

# LEGAL IMPLICATIONS OF AMNIOCENTESIS

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Of the four million infants born in the United States each year, approximately five percent, or 200,000, are afflicted with disabling, hereditary birth defects.<sup>1</sup> In order to alleviate the emotional burdens on parents, the suffering and death of affected children, and the social cost of caring for those unable to care for themselves, biomedical science is exploring the means by which hereditary diseases may be reduced or eliminated. One currently available technology is amniocentesis—a procedure whereby fetal genetic defects are diagnosed through

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<sup>1</sup>Two hundred fifty thousand defective infants are born annually. However, 20% (approximately 50,000) of these abnormal births are caused by environmental factors during pregnancy—drugs, disease (rubella), or radiation. An additional 60% of all birth defects result from the interaction between environment and heredity; and 20% are attributed to inherited genetic defects alone. Stock, *Will the Baby Be Normal?*, N.Y. Times, Mar. 23, 1969, § 6 (Magazine), at 82, col. 3.

intrauterine testing. Amniocentesis is normally used today in conjunction with abortion; someday the alternative of prenatal therapy may be generally available. "The advent of prenatal diagnosis through amniocentesis represents the most important advance so far attained in the prevention of the births of infants with irreparable genetic mental defect and fatal genetic disease."<sup>2</sup>

Philosophers and scientists have considered the ramifications of amniocentesis,<sup>3</sup> but the courts and legislatures have been silent. There has not yet been a case involving prenatal testing, nor does there seem to be sufficient public awareness to foment legislative action.<sup>4</sup> Our legal institutions, however, cannot long remain mute. The burgeoning use of amniocentesis will eventually give rise to proposals that the state or federal government regulate the conditions under which the procedure may, perhaps must, be performed. Moreover, the continued use of prenatal testing will undoubtedly generate malpractice litigation,<sup>5</sup> perhaps even including actions for wrongful life.

This Article will describe amniocentesis, suggest possible statutory approaches to prenatal diagnosis, discuss the policy and constitutional conflicts which such legislation might provoke, and explore a possible malpractice action for wrongful life.

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<sup>2</sup> Milunsky, Littlefield, Kanfer, Kolodny, Shih, & Atkins, *Prenatal Genetic Diagnosis*, 283 NEW ENG. J. MED. (pt. 3) 1498, 1503 (1970) [hereinafter cited as Milunsky part 3].

<sup>3</sup> See, e.g., ETHICAL ISSUES IN HUMAN GENETICS: GENETIC COUNSELING AND THE USE OF SCIENTIFIC KNOWLEDGE (Fogarty Int'l Center Proceedings No. 13, 1973) [hereinafter cited as ETHICAL SYMPOSIUM]; EARLY DIAGNOSIS OF HUMAN GENETIC DEFECTS: SCIENTIFIC AND ETHICAL CONSIDERATIONS (Fogarty Int'l Center Proceedings No. 6, 1971) [hereinafter cited as EARLY DIAGNOSIS SYMPOSIUM].

<sup>4</sup> See generally Grad, *Legislative Responses to the New Biology: Limits and Possibilities*, 15 U.C.L.A.L. REV. 480 (1968).

<sup>5</sup> Amniocentesis may also prove useful in prenatal determination of paternity. For example, a woman who has been raped may want to abort a fetus if the father is the rapist, but carry it if the father is her husband. In a Swedish case, the woman wanted to ascertain whether the father was her husband or her lover; see Brody, *Analysis of Cells of a Fetus Settles a Paternity Dispute*, N.Y. Times, Apr. 21, 1972, at 79, col. 1.

Postnatal genetic analysis may someday prove useful in paternity litigation. See generally Krause, *Scientific Evidence and the Ascertainment of Paternity*, 5 FAM. L.Q. 252, 270-73 (1971). Since antenatal judicial determinations of paternity should rarely, if ever, be necessary, amniocentetic determinations of paternity should be excluded from evidence because of the possibility of erroneous diagnoses. See text accompanying notes 65-68 *infra*.

## I. AMNIOCENTESIS—ITS METHODOLOGY, FUNCTIONS, POSSIBILITIES, AND RISKS

### A. *Toward an Understanding of Amniocentesis*

The word *amniocentesis* is derived from the Greek *amnion*, the membrane around the fetus, and *kentesis*, to puncture. The procedure consists of the perforation of the uterus and the subsequent removal of amniotic fluid produced very early in pregnancy. Comprised in part of fetal cells, this fluid is cultured and analyzed to determine certain genetic characteristics of the fetus.<sup>6</sup>

Amniocentesis emerged as a diagnostic aid in practical obstetrics in the middle of the 1950's,<sup>7</sup> when it was discovered that analysis of amniotic fluid cells could facilitate the determination of fetal sex.<sup>8</sup> Pregnancies "at risk" for a sex-linked genetic disorder—which is transmitted from the carrier mother to about half of her male offspring<sup>9</sup>—could be identified through amniocentesis, and subsequently terminated by abortion.<sup>10</sup> Since about half of the male offspring born to a mother carrying a gene for a sex-linked condition are unaffected by the disease, however, it must be assumed that those pregnancies which were selectively terminated in the early 1960's resulted in the abortion of healthy male fetuses along with those which were affected. Even today there is no way of distinguishing male fetuses which are affected with some sex-linked disorders—hemophilia, for example—from those which are not.<sup>11</sup>

Many other inherited metabolic disorders and chromosomal aberrations, however, are now *directly* detectable by amniocen-

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<sup>6</sup> Friedmann, *Prenatal Diagnosis of Genetic Disease*, 225 SCI. AM., Nov. 1971, at 37.

<sup>7</sup> Menees, Miller, and Holly employed amniotic puncture as a diagnostic technique as early as 1930. Menees, Miller & Holly, *Amniography: Preliminary Report*, 24 AM. J. ROENTGENOLOGY & RADIUM THERAPY 363 (1930). Menees and his colleagues, however, injected radioactive strontium iodide into the amniotic sac to highlight fetal X-rays; more than two decades passed before the amniotic fluid itself was subjected to diagnostic analysis. Liley, *The Technique and Complications of Amniocentesis*, 59 N.Z. MED. J. 581 (1960).

