining the general cut-off. The current method of screening for genetic defects is amniocentesis, a procedure that involves removal and culture of fluid from the amniotic sac.¹⁹⁶ The cultured cells can be tested for a number of identifiable anomalies.¹⁹⁷ Because successful amniocentesis requires sufficient amniotic fluid, it is typically performed at approximately week 16 of pregnancy.¹⁹⁸ Test results are available three to four weeks later.¹⁹⁹ Hence abortions for fetal defects, or eugenic abortions,²⁰⁰ are most often performed between weeks 19 and 22,²⁰¹ and sometimes involve fetuses that are approaching the threshold of viability.²⁰²

195. If 24 weeks is the limit, doctors will look to the mean head size (in terms of biparietal diameter) at 24 weeks. However, because of variations in growth rate, in order to avoid aborting fetuses that actually are 25½ weeks, physicians may also exclude from abortion some women whose pregnancies have progressed only to week 22½. See Stubblefield, *supra* note 105, at 791.

196. In the laboratory, the amniotic fluid is mixed with nutrient-containing tissue-culture fluid and maintained in an incubator at human body temperature so that fetal cells can grow. Karp, *The Prenatal Diagnosis of Genetic Disease*, in *BIOMEDICAL ETHICS* 458, 459 (T. Mappes & J. Zembaty eds. 1981).

197. Omenn, *Prenatal Diagnosis of Genetic Disorders*, 200 *SCI.* 952, 954-55 (1978). The amniotic fluid itself is analyzed for evidence of neural tube defects. Karp, *supra* note 196, at 461.

198. M. HARRISON, M. GOLBUS & R. FILLY, *supra* note 117, at 19.

199. Omenn, *supra* note 197, at 952.

200. The term "eugenic abortion" is more correct than "genetic abortion," because some fetal defects may not be of genetic origin but may instead be caused by maternal illness (e.g., rubella), or drugs given the mother (e.g., thalidomide), or by unknown factors (e.g., fetal hydrocephalus not associated with other anomalies). See Note, *Genetic Screening, Eugenic Abortion, and Roe v. Wade: How Viable is Roe's Viability Standard?*, 50 *BROOKLYN L. REV.* 113, 125 n.73 (1983).

201. According to one physician, the average time at which abortions after amniocentesis are performed is 22 weeks. Interview with Dr. Harold Schulman, Professor of Obstetrics and Gynecology, Albert Einstein College of Medicine, in New York City (Apr. 7, 1983).

202. Fletcher, *The Morality and Ethics of Prenatal Diagnosis*, in *GENETIC DISORDERS AND THE FETUS* 621, 628 (A. Milunsky ed. 1979).

New technology will soon affect this discussion to some extent. Chorionic villi biopsy is a new, and still experimental, technique of genetic diagnosis that is performed in the first trimester between approximately week 8 and week 12.²⁰³ When this new technique becomes standard, it will eliminate many of the abortions now performed after amniocentesis, which already constitute a very small number of abortions.²⁰⁴ However, this technique is unlikely to completely replace amniocentesis. Some high-risk women²⁰⁵ will not obtain prenatal care early enough to have chorionic villi biopsy performed. Moreover, certain defects, such as anencephaly or spina bifida, cannot be diagnosed by this new test and hence still require amniocentesis.²⁰⁶ Thus the amniocentesis time frame will remain relevant even after this new technique has become routine.

Although the actual number of eugenic abortions is small, these are cases where the justification for abortion is unusually strong and the public support solid.²⁰⁷ The Court has not discussed eugenic abortions specifically, but it is highly unlikely that it would sanction an abortion cut-off that precluded them.²⁰⁸ Given the difficulties of precise determination of gestational age, and the fact that there can be some slippage in the time of

203. See generally Pergament, Ginsberg, Verlinsky, Cadkinchu & Trinkka, and Grebner, Wapner, Barr & Jackson, *Prenatal Tay-Sachs Diagnosis by Chorionic Villi Sampling* (Letters to the Editor), 1983 THE LANCET 286-87 (reporting that chorionic villi sampling has been used successfully to diagnose Tay-Sachs disease in first trimester of pregnancy).

204. Grimes, *supra* note 192, at 261.

205. Prenatal testing is routinely recommended only for women over 35, women who have previously had a disabled child, or women who have other risk factors such as genetic disorders in one partner's family. See G. BURROW & T. FERRIS, *MEDICAL COMPLICATIONS DURING PREGNANCY* 129 (2d ed. 1982).

206. Because abnormalities in the amniotic fluid, rather than chromosomal anomalies, indicate neural tube defects, chorionic villi biopsy cannot be used to test for neural tube defects. Interview with Dr. Philip Darney, Associate Professor of Obstetrics and Gynecology, and Reproductive Sciences, University of California, San Francisco, California, in New York City (Sept. 15, 1983).

207. See Thompson, *Prenatal Diagnosis and Public Policy*, in *GENETIC DISORDERS AND THE FETUS* 637, 644 (A. Milunsky ed. 1979) (80% public approval where there is strong chance of serious defect) (citing National Opinion Research Center, *Limited Approval of Legal Abortion*, 4 CURRENT OPINION 18 (1976)). For a more recent survey, see Louis Harris & Associates, *Public Attitudes About Sex Education, Family Planning, and Abortion in the United States* 49 (1985) (64% of persons polled would oppose abortion ban if fetus defective) (unpublished survey) (on file with author). At the time of *Roe*, 14 states had patterned their statutes after the A.L.I.'s MODEL PENAL CODE § 230.3 (Proposed Official Draft 1962), which allowed abortion with no time restrictions if pregnancy resulted from rape or incest, if the mother's life was in danger, or if the child would be mentally retarded or physically defective. *Roe*, 410 U.S. at 140 n.37. Of the first eleven states adopting the A.L.I. provisions, only California chose to exclude the A.L.I.'s provision on fetal defects. See Note, *supra* note 200, at 121-22. It is ironic that *Roe* is more restrictive of eugenic abortions than were these older state statutes. See *id.* at 124-25. It is even more ironic that as more defects become susceptible to prenatal diagnosis, the threshold of viability is dropping, rendering abortion problematic if the fetal diagnosis is made a few weeks later than usual.

208. At the time of *Roe*, results from amniocentesis were readily obtained before viability, which was ordinarily at about 28 weeks. Thus, although it was perhaps ironic that *Roe* was stricter in regard to eugenic abortions than the Georgia statute invalidated by the Court in *Doe v. Bolton*, 410 U.S. 179 (1973) (which was based on the Model Penal Code), eugenic abortions were not at that time threatened.

performing amniocentesis, obtaining the results, and scheduling the abortion, if most abortions after amniocentesis are to be kept within the framework of general elective abortions, then states should not be allowed to prohibit abortion until about week 22.

