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The Concept of Brain Life: Shifting the Abortion Standard Without Imposing Religious Values, 25 Duq. L. Rev. 471 (1987)

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The point at which a mass of protoplasm becomes a human being cannot be determined by science. Attributes such as "human" cannot be verified by mathematical calculation or even empirical observation. The question of when human life begins is, in this sense, metaphysical, and any answer to the question is necessarily speculative.[1]

Although there is no strictly scientific ground upon which to determine when or if a fetus is a person, courts have often been faced with the practical necessity of making such a determination.[2] While the absence of an objective basis has been acknowledged by some courts,[3] the majority of courts have, often by the skillful employment of rhetoric, refused to acknowledge the patently unscientific character of this judgment.[4] The difficult fact is that scientific

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1. *Cf.* the remarks of Dr. Lewis Thomas, chancellor of the Memorial Sloan-Kettering Cancer Center and former dean of the Yale Medical School, in his testimony before the United States Senate regarding the Human Life Bill (S. 158):

> The question as to when human life begins, and whether the very first single cell that comes into existence after fertilization of an ovum represents, in itself, a human life, is not in any real sense a scientific question and cannot be answered by scientists. Whatever the answer, it can neither be verified nor proven false using today's scientific knowledge.
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> It is therefore in the domain of metaphysics: it can be argued by philosophers and theologians, but it lies beyond the reach of science.

ABORTION, MEDICINE, AND THE LAW 710 (Butler and Walbert 3d ed. 1986).

2. *See generally* Louisell, *Abortion, the Practice of Medicine and the Due Process of Law*, 16 U.C.L.A. L. REV. 233 (1969).

3. *See, e.g.*, Foster v. State, 182 Wis. 298, 196 N.W. 233 (1923), where the court stated:

> In a strictly scientific and physiological sense there is life in an embryo from the time of conception, and in such sense there is also life in the male and female elements that unite to form the embryo. But law . . . must for purposes of practical efficiency proceed upon more everyday and popular conceptions.

196 N.W. at 235.

4. *E.g.*, Roe v. Wade, 410 U.S. 113 (1973), where Justice Blackmun's majority opinion stated:

instruments cannot tell us when a human life begins. To be sure, instruments can tell us when cells divide, when a heartbeat is present, or when electrical charges are emitted from a fetal brain. While such phenomena are characteristic of human life, they are characteristic of other life forms as well. The judgment that any one or several of these phenomena provide a definitive indication of a human being cannot be predicated on the mere apprehension of these verifiable parts. Such a judgment must be predicated on something else. The absence—indeed, the impossibility—of a commonly agreed upon "something else" is the source of the abortion controversy.

Human perceptions vary. A fetal entity which to one may seem to be a baby by reason of possessing a discernible head or heart may not seem to be a baby to another for its failure to possess a nervous system. Still another may perceive a baby at whatever point medical technology allows the fetus to mature apart from the mother's womb. Moreover, perceptions are emotive as well as empirical. If one perceives a fetal soul, i.e., if one perceives that a fetus is a person in the eyes of God, destroying the fetus can only be perceived as murder, whether or not the fetus's personhood is empirically verifiable. Any answer to the question of when human life begins is doomed to be arbitrary not only according to the measurements of science, but also according to the measurements of empirical and emotive perception.

From the standpoint of one who believes that a fetus possesses a human soul, a law protecting the fetus's life is not analogous to other laws which have been held to violate individual privacy for

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> We need not resolve the difficult question of when life begins. When those trained in the respective disciplines of medicine, philosophy, and theology are unable to arrive at any consensus, the judiciary, at this point in the development of man's knowledge, is not in a position to speculate as to the answer.

Id. at 159. Here Justice Blackmun admits that the question is not one which can be resolved on an objective basis, but asserts that the Court need not resolve the question. Justice Blackmun had previously acknowledged "the sensitive and emotional nature of the abortion controversy, [and] the rigorous opposing views, even among physicians . . . that the subject inspires." *Id.* at 116. He then stated, "Our ask is to resolve the issue by constitutional measure, free of emotion and predilection." *Id.* Here Justice Blackmun admits that the Court must resolve the issue of whether a state may afford a fetus the rights of a person, but asserts that there is an objective basis for the resolution, *i.e.*, "constitutional measurement." The rhetorical sleight of hand in the first instance denies that determining whether a state may afford legal protection to a fetus is tantamount to determining whether the fetus is a person. The rhetorical sleight of hand in the second instance exalts a value judgment (what the Constitution should protect) to the level of science. *See also* the critique of Justice Blackmun's reasoning by Singer, *The Player and the Cards: Nihilism and Legal Theory*, 94 YALE L.J. 1, 30-33 (1984).