<sup>8</sup> Riis & Fuchs, *Antenatal Determination of Foetal Sex in Prevention of Hereditary Diseases*, 2 LANCET, July 23, 1960, at 180. See also Fuchs, *Amniocentesis: Techniques and Complications*, in EARLY DIAGNOSIS SYMPOSIUM, *supra* note 3, at 11.

<sup>9</sup> See generally I. LERNER, HEREDITY, EVOLUTION AND SOCIETY 101-02 (1968); A. WINCHESTER, GENETICS 122-29 (1958).

<sup>10</sup> Riis & Fuchs, *supra* note 8.

<sup>11</sup> Lappé, *Genetic Knowledge and the Concept of Health*, 3 HASTINGS CENTER REP., Sept. 1973, at 3.

tesis.<sup>12</sup> Consequently, genetic counselors can, in many instances, predicate their advice to prospective parents not on "calculated probability risks"<sup>13</sup> but on practical certainty.

### 1. An Overview of Mendelian Genetics

At the present time, amniocentesis is performed discriminately on those pregnancies defined to be "at risk." An understanding of the concept of genetic risk requires a brief introduction to Mendelian theory.<sup>14</sup>

Each cell in the human body contains approximately 40,000 hereditary units called genes, each of which is housed in a thread-like body called a chromosome. The normal human cell contains forty-six chromosomes, grouped in twenty-three pairs—one member of each pair being inherited from the mother and one from the father. Every human being thus carries two genes for any particular characteristic, such as eye color—one gene housed in the chromosome transmitted by the father, and the other contained in the homologous chromosome<sup>15</sup> inherited from the mother. Generally, only one of the genes for any particular characteristic will express itself; but either the expressed gene or its unexpressed counterpart may be transmitted by the carrier to his progeny.

The following example illustrates the manner in which genetic traits are transmitted. Assume that a brown-eyed male has descended from a family which has been strictly brown-eyed for many generations; assume, further, that this is a "pure" brown-eyed line, that all individuals in this line carry two genes for brown. The term "homozygous" refers to such a condition. In contrast, the term "heterozygous" refers to the state in which the individual carries two different genes for any characteristic, for example, one gene for brown eyes and one for blue. If a homozygous brown-eyed male mates with a homozygous blue-eyed female, each sperm will carry one gene for brown and each egg will carry one gene for blue. All the offspring of this mating will be heterozygous; in other words, they will carry one brown-eyed

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<sup>12</sup> Howell & Moore, *Prenatal Diagnosis in the Prevention of Genetic Disease*, 70 TEX. MED., No. 5, at 77 (1974).

<sup>13</sup> Milunsky part 3, *supra* note 2, at 1503.

<sup>14</sup> The following discussion was distilled from I. LERNER, *supra* note 9, at 98-103, and A. WINCHESTER, *supra* note 9, at 66-76.

<sup>15</sup> Only 22 of the 23 pairs of chromosomes contain homologous genetic material. The twenty-third pair (the X and Y chromosomes), which determines fetal sex, is, in general, non-homologous. See note 9 *supra*.

gene and one blue-eyed gene. However, all of these children will have brown eyes, since brown is dominant over blue.

If two of these heterozygous offspring subsequently mate with each other, however, there are four possible combinations of resultant offspring: brown-brown, brown-blue, blue-brown, and blue-blue. Since the gene for blue eyes is recessive, only one of these four combinations (blue-blue) will express itself in a blue-eyed offspring. Two other combinations (brown-blue and blue-brown) will result in brown-eyed offspring who carry a gene for blue.

Thus if a particular genetic disease is known to be autosomal (non-sex-linked) recessive,<sup>16</sup> and both the mother and the father are known to be heterozygous for the condition, the probabilities are that one-fourth of their offspring will be affected by the disease and an additional one-half will be carriers. On the other hand, if both parents are heterozygous for an autosomal dominant disease,<sup>17</sup> there is a three-fourths chance that their offspring will be affected; if only one parent carries the dominant gene, one-half of the children will probably be affected.<sup>18</sup>

Not all hereditary diseases are amenable to Mendelian analysis; some are caused by an abnormality of the chromosome rather than by a defect in a particular gene.<sup>19</sup>

## 2. The Technique of Amniocentesis

Amniocentesis currently serves to identify genetic defects, chromosomal anomalies, and the sex and blood type of the fetus.<sup>20</sup> About one-third of an ounce of amniotic fluid is removed from the amniotic cavity; the usual procedure is to perforate the abdominal wall with a five-inch syringe, after the fifteenth week of gestation.<sup>21</sup> Amniotic fluid aspirated during

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<sup>16</sup> E.g., Tay-Sachs disease, described in text accompanying notes 43-45 *infra*.

<sup>17</sup> E.g., Huntington's Chorea; see text accompanying notes 57-58 *infra*.

<sup>18</sup> Whittier, Heimler, & Korenyi, *The Psychiatrist and Huntington's Disease (Chorea)*, 128 AM. J. PSYCHIAT. 1546, 1547 (1972).

<sup>19</sup> E.g., trisomy 21 mongolism; see text accompanying notes 35-42 *infra*.

<sup>20</sup> Carter, *Practical Aspects of Early Diagnosis*, in EARLY DIAGNOSIS SYMPOSIUM, *supra* note 3, at 17; Nadler, *Prenatal Detection of Genetic Defects*, 74 J. PEDIAT. 132, 135 (1969). A tentative classification of pregnancies appropriate for amniocentesis has been compiled by a British psychiatrist. Compare Cowie, *Amniocentesis: A Means of Pre-natal Diagnosis of Conditions Associated With Severe Mental Sub-normality*, 118 BRIT. J. PSYCHIAT. 83, 84-85 (1971), with Littlefield, *The Pregnancy at Risk for a Genetic Disorder*, 282 NEW ENG. J. MED. 627 (1970).

<sup>21</sup> The sixteenth week of gestation is, in the opinion of many physicians, the most fruitful time for amniocentesis. Friedmann, *supra* note 6, at 36. As the

amniocentesis is centrifuged in order to isolate the fluid's component cells, which are compounded with calf serum and grown in a culture medium for two to four weeks.<sup>22</sup> At that time, the cells are responsive to two methods of examination—chromosomal karyotyping and biochemical analysis.