The other group most likely to seek late abortions is young teenagers, who may have irregular menstrual periods that make pregnancy harder to detect, may deny the pregnancy until it is too obvious to ignore, or may be afraid to tell their parents or seek medical care.²⁰⁹ Moreover, highly educated women tend to have earlier abortions,²¹⁰ and late abortion candidates may often be poor and uneducated, as well as young. The Court has allowed states to further disadvantage poor women by treating abortion differently from other medical procedures and refusing to fund it.²¹¹ Even if one finds such refusal to fund justified, the state cut-off for elective abortions should not work to the detriment of those women (or girls) least able to cope with unwanted pregnancy, childbirth, and childrearing. Even young and uneducated teenagers will have difficulty denying the fact of their pregnancy when they begin to feel the fetus move, which occurs between 17 and 20 weeks. Allowing time after this for persons unfamiliar with the health care system to gain access to it again suggests that the week 20–24 time period is significant, and that the cut-off should certainly never become earlier than week 21 to 22.²¹²

It might be objected that although these medical, psychological and social factors are relevant to legislative decision making, they lack constitutional import. But if protecting women's privacy rights for a substantial portion of pregnancy is a legitimate judicial function, then defining the lower limit of "substantial" is as well. We have seen the futility of seeking biological or logical justifications for lines drawn in the continuum of pregnancy. Thus any line-drawing must be based on less absolute, but no less important, factors such as medical, psychological and social condi-

209. See Grimes, *Second-Trimester Abortions in the United States*, 16 FAM. PLAN. PERSPS. 260, 261 (1984) (nearly 1 in 4 abortions on girls under 15 performed in second trimester).

210. *Id.* at 262.

211. *Harris v. McRae*, 448 U.S. 297 (1980); *Maher v. Roe*, 432 U.S. 464 (1977). For criticism of the Court's approach, see Perry, *Why the Supreme Court Was Plainly Wrong in the Hyde Amendment Case: A Brief Comment on Harris v. McRae*, 32 STAN. L. REV. 1113 (1980). Some scholars have argued that cut-offs prohibiting abortions are very different in nature from the mere refusal to fund abortions. See Appleton, *Beyond the Limits of Reproductive Choice: The Contributions of the Abortion-Funding Cases to Fundamental-Rights Analysis and to the Welfare-Rights Thesis*, 81 COLUM. L. REV. 721, 736–37 (1981) (supporting distinction between negative right to obtain abortion without state interference and positive one to have abortion paid for by government). *But see* L. TRIBE, *AMERICAN CONSTITUTIONAL LAW* 933 n.77 (1978) (arguing that funding cases do not rest upon any principled distinction between governmental interference through prohibition and similar interference through selective funding).

212. Interestingly, the A.L.I.'s Model Penal Code also excepted from the criminal prohibition of abortions those performed on girls under the age of 16 who had had illicit intercourse (all intercourse outside marriage is illicit at this age). MODEL PENAL CODE § 230.2 (Proposed Official Draft 1962).

tions. Of course, these conditions may someday change. For example, were a safe, inexpensive and effective first trimester abortifacient developed that could be purchased over the counter and ingested, the need for late abortions would decline substantially. But given the social conditions in this country today²¹³ and for the foreseeable future, even if the threshold of viability moves earlier in gestation, the point at which states can prohibit elective abortions should remain approximately what it is today, and in no event should it creep earlier than the week 21–24 range.

C. *Eugenic Abortions*

Although most fetal defects will be diagnosed within the amniocentesis time frame described earlier, a few will unexpectedly be discovered later. A small percentage of these will be cases in which the amniocentesis had to be repeated.²¹⁴ More significantly, while only a fairly small group of pregnant women—those considered to be at high risk—at present are routinely offered amniocentesis,²¹⁵ other obstetric procedures which can be performed throughout pregnancy, such as ultrasonography, are playing an increasingly important role in the diagnosis of fetal abnormalities.²¹⁶ Hence a woman may complain, late in pregnancy, of an absence of fetal movement, and the ultrasound may show that the fetus is anencephalic, i.e., lacks a higher brain.²¹⁷ Or an ultrasound done at week 20 or 24 in a woman who had no prenatal genetic testing may show an unusual fetal appearance, with subsequent amniocentesis indicating a genetic disorder. Additionally, certain fetal problems such as hydrocephalus (water on the

213. Conditions elsewhere may make different limits workable. For example, Sweden has a general cut-off of 18 weeks. See C. TIETZE, *supra* note 9, at 10. It should be noted that Sweden, however, has universal access to medical care, virtually no poverty, and a very high general level of education. Cf. Young, *Caring for Disabled Infants*, HASTINGS CENTER REP., Aug. 1983, at 15, 16–17. Sex education also makes a difference. A recent study by the Alan Guttmacher Institute shows that the U.S. has a higher level of teenage pregnancies than other developed countries, and suggests that, among other things, the more frank and open sex education in other countries, their lower poverty rates, and their more generous provision of free or low-cost contraceptives may be contributing factors. Jones, Forrest, Goldman, Henshaw, Lincoln, Rosoff, Westoff & Wulf, *Teenage Pregnancy in Developed Countries: Determinants and Policy Implications*, 17 FAM. PLAN. PERSPS. 53, 53–54, 58–60 (1985).

214. Although a culture is successfully grown in 98% of the cases, in the remaining 2% a second amniocentesis is required. NATIONAL INST. OF CHILD HEALTH & HUMAN DEVELOPMENT, U.S. DEPT. OF HEALTH, EDUCATION & WELFARE, ANTENATAL DIAGNOSIS, at I-35 (1979).

215. See *supra* note 205, for the indications for amniocentesis.

216. See M. HARRISON, M. GOLBUS & R. FILLY, *supra* note 117, at 145–47 (many fetal malformations detected serendipitously during ultrasonographic examinations performed for obstetric indications); Ferry & Pernoll, *Rational Management of Perinatal Hydrocephalus*, 126 OBSTETRICS & GYNECOLOGY 151, 151 (1976) (fetal hydrocephalus likely to be discovered more frequently with use of ultrasound during pregnancy).

217. See generally Nakano, *Anencephaly: A Review*, 15 DEVEL. MED. & CHILD NEUROLOGY 383 (1973). Anencephaly is sometimes diagnosed late in pregnancy by the absence of voluntary movement by an anencephalic fetus. See Bonanao, Gregori & Breen, *Anencephaly: An Overview*, 77 J. MED. SOC'Y N.J. 439, 440 (1980).

brain) may require a series of ultrasound examinations to determine with reasonable accuracy the severity of the problem.²¹⁸ It is therefore necessary to consider, regardless of any change in the elective abortion cut-off, whether abortion under these unusual circumstances should be treated exactly like elective abortion, or should instead be given special treatment.