the sake of imposing a peculiar moral or religious precept, such as a statute restricting the sale of contraceptive devices.[5] If contraceptive devices offend God, the proximate injury of using such a device is to the user and no one else. If a fetus is a person, the proximate injury of an abortion is to this unborn person who has committed no act which would justify the taking of his or her life.[6] What is problematical about any attempt to curtail abortion on the ground that a fetus possesses a human soul is that the question which cannot be answered on the basis of scientific criteria is answered on the basis of religious criteria. Because concepts such as "soul" are not scientifically verifiable, the assertion that fetuses possess souls is, from an empirical standpoint, nonsensical, and therefore, properly designated as mystical or religious.[7] Thus, if the assertion of fetal personhood is premised upon the possession of a human soul by the fetus, a state's recognition of that personhood would violate the first and fourteenth amendments to the federal Constitution, at least as they have been interpreted in the modern era.[8]

Without a commonly accepted ground upon which to determine when a fetus is a baby and when it is not, courts have drawn the line essentially by appealing to such common attitudes and percep-

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5. Griswold v. Connecticut, 381 U.S. 479 (1965).

6. Indeed, if a fetus is a person, the federal government has a duty to protect the fetus pursuant to the fourteenth amendment, which forbids the states from depriving a person of life without due process of law. U.S. CONST. amend. XIV.

7. All judgments of value rest in part on unverifiable premises. The judgment that ear cropping is cruel and unusual punishment for theft, or that slavery is so undesirable as to warrant proscription by constitutional amendment has no more of a scientific basis than that which states that a fetus possesses attributes sufficient to render the fetus a person. The dilemma of democratic government is that judgments of value can be imposed by civil law only to the extent that the judgments reflect the sentiments of a majority. In a predominantly Roman Catholic, or even Christian, society, a value judgment predicated on the existence of a fetal soul would not be problematical. In contemporary America, a judgment that fetuses should be considered persons for purposes of the federal Constitution must, like the prior judgment that black people should be so considered, be based on a broader, *i.e.*, ostensibly humanistic, emotive perception. *See infra* note 24.

8. *See generally* Wallace v. Jaffree, 105 S. Ct. 2479 (1985); Grand Rapids School Dist. v. Ball, 105 S. Ct. 3216 (1985); Lemon v. Kurtzman, 403 U.S. 602 (1971); Stone v. Graham, 449 U.S. 39 (1980) (per curiam); Epperson v. Arkansas, 393 U.S. 97 (1968).

> The modern Supreme Court . . . has treated the establishment clause as a directive to the courts to strike down all public acts, federal, state, and local, whose primary purpose or predominant effect is to promote one religious group at the expense of others or even promote religion as a whole at the expense of the nonreligious—a position that in effect treats the nonreligious as a sect, the sect of nonbelievers.

American Civil Liberties Union v. City of St. Charles, 794 F.2d 265, 270 (7th Cir. 1986) (citations omitted).

tions as they have been able to discern.[9] In drawing the line at fetal viability, the United States Supreme Court was attempting nothing more than this.[10] Because the period in which a fetus is inviable would undoubtedly decrease with the advance of medical technology, however, commentators realized at the outset that the viability standard could not survive indefinitely if a constitutional right to abortion were to be maintained.[11] Thirteen years later, medical technology has reached the point where the shrinking span of fetal inviability has in fact threatened the concept of a *right* to choose abortion, and has prompted critics to call for a revamping of the viability standard.[12]

The irony of these technological advances is that as the viability standard erodes the permissible time within which a woman legally may seek an abortion, the standard becomes more acceptable to those persons who have previously opposed it. There is little doubt that some long-time opponents of the *Roe v. Wade* decision will eventually seek to maintain the standard. The sensibilities of many persons are moved by the argument that a fetus capable of surviving outside the womb is indistinguishable from an infant already born.[13] It is equally true, however, that the sensibilities of at least as many persons are either not moved by this argument, or are superseded by more powerful sensibilities which favor the preservation of a legal right to abortion. These persons will argue for a revamping of the viability standard in favor of a fixed point independent of medical technology. As courts and legislatures grapple with the problem, the focus of the right-to-choice versus right-to-life conflict will accordingly shift to a debate over where the new line should be drawn.

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9. *See generally* Louisell, *supra* note 2, at 235-44.