Karyotyping is a technique whereby chromosomes are located through microscopic examination, photographed, and systematically ordered on the basis of physical characteristics.<sup>23</sup> Karyotype analysis can detect the absence or doubling of a particular chromosome, the deletion of a fragment of a chromosome, or the mutual exchange of fragments between two broken chromosomes (reciprocal translocation)—all of which can result in severe congenital disorders.<sup>24</sup> Karyotype analysis provides for the evaluation of those pregnancies in which either parent bears a known chromosomal aberration; it may, in addition, help to ascertain prenatally the effect of allegedly mutagenic agents, such as radioactive materials and LSD.<sup>25</sup>

Although a chromosomal karyotype can be performed in about fourteen days,<sup>26</sup> two factors hinder the potential utility of this device. First, a relatively small number of genetic defects are associated with visible chromosomal abnormalities; and second, the great majority of these few defects arise from an isolated mutation, rather than from a defect permanently carried by the parent,<sup>27</sup> so that a physician is not ordinarily alerted to search for the defect.

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pregnancy progresses, there is an increasing volume of amniotic fluid, which facilitates the aspiration of a sample of the fluid. Yet the risk of fetal trauma is minimized earlier in pregnancy, as the ratio of the fluid volume to fetal volume tends to be greater at that time. *Id.*; Fuchs, *supra* note 8, at 13. Another restriction is imposed by the several week time lag necessary for the completion of diagnostic procedures and the legal time barriers beyond which an abortion may be proscribed by the state. Heller, *Prenatal Diagnosis and the Prevention of Birth Defects*, 20 *M.D. ST. MED. J.*, May 1971, at 60.

There is also a transvaginal technique which is performed at an earlier stage of pregnancy, but this procedure is riskier and should be reserved for those pregnancies requiring early diagnosis. Fuchs, *Amniocentesis and Abortion: Methods and Risks*, in 7 *BIRTH DEFECTS: ORIGINAL ARTICLE SERIES*, No. 5, at 18 (1971).

<sup>22</sup> Nadler, *supra* note 20, at 135. See also Heller, *supra* note 21, at 60.

<sup>23</sup> Howell & Moore, *supra* note 12, at 79-80.

<sup>24</sup> Brody, *Prenatal Diagnosis Is Reducing Risk of Birth Defects*, *N.Y. Times*, June 3, 1971, at 53, col. 5.

<sup>25</sup> Mintzer & Reisman, *Prenatal Chromosome Studies: Diagnosis in Genetic Defects*, 62 *S. MED. J.* 1220, 1221 (1969).

<sup>26</sup> Therkelsen, Petersen, Steenstrup, Jonasson, Lindsten & Zech, *Prenatal Diagnosis of Chromosome Abnormalities*, 61 *ACTA PAEDIATRICA SCANDINAVICA* 397 (1972).

<sup>27</sup> Dancis, *The Prenatal Detection of Hereditary Defects*, 24 *OBST. & GYNEC. SURVEY* 1351, 1352 (1969).

The genetic constitution of a fetus can also be identified by a biochemical analysis of the cells comprising the amniotic fluid.<sup>28</sup> A close examination of these cells may sometimes detect genetic defects manifested by abnormal enzyme activity.<sup>29</sup> Unfortunately, biochemical analysis ordinarily cannot be completed until approximately three or more weeks after amniocentesis has been performed.<sup>30</sup> A lapse of such time might not only induce psychological trauma in the prospective parents, but, depending upon the week of gestation during which amniocentesis was performed, can also put the pregnant woman into that part of the gestation period during which the state may constitutionally prohibit abortion.<sup>31</sup>

### 3. The Domain of Amniocentesis

At present, certain chromosomal disorders and about fifty inherited diseases associated with enzyme deficiencies are amenable to prenatal diagnosis.<sup>32</sup> A description of several of these disorders follows.<sup>33</sup>

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<sup>28</sup> *Diagnostic Amniocentesis*, 14 MED. LETTER ON DRUGS & THERAPEUTICS 53 (1972).

<sup>29</sup> *Id.* Of course, inasmuch as only those disorders which are being looked for can actually be discounted, the absence of abnormal activity in a particular enzyme can never be conclusive of the fetus' normality. Uhlendorf, *Use of Amniotic Fluid and Reliability of Diagnostic Procedures*, in EARLY DIAGNOSIS SYMPOSIUM, *supra* note 3, at 150-51.

Another drawback to this method is that a great deal of information regarding the normal development, range of specific activity, and distribution of each enzyme derived from the amniotic fluid should be known before attempting to utilize these findings for interuterine diagnosis. Nadler, *Prenatal Detection of Genetic Disorders*, 3 ADVANCES IN HUMAN GENETICS 1, 14 (H. Harris & K. Hirschhorn eds. 1972).

<sup>30</sup> The mean time is about 21 days, but the outer range is 40 days. Nadler, *supra* note 29, at 10.

"The problem of growing adequate cell numbers in a sufficiently short time to be of value is a greater deterrent for interuterine detection of biochemical disorders than for chromosomal aberrations." *Id.* 14.

<sup>31</sup> See notes 135-44 *infra* & accompanying text. Recent biomedical advances have enabled scientists to perform analyses on connective tissue cells derived from fetal skin. This new diagnostic procedure has facilitated the detection of an increasing number of genetic disorders. Milunsky, Littlefield, Kanfer, Kolodny, Shih & Atkins, *Prenatal Genetic Diagnosis* (pt. 1), 283 NEW ENG. J. MED. 1370 (1970) [hereinafter cited as Milunsky part 1].

<sup>32</sup> Howell & Moore, *supra* note 12, at 77. This is about three to five percent of all known birth defects. Heller, *supra* note 21, at 61.