Some commentators have suggested that because an unfavorable diagnosis is extremely disturbing to the mother-to-be, eugenic abortions can be considered therapeutic, *i.e.*, undertaken to preserve the woman's health.²¹⁹ Although the woman's trauma should not be minimized, I believe this approach is flawed. First, although several cases have indicated that "health" in the abortion context includes mental health,²²⁰ and the Court has refused to interpret "health" narrowly,²²¹ physicians do not generally interpret "health" to cover maternal trauma resulting from knowledge of a fetal defect. Because doctors, reasonably enough, seldom wish to create test cases for homicide prosecutions, few if any will perform eugenic abortions (except for defects incompatible with life, such as anencephaly) after week 24 or 25.²²² Second, even if "health" were properly interpreted in this manner,²²³ only *some* women facing severe fetal diagnoses would

218. See Johnson, Pretorius, Clewell, Meier & Manchester, *Fetal Hydrocephalus: Diagnosis and Management*, 7 SEMINARS IN PERINATOLOGY 83, 85 (1983) (single ultrasound examination for hydrocephalus often inconclusive); Vintzileos, Ingardia & Nochimson, *Congenital Hydrocephalus: A Review and Protocol for Perinatal Management*, 62 OBSTETRICS & GYNECOLOGY 539, 542 (1983) (ultrasonography does not always provide early diagnosis of hydrocephalus).

219. See *Survey of Abortion Law*, *supra* note 8, at 148-49; Wood & Hawkins, *State Regulation of Late Abortion and the Physician's Duty of Care to the Viable Fetus*, 45 MO. L. REV. 394, 415-16 (1980) (recognizing that Supreme Court dicta suggest that states may not prohibit post-viability abortions for woman whose mental health was impaired by diagnosis of fetal defect).

220. *Doe v. Bolton*, 410 U.S. at 192; *United States v. Vuitch*, 402 U.S. 62, 72 (1971).

221. See *Colautti*, 439 U.S. at 400 (noting, in invalidating state requirement that doctor use abortion technique best for fetal survival unless alternative is necessary to safeguard the woman's health, that 'health' had not been construed by Pennsylvania courts to mean that all factors relevant to woman's welfare may be considered).

222. At a Planned Parenthood conference in New York on December 14 and 15, 1984, several noted physicians said that although they would perform third trimester abortions for anencephaly and felt that other very severe defects warranted late termination, they felt constrained to deny late abortions to women where the diagnosis was a severe but not invariably lethal abnormality. Statements of Dr. Mitchell Golbus, Professor of Obstetrics, Gynecology and Reproductive Science, and Director of the Reproductive Genetics Unit at the University of California Medical Center, San Francisco, California, and Dr. Phillip Stubblefield, Professor of Obstetrics and Gynecology, Harvard Medical School, Boston, Massachusetts. Dr. Stubblefield stated this view earlier in an interview in Boston on June 6, 1983. Also at the Planned Parenthood conference, Dr. Louise Tyrer, Director of the Medical Division of Planned Parenthood, stated that she has been unable to locate physicians in this country willing to perform abortions after week 25 even for such serious genetic defects as Trisomy 13 or 18, and has advised women in such cases to seek medical care in other countries. Although the numerous states without abortion legislation (and hence no restriction of post-viability abortion to cases where the woman's health is at stake) present no legal impediment to such abortions, they are nonetheless, according to Dr. Tyrer, virtually impossible to obtain.

223. Even if "health" were so interpreted, this would be of little use in those states that require that post-viability abortions to preserve the woman's health be done by the method least likely to harm the fetus. See, *e.g.*, GA. CODE ANN. § 16-12-141(c) (1984); NEB. REV. STAT. §§ 28-329, 28-330 (1979). When abortion is performed because of a fetal defect, the intent is that the fetus not

merit abortions; abortions could properly be denied to women who were handling this tragedy relatively well.²²⁴ (Of course, if mental health were really the only relevant factor, this disparity would seem neither inappropriate nor odd.) Finally, and most importantly, calling eugenic abortions "therapeutic" is not completely honest. Mental disturbance alone would seem an inadequate justification for some post-viability abortions—for example, if a woman were horribly disturbed to find that the fetus was male or had a very mild genetic abnormality that did little more than slightly decrease stature.²²⁵ One feels far more sympathy for the woman whose mental disturbance is created by a truly severe diagnosis. In other words, the real question here is whether fetuses with genetic anomalies can be treated differently from normal ones of the same gestational age. This vexing question clearly resembles the agonizing problem of whether newborns with birth defects can be allowed to die—a problem for which analysis properly focuses on the severity of the infant's condition, and not on the impact of the baby's condition on its parents.²²⁶

To analyze this problem, let's start with the easiest case. Suppose, at week 28, an ultrasound is performed because the woman feels no fetal movement, and it reveals that the fetus is anencephalic. Such infants, if not stillborn, will die within hours or days of birth.²²⁷ Even in the extraordinarily rare case where the baby lives a bit longer,²²⁸ there is no possibility of lengthy survival or consciousness. Upon diagnosis at birth, withholding life-sustaining treatment is unquestionably appropriate, because the infant is dying.²²⁹ Even the very conservative "Baby Doe" regulations promulgated by the Department of Health and Human Services (DHHS) allowed nontreatment of anencephalic infants.²³⁰ Because such

survive. Such a requirement would therefore effectively eliminate such abortions. *See Note, supra* note 200, at 135-36.

224. *Survey of Abortion Law, supra* note 8, at 143-49.

225. For example, Klinefelter's syndrome (an extra X chromosome in males) causes infertility and a slightly decreased I.Q.—10 to 15 points below that of normal siblings. D. SMITH, *RECOGNIZABLE PATTERNS OF HUMAN MALFORMATION* 64 (3d ed. 1982). Counseling parents about whether to abort for such an abnormality can be quite difficult. *See P. REILLY, GENETICS, LAW AND SOCIAL POLICY* 166 (1977).

226. *See* PRESIDENT'S COMMISSION FOR THE STUDY OF ETHICAL PROBLEMS IN MEDICINE AND BIOMEDICAL AND BEHAVIORAL RESEARCH, *DECIDING TO FOREGO LIFE-SUSTAINING TREATMENT* 219 (1983) [hereinafter cited as COMMISSION'S REPORT].

227. *See* Nakano, *supra* note 217, at 383.

228. The longest documented survival for an anencephalic infant is 5½ months. Chervenak, *When Is Termination of Pregnancy During the Third Trimester Morally Justifiable?*, 310 N. ENG. J. MED. 501, 502 (1984); Brackbill, *The Role of the Cortex in Orienting: Orienting Reflex in an Anencephalic Human Infant*, 5 DEV. PSYCHOLOGY 195 (1971).

229. *See, e.g.,* COMMISSION'S REPORT, *supra* note 226, at 219; D. SMITH, *supra* note 225, at 568.

230. 49 Fed. Reg. 1622, 1654 (1984) (codified at 45 C.F.R. pt. 84, app. C (1984)). This was the final version of the "Baby Doe" regulations, promulgated under the ostensible authority of § 504 of the Rehabilitation Act of 1973, 29 U.S.C. § 794 (1976). Federal courts have held, however, that the

an infant is dying at birth, and is hence not viable, an anencephalic fetus is likewise not viable, no matter what stage of gestation it has reached.²³¹ Denying a woman an abortion in this type of case is tantamount to making her carry to term a fetus that has died *in utero*. Thus, even under a viability standard that brooks no exceptions, abortion for anencephaly (or other defects that inevitably cause neonatal death)²³² should be permitted at any time in pregnancy.