10. Roe v. Wade, *supra*, at 130-47.

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

12. Rhoden, *Trimesters and Technology: Revamping Roe v. Wade*, 95 YALE L.J. 639 (1986); *see also* Akron v. Akron Center for Reproductive Health, 462 U.S. 416, 458 (1983)(O'Connor, J., dissenting); Comment, 29 U.C.L.A. L. REV. 1194 (1982). The Court in *Roe* noted that fetuses ordinarily become viable at approximately 28 weeks, but could achieve viability as early as 24 weeks. *Roe* at 160. The current threshold of viability is usually estimated at 24 weeks, and at least one expert has placed the threshold at 23 weeks. Rhoden, *supra*, at 661. Fetuses have in some cases become viable at 22 weeks, and the World Health Organization, in its 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. *Id.*

13. See Tribe, *The Supreme Court, 1972 Term—Foreward: Toward a Model of Roles in the Due Process of Life and Law*, 87 HARV. L. REV. 1, 28 (1973).

Because the ultimate question of when human life begins is unanswerable without an appeal to unverifiable assertions, such as an immortal soul, which can only be characterized as matters of faith, any legal line that is drawn must necessarily be arbitrary in a scientific sense. "Viability" was, in this sense, as arbitrary a standard as "fertilization," "six weeks," "when a nose develops," or any other that the Court, in its prudential judgment, might have imposed. How, given the peculiarly powerful emotive preferences at conflict in society, is it possible for a court or legislature to fashion another standard which is not subject to technological vicissitude? A logical method would, while acknowledging the necessarily arbitrary quality of any standard, impose the same legal measurement on the beginning of life as is imposed on the end of life.

The question of when life ends is in a strict sense as unanswerable as that of when life begins, but measuring the phenomenon by a standard of brain activity has gained a popular acceptance unknown to the viability standard of *Roe v. Wade*.[14] Utilizing a standard of brain activity for determining the beginning of life would provide consistency in an area of law which cannot appeal to the certainty of scientific measurement. In other words, while the viability standard of *Roe v. Wade* is necessarily arbitrary in the sense that it sets an inherently unverifiable standard for the beginning of life, it is unnecessarily arbitrary in the sense that it bears no logical relation to the equally unverifiable standard most states employ for determining the end of life.

If we grant, then, that medical technology is reaching the point where courts and legislatures will be under pressure to revamp the *Roe v. Wade* standard for legal abortion, and that a standard of "brain life" will seem attractive to many judges and legislators, the engaging question becomes how brain life will be defined. Already certain critics, proposing a brain life standard in order to expand

14. Between 1970 and 1979, twenty-five state legislatures enacted brain death statutes based upon models proposed either by the American Bar Association, the American Medical Association, or the National Conference of Commissioners on Uniform State Laws. In 1980, the NCCUSL approved the Uniform Determination of Death Act, which states: "An individual who has sustained either (1) irreversible cessation of circulatory and respiratory functions, or (2) irreversible cessation of all functions of the entire brain, including the brain stem, is dead. A determination of death must be made in accordance with accepted medical standards." Unif. Determination of Death Act § 1, 12 U.P.A. (Supp. 1986) (superseding the Unif. Brain Death Act). In 1981, a presidential commission recommended acceptance of the brain death standard. 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* (1981).

the boundaries of *Roe v. Wade*, have presupposed in their definition of brain life a stage of brain development not directly corresponding to the state of disintegration implicit in the common definition of brain death.[15]

Primitive neuronal cells which form the basis of the fetal brain develop between the third and fourth weeks after gestation.[16] At five weeks, a primitive brain exists.[17] Cerebral hemispheres develop at seven weeks, and at eight weeks the brain generates electrical waves discernible by an electroencephalogram.[18] Despite the fact that brain activity at the eighth week would be sufficient to establish life for purposes of the Uniform Determination of Death Act, the aforementioned critics have insisted that life should not be adjudged to begin until sometime between the twenty-eighth and thirty-second weeks of pregnancy, when "the cerebral cortex . . . begin[s] to develop consciousness, self-awareness and other generally recognized cerebral functions."[19] The political utility of this definition is questionable, since the inconsistency of these stan-

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15. Comment, *supra* note 12; Glantz, *The Legal Aspects of Fetal Viability*, GENETICS AND THE LAW 39 (Milunsky and Annas 3d. ed. 1975).

16. Goldenring, *The Brain Life Theory: Towards a Consistent Biological Definition of Humanness*, 11 JOURNAL OF MEDICAL ETHICS 198, 200 (1985).

17. *Id.*

18. *Id. See also* Sokol and Rosen, *The Fetal Electroencephalogram*, 11 CLINICS IN OBSTETRICS AND GYNAECOLOGY 123 (1974).