<sup>33</sup> Other genetic disorders currently receptive to amniocentesis include Hurler's and Hunter's Syndrome, see Carter, Wan & Carpenter, *Commonly Used Tests in the Detection of Hurler's Syndrome*, 73 J. PEDIAT. 217 (1968), and Fratantoni, Neufeld, Uhlendorf & Jacobson, *Intrauterine Diagnosis of the Hurler and Hunter Syndromes*, 280 NEW ENG. J. MED. 686 (1969); Maple Syrup Urine Disease, see Dancis, *Maple Syrup Urine Disease*, in ANTENATAL DIAGNOSIS 123 (A. Dorfman ed. 1970), and L. REISMAN & A. MATHENY, JR., GENETICS AND COUNSELING IN MEDICAL PRACTICE 162-63



*Down's Syndrome (mongolism)* is the most common congenital anomaly, having an incidence of one in six hundred live births.<sup>34</sup> It is an untreatable condition caused by a chromosomal aberration rather than a defective gene.<sup>35</sup> The disease expresses itself in two forms: translocation, in which the fetus inherits the disease from either parent whose chromosomal composition contains a reciprocal translocation;<sup>36</sup> and trisomy 21, where the fetus carries three number 21 chromosomes instead of the usual two.<sup>37</sup> Translocation mongolism has a tendency to recur in subsequent offspring because it is actually inherited from a parent with a permanently aberrant chromosomal pattern.<sup>38</sup> Trisomy 21 is the result of an isolated mutation,<sup>39</sup> so there is no particular tendency for it to recur in subsequent offspring; however, its incidence increases with maternal age.<sup>40</sup> It has been estimated that if all pregnancies in women over thirty-five were subject to diagnostic amniocentesis, and selective abortion were practiced, the rate of occurrence of the trisomy 21 form of the disease would be reduced to half the present level.<sup>41</sup> Likewise, if all reciprocal translocation carriers could be identified and subjected to both amniocentesis and selective abortion, the incidence of that form of

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(1969); Lesch-Nyhan Syndrome, *see* Boyle, Raivio, Astrin, Schulman, Graf, Seegmiller & Jacobsen, *Lesch-Nyhan Syndrome: Preventive Control by Prenatal Diagnosis*, 169 SCIENCE 688 (1970), and Friedmann, *supra* note 6, at 35; Wilson's Disease, *see* L. REISMAN & A. MATHENY, *supra*, at 164-65; and Glycogen Storage Disease, *see* Howell, Kaback & Brown, *Type IV Glycogen Storage Disease: Branching Enzyme Deficiency in Skin Fibroblasts and Possible Application to Antenatal Diagnosis*, in ANTENATAL DIAGNOSIS 161-63 (A. Dorfman ed. 1970).

<sup>34</sup> Carter, *supra* note 20, at 17. Half of the children with Down's syndrome have congenital heart disease, which accounts for approximately 50% of the mortality during the first year of life. L. REISMAN & A. MATHENY, *supra* note 33, at 71-73. Ninety-five percent of all Down's syndrome children are severely mentally retarded. Carter, *supra* note 20, at 17.

<sup>35</sup> Friedmann, *supra* note 6, at 34.

<sup>36</sup> A reciprocal translocation is the mutual exchange of fragments between two broken chromosomes, one part of each uniting with part of the other. DORLAND'S ILLUSTRATED MEDICAL DICTIONARY 1631 (25th ed. 1973).

<sup>37</sup> Friedmann, *supra* note 6, at 34-35.

<sup>38</sup> If the father is the carrier, the risk is two percent for each subsequent pregnancy; if the mother is the carrier, the risk becomes thirty percent. O'Brien, *How We Detect Mental Retardation Before Birth*, 99 MED. TIMES 103, 108 (1971).

<sup>39</sup> I. LERNER, *supra* note 9, at 196.

<sup>40</sup> Friedmann, *supra* note 6, at 35. Of the 3,500 mongoloid children born in the United States each year, 50% are conceived by women over 35 years of age. O'Brien, *supra* note 38, at 107. Women over 35 bear 13.5% of all pregnancies. Milunsky part 1, *supra* note 31, at 1376.

<sup>41</sup> Friedmann, *supra* note 6, at 38; O'Brien, *supra* note 38, at 107.

the disorder could be reduced. However, since many prospective parents in the latter category are otherwise quite healthy,<sup>42</sup> it is often impossible to identify them until they have already borne one mongoloid child.

*Tay-Sachs Disease* is a devastating autosomal recessive condition characterized by "blindness, severe mental retardation and death, usually before three or four years of age. It is most common in Jews of northern European origin (Ashkenazy Jews)."<sup>43</sup> The disease has an incidence in that population of one in every 3,600 births, compared to one in every 360,000 births in the general population.<sup>44</sup> It is now possible to screen large population groups rapidly for carrier states of the disease;<sup>45</sup> screening programs coupled with amniocentesis and selective abortion provide the potential means for a drastic reduction of the incidence of Tay-Sachs disease.

*Galactosemia* is an example of a genetic defect where amniocentesis can play a major role because the immediacy of post-natal treatment can be crucial. This autosomal recessive disorder involves the improper assimilation of galactose, which is found in milk and milk products. It can be fatal if undiagnosed.<sup>46</sup> Removal of galactose from the infant's diet is critical to the management of the disease. Postnatal diagnosis is often inadequate, however, since it is difficult to ascertain the cause of the poisoning early enough to avert the brain damage and other symptoms.<sup>47</sup> Amniocentetic diagnosis enables physicians to place the infant on a low-galactose diet immediately after birth.<sup>48</sup>

*Adrenogenital Syndrome* is an autosomal recessive condition which results in the appearance of abnormal genitalia, usually in females.<sup>49</sup> If this disorder is not diagnosed prior to birth, the female child may be registered as a male;<sup>50</sup> but through

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<sup>42</sup> Lappé, *supra* note 11, at 3.

<sup>43</sup> Friedmann, *supra* note 6, at 36.

<sup>44</sup> Kaback & Zeiger, *The John F. Kennedy Institute Tay-Sachs Program: Practical and Ethical Issues in An Adult Genetic Screening Program*, in ETHICAL SYMPOSIUM, *supra* note 3, at 133.

<sup>45</sup> *Id.*

<sup>46</sup> Donnell & Kogut, *Disorders of Carbohydrate Metabolism*, in 5 CURRENT PEDIATRIC THERAPY 359 (Gellis & Kagan ed. 1973).

<sup>47</sup> *Id.*

<sup>48</sup> See L. REISMAN & A. MATHENY, *supra* note 33, at 205-06.

<sup>49</sup> See *id.* 160-61.