Most defects, however, are not quite so severe, and hence create far more difficult dilemmas. For instance, Trisomy 13²³³ or 18²³⁴ infants almost never live beyond three years.²³⁵ Those few who survive infancy are inevitably profoundly retarded²³⁶ and usually plagued by multiple physical problems.²³⁷ Tay-Sachs²³⁸ children never survive past four years and suffer a painful process of neurological deterioration beginning at about six months.²³⁹ Babies with these sorts of defects present true treatment

department lacked statutory authority to promulgate such regulations. *United States v. University Hosp., State Univ. of N.Y. at Stony Brook*, 575 F. Supp. 607 (E.D.N.Y. 1983), *aff'd*, 729 F.2d 144 (2d Cir. 1984); *American Hosp. Assoc. v. Heckler*, 585 F. Supp. 541 (S.D.N.Y. 1984), *aff'd*, Nos. 84-6211 & 84-6231 (2d Cir. Dec. 27, 1984), *cert. granted*, 105 S. Ct. 3475 (1985). Congress has now passed amendments to the Child Abuse Prevention and Treatment Act to deal with the problem of infants with birth defects. Pub. L. No. 98-457, 98 Stat. 1749, 1752-54 (1984).

231. Although not using the terminology of viability, Chervenak persuasively argues in favor of third trimester abortions for anencephalic infants, because they have a reliably diagnosable condition that is incompatible with postnatal survival for more than a few weeks. Chervenak, *supra* note 228, at 502.

232. Certain defects, such as renal agenesis, infantile polycystic kidneys with hypoplastic lungs, and Meckel's syndrome, inevitably cause death within a few weeks of birth, but at present are not susceptible to accurate prenatal diagnosis. Chervenak, *supra* note 228, at 502. Hydranencephaly, a disorder related to anencephaly in which the cerebellum is destroyed prenatally, can allow for a somewhat longer life (6 months or a year), but these infants will never be conscious. See S. KORONES, *HIGH RISK NEWBORN INFANTS* 165 (3d ed. 1981). Prenatal diagnoses of hydranencephaly or alobar holoprosencephaly (another disorder incompatible with long-term or conscious survival) are treated similarly to anencephaly after birth, D. SMITH, *supra* note 225, at 568, and should probably be treated similarly when diagnosed *in utero*, assuming such diagnosis is reliable. Chervenak, *supra* note 228, at 503, notes, however, that *in utero* diagnoses of these disorders are sometimes unreliable.

233. Trisomy 13 is a chromosomal anomaly that causes severely abnormal cerebral function and often causes anomalies of the eyes, ears, heart, renal system, and gastrointestinal tract. See Magenis & Hecht, *Chromosome 13 Trisomy Syndrome*, in *BIRTH DEFECTS COMPENDIUM* 212, 212-13 (D. Bergsma 2d ed. 1979).

234. Trisomy 18 causes severely abnormal cerebral function, and, frequently, cardiac, gastrointestinal or renal defects, or defects of other organ systems. See Hecht, *Chromosome 18 Trisomy Syndrome*, in *BIRTH DEFECTS COMPENDIUM*, *supra* note 233, at 201-02.

235. Sixty-five percent of Trisomy 13 infants are dead by 3 months, and 95% are dead by 3 years. Magenis & Hecht, *supra* note 233, at 213. Trisomy 18 infants fare no better: 90% are dead within the first year. Karayalcin, *Wilms Tumor in a Thirteen Year Old Girl with Trisomy 18* (Letter to the Editor), 135 *AM. J. DISEASES CHILDREN* 665, 666 (1982).

236. Magenis & Hecht, *supra* note 233, at 213; Hecht, *supra* note 234, at 202. There is no report of a child with Trisomy 18 ever learning to walk or talk. *Id.*

237. See *supra* notes 233-34.

238. Tay-Sachs is a degenerative disease in which the baby appears normal at birth but develops motor weakness and becomes unconscious by no later than age four. See O'Brien, *The Gangliosidoses*, in *THE METABOLIC BASIS OF INHERITED DISEASE* 945, 957 (J. Stanbury, J. Wyngaarden, D. Fredrickson, J. Goldstein & M. Brown 5th ed. 1983).

239. *Id.* at 852-53.

dilemmas, discussion of which is largely beyond the scope of this Article.²⁴⁰ However, the overwhelming majority of physicians would not aggressively sustain the life of a Trisomy 13 or 18 infant,²⁴¹ or a child with Tay-Sachs, after some point in its inevitable decline.²⁴² Ethicists who specifically discuss these disorders also agree that they render life so brief and so devastatingly impaired that medical preservation would do more harm than good.²⁴³ Of course, there is dispute here: DHHS's "Baby Doe" regulations seemed to require preservation of any conscious life that could persist for more than hours or days.²⁴⁴ But if one rejects such rigid vitalism²⁴⁵ and allows that some few lives are so painful and/or limited that death could reasonably be preferred, these infants' lives may well be of this caliber.

Babies with these sorts of defects will therefore be appropriate candi-

240. For discussions of these issues, see generally R. WEIR, *SELECTIVE NONTREATMENT OF HANDICAPPED NEWBORNS* (1984); COMMISSION'S REPORT, *supra* note 226, at 197-229; Arras, *Toward an Ethic of Ambiguity*, 14 HASTINGS CENTER REP., Apr. 1984, at 25; WHICH BABIES SHALL LIVE? HUMANISTIC DIMENSIONS OF THE CARE OF IMPERILED NEWBORNS (T. Murray & A. Caplan eds. 1985); Rhoden, *Treatment Dilemmas for Imperiled Newborns: Why Quality of Life Counts*, 58 S. CAL. L. REV. 1283 (1985).