19. Glantz, *supra* note 15. This position mirrors an argument made by several philosophers in the debate over the proper definition of death. *See* LAMB, DEATH, BRAIN DEATH AND ETHICS 41 (1985). The argument is that the death of a person is signified by death of the "higher" regions of the brain, *i.e.*, the cerebral cortex, thought to be largely responsible for such functions as consciousness and cognition. There is now general agreement that these "higher" functions probably result from complex interactions between the brainstem and cortex. *Id.* at 42. The "lower" brain, or brainstem, is responsible for generating the capacity for consciousness by activating the cerebral hemispheres. The brainstem is also responsible for respiration and spontaneous vegetative functions. *Id.* The argument that death occurs with the destruction of the higher brain was rejected by the American Bar Association, the American Medical Association and the President's Commission, all of which opted for the definition of brain death which insists on the "cessation of all functions of the entire brain, including the brain stem." *See supra* note 14. The Conference of Medical Royal Colleges and Their Faculties in the United Kingdom has recommended criteria for death based on the death of the brainstem. Lamb, *supra*, at 41.

The brainstem begins to develop at about the fifth week of pregnancy. After the eighth week, the fetus possesses an active central nervous system in which the brainstem formation processes electrical impulses transmitted from the spinal cord. Flower, *Neuromaturation of the Human Fetus*, 10 JOURNAL OF MEDICINE AND PHILOSOPHY 237. 239-41 (1985). The argument may thus be made that despite the disorganized character of the electrical charges, the fetal brainstem is the source of purposeful activity at this stage. Even if lawmakers were to determine that a later threshold for brain life could be asserted consistent with the UDDA standard for brain death, it is clear that a consistent threshold could not await the advanced development of the cerebral cortex.

dards, according to which a fetus is not legally human until it attains self-awareness, even though its brain may produce electrical impulses which would render it legally human if it were already born and in a comatose state, can only further aggravate the sensibilities of those who perceive a human entity at the point of viability. For if, as Professor Tribe suggests,[20] there is no practical basis upon which to distinguish killing a viable fetus from killing an infant, how much less distinguishable is the act when the fetus is not only capable of living outside the womb, but is also subject to brain activity which, if the fetus were outside the womb, would establish its legal personhood. Brain life as it so far has been defined by pro-choice commentators employs a double standard, generous to those entities fortunate enough to have left the womb, cruel to those entities which have not.

Drawing the line for legal abortion at the eighth week would not prohibit the majority of abortions that take place in America.[21] It would, however, impose a significantly higher responsibility upon pregnant women to seek early abortions. To be sure, the possibility of eugenic abortion (abortion compelled by discovery of fetal illness or deformity) would be seriously limited, though technology is steadily pushing back the point at which significant fetal abnormalities can be discovered.[22] Given the considerable pressure on

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20. *Supra* note 13.

21. Over 50 percent of all abortions are performed prior to the eighth week. Over 90 percent are performed prior to the twelfth week. Callahan, *How Technology is Reframing the Abortion Debate*, HASTINGS CENTER REPORT 36 (Feb. 1986). *See also* Tietze, *Demographic and Public Health Experience with Legal Abortion: 1973-80*, ABORTION, MEDICINE AND THE LAW 289, *supra* note 1.

22. Amniocentesis, the current method of screening for genetic defects, is usually performed at approximately the sixteenth week of pregnancy. Chlorionic villa biopsy, a new technique still in the experimental state, is performed between the eighth and twelfth week of pregnancy. Rhoden, *supra* note 12, at 681-82. Obviously, even the new technique would be of questionable value if the limit for abortion were placed at week eight, and the near elimination of eugenic abortions would undoubtedly render the brain life concept unacceptable to a large number of pro-choice individuals. In advocating an eight week standard, Dr. Goldenring, *supra* note 16, at 202, notes the similarity between terminally ill or severely brain damaged patients whose condition does not technically amount to brain death and certain diseased or severely damaged fetal entities, and concludes that the law might allow later abortions if it could be demonstrated that a fetus's condition were such that our ethical standards would allow discontinuation of extraordinary medical procedures if the fetus were already born.

The increasing judicial recognition of a patient's right to refuse life saving medical treatment provides precedent for the proposition that *ex utero* human life need not be preserved at a cost that radically diminishes the quality of that life. *See* Bouvia v. Superior Court, 179 Cal. App. 3d 1127, 225 Cal. Rptr. 297 (1986); *In re* Quackenbush, 156 N.J. Super. 282, 383 A.2d 785 (1978); Lane v. Candura, 6 Mass. App. 377, 376 N.E. 2d 1232 (1978). The semantic

judges and legislators to do *something* to curtail abortion, a higher standard of responsibility on the part of those who seek abortions is perhaps a small price to pay.