<sup>50</sup> Jeffcoate, Fliegner, Russell, Davis & Wade, *Diagnosis of the Adrenogenital Syndrome Before Birth*, 2 LANCET 553 (1965).

surgical correction and medical treatment, a female with this disorder can lead a normal and even reproductive life.<sup>51</sup> The adrenogenital syndrome is one of the very few detectable defects which is even partially treatable prenatally; intrauterine therapy will arrest the enlargement of the clitoris.<sup>52</sup>

*Fabry's Disease* is a sex-linked genetic disorder in which a specific enzyme deficiency damages the renal-cardiovascular system and other bodily organs.<sup>53</sup> Some progress has been made in developing enzyme replacement therapy for this disease.<sup>54</sup>

The two genetic disorders which occur with greatest frequency in the United States are not prenatally detectable. They are cystic fibrosis, an autosomal recessive condition affecting one in every two thousand Caucasian infants,<sup>55</sup> and sickle cell anemia, an autosomal recessive disorder occurring with extremely high frequency in the black population.<sup>56</sup> Nor is the most frequently occurring autosomal dominant condition, Huntington's Chorea,<sup>57</sup> presently amenable to prenatal diagnosis.<sup>58</sup>

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<sup>51</sup> New, *Adrenogenital Syndrome*, in ANTENATAL DIAGNOSIS 153, 159 (A. Dorfman ed. 1970).

<sup>52</sup> *Id.* 160.

<sup>53</sup> Desnick & Sweeley, *Prenatal Detection of Fabry's Disease*, in ANTENATAL DIAGNOSIS 185, 186 (A. Dorfman ed. 1970).

<sup>54</sup> Brady, *Hereditary Fat-Metabolism Diseases*, 229 SCI. AM., Aug. 1973, at 97. M. L. Moss and Warren W. Harris of the Oak Ridge National Laboratory have developed a technique which reduces the time factor involved in the biochemical analysis of Fabry's disease to 24 hours. *Id.* 95.

<sup>55</sup> Brody, *supra* note 24, at 53, col. 6; Nadler & Gerbie, *Present Status of Amniocentesis in Intrauterine Diagnosis of Genetic Defects*, 38 OBST. GYNEC. 789, 793 (1971). Cystic fibrosis has been detected fortuitously, but the technique cannot be used with reliability.

<sup>56</sup> The disease occurs in that population with a frequency of one in every 400 births. Brody, *supra* note 24, at 53, col. 6. *Cf.* Littlefield, Milunsky & Jacoby, *Prenatal Genetic Diagnosis: Status and Problems*, in ETHICAL SYMPOSIUM, *supra* note 3, at 48 (one in every 500). It is hoped that prenatal diagnosis of sickle cell anemia will become practical within the next few years. *Id.*; Yuct, Dozy, Alter, Frigoletto & Nathan, *Detection of the Sickle Gene in the Human Fetus*, 287 NEW ENG. J. MED. 1, 4 (1972).

<sup>57</sup> The symptoms of this disease normally do not become manifest until well after the end of the individual's reproductive period, so his fertility remains unimpaired. Most cases are thus the result of parental transmission of the abnormal gene rather than fresh mutation. Motulsky, Fraser & Felsenstein, *Public Health and Long-Term Genetic Implications of Intrauterine Diagnosis and Selective Abortion*, in 7 BIRTH DEFECTS, No. 5, at 25 (1971).

<sup>58</sup> "If a scheme of population screening and prospective diagnosis of Huntington's chorea were to become practicable, the prevalence of this disease could thus be reduced drastically to the very low levels maintained by mutation" by a relatively small number of abortions, if selective abortion of affected fetuses were practiced. *Id.*

## B. *The Medical Hazards and Risks of Prenatal Diagnosis*

### 1. Problems of Technology

Any newly developed technology is likely to carry certain risks, and amniocentesis is no exception. There have been reports of incorrect analysis of chromosomal karyotype, enzyme activity, and sex determination.<sup>59</sup> For example, a phenotypically<sup>60</sup> normal woman with a reciprocal translocation had previously given birth to a son who shared the same reciprocal translocation, and who suffered multiple congenital malformations. Amniocentesis performed during a subsequent pregnancy yielded a distinctly abnormal karyotype. Nonetheless, termination of the pregnancy was not elected and a normal child was born.<sup>61</sup> In another instance, analysis of amniotic fluid aspirated during amniocentesis revealed an abnormal 45, X karyotype.<sup>62</sup> Abortion was performed and a culture of amniotic fluid extracted at that time revealed a normal male karyotype (46, XY),<sup>63</sup> thereby discrediting the first diagnosis. Moreover, a recent study of attempts to employ amniocentesis to ascertain the gender of the fetus revealed a thirteen percent failure rate.<sup>64</sup> Incorrect analysis of gender can have serious ramifications in the management of those pregnancies in which the mother is known to be a carrier of a sex-linked disorder.

Erroneous diagnoses have been attributed to a number of factors. Among these are the aspiration of an inadequate

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<sup>59</sup> See, e.g., Nadler, *Indications for Amniocentesis in the Early Prenatal Detection of Genetic Disorders*, in 7 BIRTH DEFECTS, No. 5, at 7 (1971):

In some cases, diagnosis appears to be accurate and reliable, while in others, the methods of detection lack precision and therefore cannot be used for intra-uterine diagnosis. Despite the advances in the past few years, a great deal more experience is required before amniotic fluid, uncultured amniotic fluid cells and cultivated amniotic fluid cells can be used as a routine method for the antenatal detection of familial metabolic disorders.

<sup>60</sup> A phenotype is "[t]he outward, visible expression of the hereditary constitution of an organism." DORLAND'S ILLUSTRATED MEDICAL DICTIONARY 1145 (24th ed. 1973).

<sup>61</sup> Epstein, Schneider, Conte & Friedmann, *Prenatal Detection of Genetic Disorder*, 24 AM. J. HUMAN GENETICS 214, 224 (1972) [hereinafter cited as Epstein].

<sup>62</sup> A normal karyotype is either 46, XX (female) or 46, XY (male). See generally I. LERNER, *supra* note 9, at 99-100.

<sup>63</sup> Kardon, Chernay, Hsu, Martin & Hirschhorn, *Pitfalls in Prenatal Diagnosis Resulting from Chromosomal Mosaicism*, 80 J. PEDIAT. 297 (1972).