241. A survey of pediatricians and pediatric surgeons found that 91.6 percent of the pediatricians and 86.5 percent of the surgeons would acquiesce in the parents' decision not to repair an atresia in a Trisomy 13 infant. Shaw, Randolph & Manard, *Ethical Issues in Pediatric Surgery: A National Survey of Pediatricians and Pediatric Surgeons*, 60 PEDIATRICS 588, 590 (1977). This was higher than for any other disorder except anencephaly. Dr. David Smith specifically recommends giving parents the option to withhold treatment from these infants. D. SMITH, *supra* note 225, at 568; see also Duff, *Counselling Families in Deciding Care of Severely Defective Children: A Way of Coping With 'Medical Vietnam'*, 67 PEDIATRICS 315 (1981) (most parents and health care personnel unenthusiastic about treating infants with Trisomy 18 or disorders with equally poor prognosis). No physician I have interviewed would recommend surgery for a Trisomy 13 or 18 infant with esophageal atresia. Personal interviews with Dr. Alan Fleischman, Director of Division of Neonatology, Dept. of Pediatrics, and Associate Professor of Pediatrics, Albert Einstein College of Medicine; Dr. Harry Gordon, Professor Emeritus of Pediatrics, Albert Einstein College of Medicine; Dr. Lucille Perrotta, Director of Newborn Services, Hospital of Albert Einstein College of Medicine, in New York City (June 11 & 12, 1984); Dr. Jack Rudolph, Director of Newborn Services and Prof. of Pediatrics & Obstetrics/Gynecology, University of Baylor College of Medicine in Houston, Texas. (Feb. 19, 1985); Dr. Joan Richardson, Director of Newborn Intensive Care and Professor of Pediatrics and Obstetrics/Gynecology, University of Texas Medical Branch—Galveston in Galveston, Texas (Feb. 5, 1985).

242. See Desnick & Goldberg, *Tay-Sachs Disease: Prospects for Therapeutic Intervention*, 18 PROGRESS CLINICAL BIOLOGICAL RESEARCH 129, 136-38 (1977) (no treatment for Tay-Sachs available or likely to be developed soon).

243. See e.g., R. WEIR, *supra* note 240, at 235-38; Strong, *Can Fluids and Electrolytes Be 'Extraordinary' Treatment*, 7 J. MED. ETHICS 83, 85 (1981); Arras, *supra* note 240, at 31.

244. DHHS took the position that handicapped infants must be provided with all treatments given normal infants, that procedures are mandatory unless they are not "medically beneficial," and that factors such as future impairments are irrelevant. 45 C.F.R. § 84.55, pt. 84, app. C (1984). For criticisms of this position, see Angell, *Handicapped Children: Baby Doe and Uncle Sam*, 309 N. ENG. J. MED. 659, 659-61 (1983); Paris, *Terminating Treatment for Newborns: A Theological Perspective*, 10 LAW, MED. & HEALTH CARE 120, 122 (1982); Arras, *supra* note 240, at 26-27; Rhoden, *supra* note 240, at 216-22.

245. The principle that any sort of life at all is preferable to nonexistence and must therefore be preserved by all medical means has been termed "vitalism." See McCormick, *To Save or Let Die*, 229 J. A.M.A. 172, 175 (1974).

dates for "conservative" medical treatment, such as withholding surgery, resuscitation, antibiotics for infection, and perhaps even artificial modes of feeding.²⁴⁶ In light of this, it would seem reasonable for abortion, even past the usual cut-off, to be permissible for similarly afflicted fetuses, on the theory that if post-natal life supports can be withheld or withdrawn, then so can prenatal life supports. After all, the woman's privacy right continues throughout pregnancy. Although the state's interest in the potential life normally becomes compelling at viability, and hence can override her right, in cases where the child's life will be so brief, painful and bleak that aggressive treatment of the infant should not be mandatory, it seems reasonable to hold that before birth, the state's interest in potential life is likewise less strong. The state, therefore, should not force women to bear children that inevitably will struggle, suffer and soon die, and doctors should have discretion to perform these abortions substantially later than elective ones (though probably not quite as late as for anencephaly).

The hardest cases, and the ones in which the argument that the woman should have a right to abort substantially beyond the usual cut-off is least persuasive, are defects such as Down's syndrome²⁴⁷ or spina bifida,²⁴⁸ in which most victims can live an impaired but lengthy and happy life. The state interest in protecting a newborn with such a defect is generally held to supersede parental or medical discretion to deny treatment to the child²⁴⁹ unless, for example, a spina bifida infant has associated anomalies which are unusually severe.²⁵⁰ Thus, continued life is ordinarily felt to be

246. See R. WEIR, *supra* note 240, at 234-40; COMMISSION'S REPORT, *supra* note 226, at 249-51 (discussing resuscitation), 220 (discussing methods of feeding); Strong, *Defective Infants and Their Impact On Families: Ethical and Legal Considerations*, 11 LAW, MED. & HEALTH CARE 168 (1983).

247. Down's syndrome, or Trisomy 21, is a genetic abnormality that causes varying degrees of mental retardation and can be accompanied by other medical disorders. See Miller, *Chromosome 21 Trisomy Syndrome*, in BIRTH DEFECTS COMPENDIUM, *supra* note 233, at 215-16. Many of these children can live relatively lengthy lives. *Id.*

248. Spina bifida, in which the neural tube fails to close, requires an operation at birth to repair the spinal lesion. Depending on the severity of the defect, spina bifida children may suffer from paralysis of bowel, bladder and legs, may require numerous orthopedic surgeries for spinal deformities, and may need shunting for hydrocephalus. See Lorber, *Spina Bifida Cystica*, 47 ARCHIVES DISEASE IN CHILDHOOD 854 (1972). Some may be mentally retarded, but others are of normal intelligence. G. AVERY, *supra* note 105, at 981-82.

249. In the case of Baby Doe, the Indiana state courts refused to intervene in a parental decision to withhold surgery from a Down's syndrome baby with an esophageal blockage. *In re Infant Doe*, No. GU 8204-004A (Monroe County Cir. Ct. Ind. April 12, 1982), *writ of mandamus dismissed sub nom. State ex rel Infant Doe v. Baker*, No. 482 § 140 (Ind. Ct. App. May 27, 1982), *cert. denied*, 464 U.S. 961 (1983). Most authorities agree, however, that Down's syndrome babies should be treated like normal infants. See, e.g., COMMISSION'S REPORT, *supra* note 226, at 218-19; Foster, *Putting Hospitals on Notice*, 12 HASTINGS CENTER REP., Aug. 1982, at 5; Paris & McCormick, *Saving Defective Infants: Options for Life or Death*, AMERICA, April 23, 1983, at 313.

250. In the case of Baby Jane Doe, an infant with severe spina bifida, hydrocephalus, and microcephaly, the parental decision to choose "conservative treatment" with antibiotics over surgical closing of the spinal lesion was upheld, although the Court of Appeals' decision was based primarily on the procedural ground that there had been no compliance with the Family Court Act's neglect procedures.

in the best interests of these infants. In light of this assessment, abortion of a fetus with Down's syndrome or spina bifida can seldom be characterized as being best for the child. Rather, it is usually undertaken because parents do not wish to raise such a child, since raising a handicapped child often destroys marriages, disrupts careers and creates problems for siblings.²⁵¹ Although the vast majority of women who receive a prenatal diagnosis of Down's syndrome or spina bifida do abort,²⁵² an unusually late diagnosis of this type of defect nonetheless presents a very difficult question for late eugenic abortions.