Curtailing abortion by shifting the legal standard from viability to brain life is hardly a perfect solution to the religious consciousness which perceives a human soul from the instant of fertilization. If we grant, however, that in any pluralistic society some concession must be made to individual conscience on matters which are beyond the scope of scientific or empirical verification, the brain life standard is at least a position which may be asserted without fear of imposing a religious—or peculiarly Catholic—moral doctrine upon all Americans.[23] Unlike the standard of viability, the standard of brain life provides civil authority with a definition of life consistent with that same authority's definition of death. If pro-choice forces may take consolation in the realization that a brain life standard is a less severe curtailment of abortion than other foreseeable possibilities, pro-life forces may take consolation in the realization that, imperfect compromise though it is, a brain life standard will nevertheless save lives.[24]

Every Christian must at some point, in faith, commend to a higher authority those children of God who insist on the freedom to live without faith, and ascribe to them the consequences of that

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nonsense of courts which have refused to allow actual damages for wrongful life on the ground that it is impossible to measure the difference between impaired life and nonexistence, on the other hand, demonstrates the lengths to which some will go to avoid setting a precedent which might subsequently open a debate on euthenasia. *E.g.*, Goldberg v. Ruskin, 128 Ill. App. 3d 1029, 471 N.E.2d 530 (1984), *aff'd*, 113 Ill.2d 482, 499 N.E.2d 406 (1986); Turpin v. Sortini, 31 Cal. 3d 220, 182 Cal. Rptr. 337 (1982); Becker v. Schwartz, 46 N.Y. 2d 401, 413 N.Y.S.2d 895 (1978). Of course such a measurement can be made, since all of us can, however imperfectly, contemplate nonexistence just as we can, however imperfectly, contemplate severely impaired life. *Cf. Goldberg*, 128 Ill. App.3d at 1045, 471 N.E.2d at 541 (Rizzi, J., dissenting). The denial that a measurement can be made asserts a hidden value judgment that life is invariably better than death, and turns this judgment into an irrebuttable presumption of law.

There may, as Dr. Goldenring suggests, be valid reasons for terminating actual human life in the womb, just as there may be valid reasons for terminating actual human life outside the womb. Acknowledging the beginning of actual human life at the eighth week of pregnancy would not preclude later abortions predicated on this value judgment. It would, however, preclude concealing the value judgment.

23. Although certain non-Catholics challenge abortion on the ground that a human soul is generated at conception, the Roman Catholic Church is the only major religious body in America to assert this ground as a matter of doctrine, and enforce the doctrine by means of a teaching magisterium. For this reason, the popular mind tends to identify any assertion of a fetal soul with Roman Catholicism.

24. If one contemplates reducing an annual 1.5 million abortions by more than forty percent, the consolation becomes more vivid. *See* Teitze, *supra* note 21.

freedom. So it must be *at some point*. If the freedom implicit in a brain life standard would be unacceptable in a predominantly Catholic, or even Christian, society,[25] it is a practical necessity in contemporary America. The majority will simply not stand for a more restrictive standard.[26]

Conclusion

Employing the concept of brain life in setting the limits of abortion would provide a consistent legal measurement for the phenomena of life and death. The concept would also provide a fixed point for legal abortion which would not be curtailed by technological advances which allow fetal entities to attain viability at increasingly earlier states. The weight of scientific evidence places the beginning of brain life at the eighth week of pregnancy. Because a brain life standard would simultaneously preserve a constitutional right to abortion while saving hundreds of thousands of fetal entities from destruction, both pro-choice and pro-life factions would attain tangible benefits from its employment. In a societal context in which neither faction can claim the sentiments of a majority, both factions would, therefore, be well advised to actively support a brain life standard for abortion, even though each faction might view the standard as an interstitial measure awaiting an enlightened change in the hearts of American men and women.

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25. By "Christian" society I mean one in which the majority would profess the Christian religion and in which the government would openly seek to enact positive law according to a Christian value structure. Such government action would be antithetical to the principle of separation of church and state presently reflected in our legal system. *See supra* note 8.

26. In a *Newsweek* poll in January, 1985, only twenty-two percent of the respondents stated that they believed abortion should be illegal under all circumstances. Fifty-four percent believed abortion should be allowed under "only certain" circumstances. Twenty-one percent stated that abortion should be legal under all circumstances. Callahan, *supra* note 21, at 38.