<sup>64</sup> Miller, *An Overview of Problems Arising from Amniocentesis*, in EARLY DIAGNOSIS SYMPOSIUM, *supra* note 3, at 27 (citing Nelson & Emery, *Amniotic Fluid Cells; Prenatal Sex Prediction and Culture*, 1 BRIT. MED. J. 523 (1970)).

specimen of amniotic fluid,<sup>65</sup> shipment difficulties resulting in "artifactual inactivation of the enzyme,"<sup>66</sup> technical problems in the laboratory which affect the growth of cell culture,<sup>67</sup> and the contamination of amniotic fluid by maternal cells.<sup>68</sup>

Furthermore, amniocentesis is, at present, unable to detect the presence of more than one fetus.<sup>69</sup> Generally, only one amniotic sac is sampled, and the cells thus grown are representative of only one offspring, yielding no information about the genetic or chromosomal composition of concurrent fetuses.<sup>70</sup> It has been suggested that ultrasonic techniques or fetal cardiograms might be useful in identifying multiple fetuses at an early stage of gestation.<sup>71</sup>

Finally, there is the problem of heterozygosity. Geneticists are currently equipped to distinguish a carrier from an affected fetus in the Hurler's and Hunter's syndromes, galactosemia, and Tay-Sachs disease.<sup>72</sup> This ability, however, does not extend to most other recessive genetic disorders,<sup>73</sup> thereby limiting the usefulness of amniocentesis.

## 2. Fetomaternal Risks

It is difficult to assess the degree to which amniocentesis poses risks to either mother or fetus. The literature pertaining to these risks primarily concerns risks presented during third trimester amniocentesis; it is not known how high a correlation exists between those risks and the risks of the procedure when it is performed during the earlier stages of pregnancy.<sup>74</sup>

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<sup>65</sup> Kaback & O'Brien, *Tay-Sachs: Prototype for Prevention of Genetic Disease*, 8 HOSPITAL PRACTICE, Mar. 1973, at 112.

<sup>66</sup> *Id.*

<sup>67</sup> See Brody, *supra* note 24, at 53, col. 5.

<sup>68</sup> Macintyre, *Chromosomal Problems of Intrauterine Diagnosis*, in 7 BIRTH DEFECTS, No. 5, at 11 (1971).

<sup>69</sup> Nadler & Gerbie, *Role of Amniocentesis in the Intrauterine Detection of Genetic Disorders*, 282 NEW ENG. J. MED. 596, 598 (1970).

<sup>70</sup> Nadler, *supra* note 59, at 6.

<sup>71</sup> *Id.*

<sup>72</sup> Hsia, *Detection of Heterozygotes*, in EARLY DIAGNOSIS SYMPOSIUM, *supra* note 3, at 118.

<sup>73</sup> *Prenatal Diagnosis and Selective Abortion*, 2 LANCET 89, 90 (1969).

<sup>74</sup> Ramsay, *Screening: An Ethicist's View*, in ETHICAL SYMPOSIUM, *supra* note 3, at 154; see generally Queenan, Kubarych, Shah & Holland, *Role of Induced Abortion in Rhesus Immunization*, 1 LANCET 815, 816 (1971). Of 410 pregnancies monitored by Dr. Henry L. Nadler, no fetal or maternal complications related to the procedure arose. Brody, *supra* note 24, at 41, col. 2. Likewise, of 162 cases monitored by Dr. Henry Nadler and Dr. Albert Gerbie, transabdominal amniocentesis performed between 13 and 18 weeks gestation resulted in neither maternal nor fetal complications. Nadler & Gerbie, *supra* note

There does seem to be some consensus among experts that the risk of fetal or maternal injury is between one and two percent, and that there thus must exist at least a two percent risk that the fetus is genetically defective for amniocentesis to be warranted.<sup>75</sup>

Maternal injuries, although infrequent, include uterine infection,<sup>76</sup> inflammation of the amniotic membrane,<sup>77</sup> perforation of the intestines,<sup>78</sup> and placental hemorrhage<sup>79</sup>—some of which could result in maternal death.<sup>80</sup> Moreover, the psychological repercussions of amniocentesis cannot be ignored. A study of problems confronting parents who seek genetic counseling and possible amniocentesis revealed that the lapse of time between amniocentesis and completion of analyses resulted, for some couples, in acute anxiety which tended to exacerbate other problems existing in their marriage.<sup>81</sup> In many instances, subsequent diagnosis confirmed the couple's misgivings, and caused suffering, feelings of guilt, and a sense of failure.<sup>82</sup> Of course, it can be argued that these problems would exist, and indeed be intensified, if amniocentesis and abortion were not available. In their absence, the waiting period for anxiety-ridden parents would be the full nine months between conception and birth, and a confirmation of the couple's fears would result not only in parental suffering, but also in pain, suffering, and often death on the part of the affected child.

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69, at 596. See also Friedmann, *supra* note 6, at 37; Littlefield, Milunsky & Jacoby, *supra* note 56, at 43. On the other hand, in a study of 410 amniocenteses conducted by Dr. Leo J. Peddle, fetal bleeding into the mother emerged as a probably detrimental consequence, affecting 11.2% of the Rh-negative women who were subjected to the procedure. Peddle, *Increase of Antibody Titer Following Amniocentesis*, 100 AM. J. OBST. GYNEC. 567, 568-69 (1968).

<sup>75</sup> See, e.g., Gerbie, Nadler & Gerbie, *Amniocentesis in Genetic Counseling*, 109 AM. J. OBST. GYNEC. 765, 766 (1971).

<sup>76</sup> Fuchs, *supra* note 8, at 14.

<sup>77</sup> Mandelbaum, *Amniocentesis Technic, Applications and Complications*, 69 MICH. MED. 209, 213 (1970).

<sup>78</sup> Fuchs, *supra* note 8, at 14.

<sup>79</sup> See Woo Wang, McCutcheon & Desforges, *Fetomaternal Hemorrhage from Diagnostic Transabdominal Amniocentesis*, 97 AM. J. OBST. GYNEC. 1123 (1967); *contra*, Cassady, Cailleteau, Lockard & Milstead, *The Hazard of Fetal Maternal Transfusion after Transabdominal Amniocentesis*, 99 AM. J. OBST. GYNEC. 284 (1967); Jensen & Sorensen, *The Risk of Foetomaternal Bleeding in Connection with Amniocentesis*, in 23 PROCEEDINGS OF THE TENTH CONGRESS OF THE INTERNATIONAL SOCIETY OF BLOOD AND TRANSFUSION 937 (1964).