These cases are further complicated by the fact that a late abortion may produce a living infant. Although this is unlikely with defects such as Trisomy 13 or 18, where the fetus is so fragile that it is not likely to survive a substantially premature delivery, premature Down's syndrome and spina bifida infants may be as strong as healthy premature babies and will face only the usual risks of prematurity. Doctors have ethical and legal obligations to treat the handicapped baby born alive from an abortion like any other infant with a similar handicap.²⁵³ Thus, the risk of live birth of a baby with defects who is made to suffer even further from the hazards of prematurity provides a good reason not to authorize such late abortions. But even if *in utero* death were assured,²⁵⁴ late abortions for these defects pose ethical problems as well. The 8-month Down's syndrome fetus differs from the normal fetus only in its cognitive potential. Although its deficiency may warrant some relaxation of the normal cut-off (e.g., 26 weeks instead of 24, or 24 instead of 22), the deficiency does not justify the time restrictions' complete abrogation; this would imply that the state has little or no interest in protecting an unborn individual simply because it is handicapped.²⁵⁵

The problem of eugenic abortions thus cannot be resolved either by simply treating them like ordinary elective abortions or by allowing termination for any defect throughout the entire third trimester. There exists a frightening array of potential defects, and the law obviously cannot set specific time limits for each one. However, flexible guidelines could be

Weber v. Stony Brook Hosp., 60 N.Y.2d 208, 456 N.E.2d 1186 469 N.Y.S.2d 63 (1983), *aff'g* 95 A.D.2d 587, 467 N.Y.S.2d 685 (1983) (dismissing petition by unrelated party to compel surgery). In refusing the federal government's request to intervene, the New York federal district court found that the parents were acting upon "a reasonable interpretation of the child's best interests." United States v. University Hospital of State Univ. of New York at Stony Brook, 575 F. Supp. 607, 616 (E.D.N.Y. 1983), *aff'd*, 729 F.2d 144 (2d Cir. 1984).

251. See Strong, *supra* note 246.

252. Kerenyi & Chitkara, *Letter to the Editor*, in 305 N. ENG. J. MED. 1219 (1981).

253. See Rhoden, *supra* note 146, at 1489.

254. As noted previously, some doctors now advocate injecting Digoxin into the hearts of fetuses being aborted, to insure fetal death *in utero*. See Waters, *supra* note 149.

255. *But see* Note, *supra* note 200, at 119-20, 137 (arguing for completely unfettered right to eugenic abortion at any time in pregnancy).

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established that permitted eugenic abortions for a few weeks after the normal cut-off, abortions for extremely severe defects (e.g., Trisomy 13) quite a bit later, and abortions for defects incompatible with life (e.g., anencephaly) at any time during pregnancy. With disorders in which severity can vary enormously such as microcephaly and hydrocephalus, physicians would have the task of assessing how severe the defect was likely to be, and thus how much past the ordinary cut-off abortion was justifiable.²⁵⁶ No solution to this infrequent but vexing problem will be perfect, but a flexible one such as this seems preferable.

Because states can require post-viability abortions to be performed by the method least harmful to the fetus unless an alternative is better for the mother, a final question is whether states could likewise require this for eugenic abortions permitted past the cut-off. Such a requirement would almost certainly deter doctors from performing late eugenic abortions, because they would not want to risk further harming a handicapped baby by burdening it with prematurity. Hence such regulations would effectively eliminate the eugenic abortion exception. But if the exception itself is justified, then regulations that negate it should be proscribed. The method chosen for late eugenic abortions should therefore be a matter for medical discretion.

IV. POSTSCRIPT: AVOIDING TECHNOLOGICAL DOMINANCE OF LAW

To read *Roe* as establishing technological survivability as an appropriate cut-off for all time, with no judicial discretion to reassess in light of medical advances, would make abortion law stand alone in embracing an unthinking capitulation to scientific technology. The relationship of science and law is, in this age of rapid technological progress, an enormous and complex topic.²⁵⁷ Nonetheless, one feature of the relationship is clear: Although the law must be responsive to scientific advances, it rightfully must retain control and temper technology with the social values it incorporates. This norm-governed relation has been consistently embraced by courts; perhaps a few brief examples will illustrate how, in other areas, courts have refused to be guided solely by scientific determinants and have instead insisted upon invoking the normative center of law.

256. Allowing this sort of an exception is not particularly unusual and is compatible with physician discretion in implementation. As noted by the Court in *Roe*, the proposed Uniform Abortion Act would have allowed: (1) elective abortion until week 20; (2) abortion after that time to protect the mother's health, to screen out fetal defects, or following rape, incest or illicit intercourse with a girl under 16. *Roe*, 410 U.S. at 146-47. Likewise, various other countries have treated eugenic abortions as special cases. See, e.g., C. TIETZE, *supra* note 9, at 10 (quoting United Kingdom statute allowing abortion if child, were it born, would suffer from serious physical or mental abnormalities).

257. See generally SCIENCE AND LAW: AN ESSENTIAL ALLIANCE (W. Thomas ed. 1983); SCIENTISTS IN THE LEGAL SYSTEM (W. Thomas ed. 1974).

In constitutional adjudication, where weighty rights and interests clash, empirical standards or standards determined entirely by another discipline are seldom even remotely plausible. In the First Amendment area, for example, courts must determine when speech constitutes a clear and present danger to the public safety.²⁵⁸ This is clearly a value judgment: a proposal to delegate such decisions to experts in psycholinguistics or communications theory would rightfully be greeted with derision. There is likewise no litmus test for pornography—common sense plus social values just help judges “know it when [they] see it.”²⁵⁹

A basic tenet of criminal and constitutional law—that insanity vitiates criminal responsibility—does invoke medical science to help determine which defendants are insane. Even then, although courts are attentive to psychological theories and diagnoses, they refuse to be bound by them. Insanity is a legal and not a medical concept,²⁶⁰ and the crucial issue is whether the defendant is insane, not whether he is schizophrenic, psychopathic, etc. Thus the stability of criminal law is not shaken by revisions in psychiatrists’ diagnostic manuals, and medical theories and terminology inform but do not control.²⁶¹ As several courts have put it:

Legal tests of criminal insanity are not and cannot be the result of scientific analysis or objective judgment They must be based on the instinctive sense of justice of ordinary men.²⁶²

As a circuit judge, Justice Burger not only emphasized the hazards of letting experts testify as to the ultimate issue of criminal insanity,²⁶³ but also more generally stated: “[N]o rule of law can possibly be sound or workable which is dependent upon the terms of another discipline whose

258. See generally L. TRIBE, *AMERICAN CONSTITUTIONAL LAW* 608-31 (1978) (“clear and present danger” doctrine used to distinguish protected speech from unprotected incitement of violent or illegal conduct).

259. See *Jacobellis v. Ohio*, 378 U.S. 184, 197 (1964); see also *Miller v. California*, 413 U.S. 15, 24 (1973) (one factor in determining obscenity is whether average person applying contemporary community standards would find that work as whole appeals to prurient interest).

260. See Tanay, *Forensic Psychiatry in the Legal Defense of Murder*, in *READINGS IN LAW AND PSYCHIATRY* 665, 665-66 (R. Allen, E. Ferster & J. Rubin eds. 1975); see also Shaw, *The Mentally Disordered Offender*, in *READINGS IN LAW AND PSYCHIATRY*, *supra*, at 347, 352-53.

261. See *United States v. Brawner*, 471 F.2d 969, 978 (D.C. Cir. 1972).

262. *Id.* at 977 n.6; see also *Holloway v. United States*, 148 F.2d 665, 666 (D.C. Cir. 1945). Courts likewise listen to psychiatrists in civil commitment proceedings, in hearings to determine competency to stand trial, and in decisions about incompetency for purposes of civil guardianship appointments, but they nonetheless insist the ultimate decision is a legal one. See Cohn, *Standards for Civil Commitment and the Right to Liberty*, in 1 *LEGAL RIGHTS OF MENTALLY DISABLED PERSONS* 183, 196 (Litigation and Administrative Practice Series No. 114, 1979) (courts and legislatures recognize that competence is social and legal, not medical, question); Sadoff, *Basic Facts about Mental Illness*, in 1 *LEGAL RIGHTS OF MENTALLY DISABLED PERSONS* 163, 176 (mental illness not tantamount to incompetency, because incompetency determinations are judicial, not medical).

263. See *Blocker v. United States*, 288 F.2d 853, 863 (D.C. Cir. 1961) (Burger, J., concurring).

members are in profound disagreement about what those terms mean.”²⁶⁴ This principle should not be forgotten in the abortion context: A technology-dependent point such as viability should not be the sole determinant of temporal cut-off points in abortion law.

The fundamental principle that legal decisions, even on highly technical subjects, must not be dictated by scientific doctrines or determinations because such a decision making process would ignore relevant non-scientific values is illustrated in many other areas. These include the degree of deference shown to decisions of the U.S. Patent Office, the Environmental Protection Agency (EPA), and the Occupational Safety and Health Administration (OSHA), the treatment of general accounting principles for purposes of the income tax law, and the tort concept of “proximate cause.” In some of these areas, the judiciary shows great deference to science. Nonetheless, the degree of deference that is shown is established by a judicial choice that itself looks to relevant social values as well as to science.

Patents promote scientific progress by offering inventors a right of exclusion for a limited time period as an incentive to risk the time and money necessary for research and development.²⁶⁵ Free enterprise would be impeded, however, if even trivial and obvious refinements in the current art were granted exclusionary rights. Thus, to be patentable, an invention must be “non-obvious.”²⁶⁶ Although the issuance of a patent by the Patent Office creates a presumption of validity,²⁶⁷ this scientific determination is not conclusive of non-obviousness, which is ultimately a question of law.²⁶⁸ According to one court:

While weight must be given to the presumption of validity . . . the time has long since gone, if it ever existed, when district courts and courts of appeal could refuse to make an independent assessment of § 103 obviousness in light of all the evidence presented. To criticize a court for making an independent assessment is to criticize it for doing what the law presently requires.²⁶⁹

This independent assessment is not simply a fresh evaluation of the scientific evidence. It includes, implicitly or explicitly, a consideration and in-

264. *Id.* at 860.

265. *Kewanee Oil Co. v. Bicron Corp.*, 416 U.S. 470, 480 (1974).

266. *See* 35 U.S.C.A. §§ 101-103 (West 1984 & Supp. 1985). The non-obviousness requirement is that the invention would not be obvious, in light of all prior art, to someone knowledgeable in the field. 35 U.S.C.A. § 103.

267. *Scully Signal Co. v. Electronics Corp. of Am.*, 570 F.2d 355, 362 (1st Cir. 1977).

268. *Graham v. John Deere Co.*, 383 U.S. 1, 17 (1966); *Johnson & Johnson, Inc. v. Wallace A. Erickson & Co.*, 627 F.2d 57, 62 (7th Cir. 1980).

269. *Scully Signal Co.*, 570 F.2d at 362.

corporation of values, such as free enterprise, that underlie the patent process.

Just as patent cases may involve the degree of deference to be given Patent Office determinations, environmental or safe workplace cases may involve the standard of review for EPA or OSHA decisions.²⁷⁰ This somewhat conflates the issues of judicial deference to science and to decisions of administrative agencies. Nonetheless, the standard for judicial review of these agencies' determinations²⁷¹ is relevant: Courts must not "substitute [their] judgment for that of the agency,"²⁷² but they must engage in a substantial inquiry into the decision, asking whether it was "based on a consideration of the relevant factors."²⁷³ Such factors, of course, include not only scientific matters but also social values and policy judgments.²⁷⁴ As the D.C. Circuit has put it: "While we must bow to the acknowledged expertise of the Administrator in matters technical we should not automatically succumb thereto, overwhelmed as it were by the utter 'scientificity' of the expedition."²⁷⁵ Thus, again, science should not utterly dominate law.

Science should not dominate law because science and law have different objectives: "Science seeks truth with impartial objectivity; law seeks a truth tempered with justice."²⁷⁶ In the tax area, accounting—a dubious science at best—seeks not pure objectivity but proper and profitable management for the company.²⁷⁷ Tax law, on the other hand, has an overrid-

270. Because such agencies are empowered by Congress to make determinations within their area of expertise, *see, e.g.*, National Environmental Policy Act of 1969, 42 U.S.C. §§ 4321, 4331-4335, 4341-4347 (1982), their decisions are accorded great deference. *See* *Citizens to Preserve Overton Park, Inc. v. Volpe*, 401 U.S. 402, 415 (1971).

271. In *Abbott Laboratories v. Gardner*, 387 U.S. 136, 139-41 (1967), the Court created a presumption that Congress intended decisions of administrative agencies to be subject to judicial review unless it specifically stated otherwise. The Administrative Procedure Act, Pub. L. No. 79-404, 60 Stat. 237 (codified as amended in scattered sections of 5 U.S.C.) establishes such a presumption of reviewability. 5 U.S.C. § 702 (1982).

272. *Citizens to Preserve Overton Park Inc.*, 401 U.S. at 416.

273. *Id.*; *Ethyl Corp. v. E.P.A.*, 541 F.2d 1, 34-35 (D.C. Cir.), *cert. denied*, 426 U.S. 941 (1976); *see also* *Vermont Yankee Nuclear Power Corp. v. Natural Resources Defense Council, Inc.*, 435 U.S. 519, 547 (1978) (courts must take hard look at administrative actions; review not limited to whether agency's procedures were proper).

274. In invalidating, by a 5-4 decision, OSHA's standard that decreased permissible exposure to benzene from 10 parts per million to 1 part per million, the Court emphasized that the policy behind the Occupational Safety and Health Act was to eliminate significant harm, not to mandate absolute safety. *Industrial Union Dep't v. American Petrol Inst.*, 448 U.S. 607, 646-47 (1980); *see also* W. RODGERS, *ENVIRONMENTAL LAW* 744-45 (1977) (courts must determine whether agency gave sufficient weight to environmental values). As one commentator puts it, in reviewing an agency's decision in this sort of case, a judge "should recognize that the decision being reviewed is at bottom a policy decision." McGarrity, *Substantive and Procedural Discretion in Administrative Resolution of Science Policy Questions: Regulating Carcinogens in EPA and OSHA*, 67 *GEO. L.J.* 729, 809 (1979).