<sup>80</sup> Burnett & Anderson, *The Hazards of Amniocentesis*, 58 J. IOWA MED. Soc'Y 130, 133 (1968) (two instances of maternal mortality).

<sup>81</sup> Fletcher, *Parents in Genetic Counseling: The Moral Shape of Decision-Making*, in ETHICAL SYMPOSIUM, *supra* note 7, at 318.

<sup>82</sup> *Id.*

The incidence of damage to the fetus from amniocentesis appears to be greater than the frequency of complications to the mother.<sup>83</sup> Fetal death may result from infection of the amniotic fluid,<sup>84</sup> inflammation of the amniotic membrane,<sup>85</sup> traumatic lesion of the cord or fetus,<sup>86</sup> or rupture of the placenta.<sup>87</sup> Fetal puncture, another complication of amniocentesis, varies in severity from negligible skin lesions to damage to the cerebrospinal system.<sup>88</sup> Instances involving scarring of the forehead,<sup>89</sup> fetal emphysema (caused by inadvertent insertion of the needle into the fetal thorax),<sup>90</sup> and severe damage to the eye<sup>91</sup> have been reported.

The possible long term consequences of amniocentesis are still speculative. It has been hypothesized, for example, that the removal of a large amount of amniotic fluid between the fourteenth and sixteenth week of gestation could effect a loss of intelligence.<sup>92</sup> The detection of developmental damage would necessitate long term evaluation of those infants who have experienced amniocentesis.<sup>93</sup> Long range studies could likewise determine the risk of the offspring's eventual deformity<sup>94</sup> and explore the long term effect of the procedure on the psychological well-being of the mother.<sup>95</sup>

<sup>83</sup> Hyman, Depp, Pakravan, Stinson & Allen, *Pneumothorax Complicating Amniocentesis*, 41 *OBST. GYNEC.* 43 (1973) [hereinafter cited as Hyman].

<sup>84</sup> Bang & Northeved, *A New Ultrasonic Method for Transabdominal Amniocentesis*, 114 *AM. J. OBST. GYNEC.* 599 (1972).

<sup>85</sup> Gerbie, Nadler & Gerbie, *supra* note 75, at 767.

<sup>86</sup> Riis & Fuchs, *supra* note 8, at 182.

<sup>87</sup> Fuchs, *supra* note 8, at 13; Woo Wang, McCutcheon & Desforges, *supra* note 79, at 1127. *See also* Stanchever & Cibils, *Management of the Rh-Sensitized Patient*, 100 *AM. J. OBST. GYNEC.* 554, 562 (1968); Woo Wang, McCutcheon & Desforges, *supra* note 79, at 1123.

<sup>88</sup> Bang & Northeved, *supra* note 84, at 599; Mandelbaum, *supra* note 77, at 213.

<sup>89</sup> Epstein, *supra* note 61, at 217.

<sup>90</sup> Hyman, *supra* note 83, at 43.

<sup>91</sup> Letter to the Editor from Harold E. Cross & A.E. Maumenee, 287 *NEW ENG. J. MED.* 993, 994 (1972).

<sup>92</sup> *See* Nadler, *Risks in Amniocentesis*, in *EARLY DIAGNOSIS SYMPOSIUM*, *supra* note 3, at 130. *See also* *Discussion of Symposium Papers*, in 7 *BIRTH DEFECTS*, No. 5, at 33 (1971) (statement by Miller) (concern that amniocentesis may result in mental retardation); discussion following Littlefield, Milunsky & Jacoby, *supra* note 56, in *ETHICAL SYMPOSIUM*, *supra* note 3, at 54 (statement by Bearn).

<sup>93</sup> *See* Friedmann, *supra* note 6, at 37.

<sup>94</sup> Milunsky part 1, *supra* note 31, at 1371.

<sup>95</sup> *See generally* discussion following Littlefield, Milunsky & Jacoby, *supra* note 56, in *ETHICAL SYMPOSIUM*, *supra* note 3, at 52-53 (statements by Drs. Stetten, Lubs, and Mellman).

### C. Societal Risks and Problems

#### 1. The Risk of Gender Imbalance

Behavioral scientists who have investigated the matter are virtually unanimous in concluding that there is a strong preference for male offspring in the United States.<sup>96</sup> In one recent study, 1,800 nineteen-year-old males were surveyed regarding their attitudes toward desired family size and gender preference.<sup>97</sup> The young men expressed, in the mean, a desire for 1.65 boys and 1.24 girls, a male-female ratio of approximately four to three.<sup>98</sup> Similarly, a survey of married women who had already borne two children of the same gender revealed that mothers of two girls were much more likely to desire a third child than were mothers of two boys.<sup>99</sup> Other studies have yielded similar results.<sup>100</sup>

These data raise a number of questions. Is sex determination alone a sufficient reason for performing amniocentesis? If so, what will be the effect on the male-female ratio if parents are allowed to selectively abort fetuses of the undesired gender? On the other side, it may be argued that since many babies are born in an attempt to produce a child of the desired sex, the use of amniocentesis for gender selection would help slow the population explosion.

#### 2. Tampering with the Gene Pool

It has been estimated that if amniocentesis could be used to identify those fetuses which were either affected by or carriers of the genes for either of the two most common genetic disorders in this country—cystic fibrosis and sickle cell anemia—then the performance of fourteen million abortions over a span of forty years “could eradicate these genes from the popula-

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<sup>96</sup> This male-oriented bias is not universal. In certain societies in New Guinea, for example, male children are less valued than female children. M. MEAD, *SEX AND TEMPERAMENT IN THREE PRIMITIVE SOCIETIES* 171 (1963).

<sup>97</sup> E. Weiss, *Male Youths' Attitudes Toward Population Control, Family Planning and Desired Family Size* (Paper presented at the 80th Annual Convention of the American Psychological Association, Sept. 5, 1972) (on file with author).