275. *Essex Chem. Corp. v. Ruckelshaus*, 486 F.2d 427, 434 (D.C. Cir. 1973).

276. W. Thomas, *Scientists and Lawyers: Their Obligation to Cooperate*, in *SCIENTISTS IN THE LEGAL SYSTEM*, *supra* note 257, at 1.

277. *See* *Thor Power Tool Co. v. Commissioner*, 439 U.S. 522, 542 (1979).

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ing mandate to preserve the revenue.²⁷⁸ Thus, although a taxpayer's adherence to generally accepted accounting principles will ordinarily be found to reflect income, the Tax Commissioner or the court can determine that, in a particular case, it does not.²⁷⁹ Just as viability is determined by medical probabilities, about which there is no agreement, the Court has said of accounting principles:

[G]enerally accepted accounting principles are far from being a canonical set of rules that will ensure identical accounting treatment of identical transactions . . . [such principles], rather, tolerate a range of 'reasonable' treatments, leaving the choice among alternatives to management.²⁸⁰

Allowing such principles definitively to determine income would improperly let accountants (and accounting) dictate the terms of the tax law.²⁸¹

The differing purposes of science and law likewise inform the tort concept of proximate cause. Causation is a scientific, empirical concept. Scientific proof may show, with irrefutable evidence and logic, that a package dropped at one end of a railroad station caused scales to fall at the other, thereby injuring poor Mrs. Palsgraf.²⁸² But the law may refuse to hold responsible the railroad attendant who caused the package to drop, because the result is viewed as too unforeseeable to impose liability.²⁸³ Views about liability are more expansive today, but the problem of an act causing harm that is remote in time or space, or that injures an unforeseeable plaintiff, is still relevant.²⁸⁴ Even were the scope of tort liability to be made coextensive with demonstrable causation, such a decision would be based on societal and judicial values and would not represent a mere capitulation to science.

Even when a scientific standard is accepted as a legal one, this is done as a matter of law, after consideration of relevant principles. For example, the tort rule that the medical profession sets its own standard of care—that is, that conformity with accepted medical practice is not malpractice²⁸⁵—is nonetheless a rule of law and potentially subject to change by law.²⁸⁶ Likewise, when doctors, in response to new medical technology,

278. *Id.* at 543.

279. *Id.* at 539-40.

280. *Id.* at 544.

281. *Id.*

282. *Palsgraf v. Long Island R.R.*, 248 N.Y. 339, 162 N.E. 99 (1928).

283. *Id.* at 346-47, 162 N.E. at 101.

284. *See* W. KEETON, D. DOBBS, R. KEETON & D. OWEN, *PROSSER AND KEETON ON THE LAW OF TORTS*, 264-65, 272-73, 287 & n.56 (5th ed. 1984) (discussing how these decisions are ones of social policy).

285. *See id.* at 187-89.

286. Occasionally, a court will hold that even though a practice is a standard one, it is nonetheless

revised their definition of death (cessation of cardiac activity) to include irreversible loss of brain function,²⁸⁷ the law eventually followed suit, but it did so as an explicit policy judgment. An influential President's Commission studied the matter, noting that the law's historical deference to the medical definition of death was itself established as a matter of law.²⁸⁸ As to the recommendation to accept "brain death," the President's Commission relied on scientific knowledge but made clear that science should not rule:

Biomedical knowledge ought to continue to inform public policy in revising the legal standards concerning death . . . but, in the end, the society as a whole must judge that these technical standards and the opinions they reflect conform to society's settled values and accepted conceptions of human existence and personal rights. This judgment will be most clearly expressed through the medium of the law of the land.²⁸⁹

As this very brief discussion shows, law has not been, and should not be, controlled by science. For while science seeks to be value free, law is ultimately the articulation of social values. The judicial process cannot become value-free and remain judicial.²⁹⁰ That the right to privacy, implicit in the Constitution, extends to a woman's right to abort is a value judgment, based not solely on interpretation of the views of the Founding Fathers,²⁹¹ but also on today's social values and mores.²⁹² It is a highly controversial judgment. But it will not be made less controversial by letting science dictate the dimensions of the abortion right. Rather, just as the law is responsive to science but is not ruled by it in other areas, the Supreme Court, and not technology, remains ultimately responsible for establishing the limitations of the abortion right.

negligent. See *Truhitte v. French Hosp.*, 128 Cal. App. 3d 332, 180 Cal. Rptr. 152 (1982) (surgeon must personally ensure removal of sponges, even if practice is to delegate this duty); *Helling v. Carey*, 83 Wash. 2d 514, 519 P.2d 981 (1974) (en banc) (failure to give glaucoma test to patient under 40 negligent despite being common practice).

287. *A Definition of Irreversible Coma: Report of the Ad Hoc Committee of the Harvard Medical School to Examine the Definition of Brain Death*, 205 J. A.M.A. 337 (1968).

288. PRESIDENT'S COMMISSION FOR THE STUDY OF ETHICAL PROBLEMS IN MEDICINE AND BIOMEDICAL AND BEHAVIORAL RESEARCH, *DEFINING DEATH: MEDICAL, LEGAL AND ETHICAL ISSUES IN THE DETERMINATION OF DEATH* 46 (1981).

289. *Id.* at 46-47.

290. Markey, *Law and Science: A Dialogue of Understanding*, in *SCIENCE AND LAW: AN ESSENTIAL ALLIANCE*, *supra* note 257, at 7; see also Markey, *Jurisprudence or "Juriscience"?*, 25 WM. & MARY L. REV. 525 (1984).

291. According to some, it cannot plausibly even be related to the views of the Founding Fathers. See, e.g., Ely, *supra* note 136, at 920.

292. See generally Perry, *supra* note 190.

CONCLUSION

In recognizing an abortion right, the Supreme Court appropriately relied on fundamental societal principles. In defining the contours of the right, however, it at least appeared to rely too heavily upon technological facts that were valid in 1973 but that are rapidly becoming obsolete. As the trimester system's medical foundation erodes, a similar fate for the abortion right itself is fearfully (or eagerly) being anticipated. But the abortion right need not suffer such a fate, for the fundamental principles that support it remain steadfast. If the unarticulated premise behind the viability standard—that late gestation (not merely survivability) is crucial—is given its due, then abortion law need not be tethered to the technology upon which fetal viability turns. "Late gestation" can be designated explicitly, and it can stay still. If *Roe* is revised (if this ever becomes necessary) by rethinking the trimester system and recognizing that there is a time range that represents the earliest period when abortion should, in our society, be subject to proscription, the spirit of *Roe* will be retained while the threat of technological tyranny will finally be vanquished.