<sup>98</sup> More specifically, respondents who desired a two-child or four-child family showed a marked preference for an equal number of boys and girls; but those desiring a one, three, or five child family overwhelmingly preferred an extra male. *Id.*

<sup>99</sup> L. BUMPASS & C. WESTOFF, *THE LATER YEARS OF CHILD BEARING* 93-94 (1970).

<sup>100</sup> See, e.g., Freedman, Freedman & Whelpton, *Size of Family and Preference for Children of Each Sex*, 66 AM. J. SOCIOL. 141, 143 (1960).



tion."<sup>101</sup> Some geneticists believe that this might not be an altogether benign biological phenomenon, for a gene presently deemed undesirable could in fact serve a vital function in the protection of the body against another disorder.<sup>102</sup> For example, there appears to be a correlation between the heterozygous state of sickle cell anemia and resistance to falciparum malaria.<sup>103</sup> Other instances of suspected interrelationships between various (possibly) genetically controlled traits abound.<sup>104</sup> A program of mass genetic manipulation, intended to eliminate genes currently thought to be deleterious, could culminate in "detrimental changes in the quality and the diversity of the human gene pool."<sup>105</sup>

### 3. The Inability to Differentiate Between a Carrier and an Affected Fetus

It is one thing to abort a fetus affected with a congenital disorder, and quite another to abort one which is only a carrier. Yet the fact that amniocentesis cannot currently be used to differentiate between a carrier and an affected fetus for most diseases<sup>106</sup> means that many carriers are in danger of being aborted. The routine abortion of undifferentiated affected and carrier fetuses, if pursued on a mass scale, would reduce the future level of certain genetic diseases,<sup>107</sup> but would also deny life to a large number of unaffected offspring.

Moreover, if both parents are heterozygous for an autosomal recessive condition, the probabilities are that three-fourths of their offspring will be either affected by, or carriers of, the disorder.<sup>108</sup> This will "result in a 75% probability of [elective] abortion with each pregnancy. There would then

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<sup>101</sup> Brody, *Genetics Clinics Predict Defects*, N.Y. Times, Feb. 2, 1969, § 1, at 76, col. 1.

<sup>102</sup> See Sullivan, *If We Master the Gene . . .*, N.Y. Times, June 14, 1970, § 4, at 9, col. 8.

<sup>103</sup> See discussion following Hsia, *Detection of Heterozygotes*, in EARLY DIAGNOSIS SYMPOSIUM, *supra* note 3, at 125 (statement by Himsworth).

<sup>104</sup> See, e.g., Lamborn, *Social Control Through the Reconstitution of Man*, 21 U. FLA. L. REV. 452, 460 (1969) (citing A. ALLAND, JR., *EVOLUTION AND HUMAN BEHAVIOR* (1967)). See also Lappé, *supra* note 11, at 2.

<sup>105</sup> Friedmann, *supra* note 6, at 38; see also Dorfman, *Medical Progress, Problems, and Possibilities*, in ANTENATAL DIAGNOSIS 233 (A. Dorfman ed. 1972).

<sup>106</sup> See notes 72-73 *supra* & accompanying text.

<sup>107</sup> Friedmann, *supra* note 6, at 38, Heller, *supra* note 21, at 61.

<sup>108</sup> See notes 14-18 *supra* & accompanying text.

be a 24% risk that five consecutive pregnancies would be aborted."<sup>109</sup> Two experts maintain:

The risk of five successive abortions is the same as that for having an affected offspring in the highest genetic risk group, and the psychological trauma of five successive abortions might even be greater than having a child with one of these disorders. Accordingly, unless differentiation between affected and heterozygous individuals can be achieved with amniotic fluid cells, it would be ill-advised to recommend amniocentesis and intrauterine diagnostic studies for a disorder.<sup>110</sup>

Personal views as to the immorality of abortion on the one hand, or the avoidance of post-natal suffering on the other, will, of course, affect this balance.

#### 4. Who is Genetically Healthy?

Each human being is the carrier of a small number of pernicious or potentially lethal recessive genes.<sup>111</sup> Elimination of these genes would require participation by the entire population:

To reduce the frequency of a particular recessive gene to near the level maintained by recurrent mutation, most or all persons heterozygous for that gene would have either to refrain from procreation entirely or to monitor all their offspring in utero and abort not only affected homozygote fetuses, but also the larger number of heterozygote carriers for the gene.<sup>112</sup>

Such a vision may be socially unrealistic,<sup>113</sup> but by rendering this or less sweeping options technically feasible, amniocentesis raises further questions. Who is genetically unhealthy? Is there a danger of increasingly arbitrary standards being applied in the assessment of genetic fitness?<sup>114</sup>

<sup>109</sup> Kaback, *Discussion of Symposium Papers*, in 7 BIRTH DEFECTS, No. 5, at 35 (1971); see Ramsay, *supra* note 74, at 154.

<sup>110</sup> Kaback & Leonard, *Control Studies in the Antenatal Diagnosis of Human Genetic-Metabolic Disorders*, in EARLY DIAGNOSIS SYMPOSIUM, *supra* note 3, at 170.

<sup>111</sup> Lappé, *supra* note 11, at 2. See also Stock, *supra* note 1, at 26.

<sup>112</sup> Institute of Society, Ethics and the Life Sciences, *Ethical and Social Issues in Screening for Genetic Diseases*, 286 NEW ENG. J. MED. 1129, 1130 (1972).

<sup>113</sup> See I. LERNER, *supra* note 9, at 178-79 (the eugenic abortion of carriers on a scale large enough to be significant would not lead to improvement but to termination of mankind on earth).

<sup>114</sup> Friedmann, *supra* note 6, at 41.

The problem arises in at least three contexts. The first is definitional: some congenital disorders seem to lie near the borderline which separates "sickness" from "health." For example,

What about the XXY pattern, Klinefelter's syndrome? Here we have infertile men often carrying some somatic stigmata. Statistically, such patients may be a little more dull than the rest of the population, but many individuals with Klinefelter's syndrome are not "sick." The decision to label a given patient as "sick," therefore, is somewhat arbitrary.<sup>115</sup>

Second, there is the question of the causation of deviant behavior which is statistically related to abnormal genetic or chromosome composition.<sup>116</sup> For example, it has been suggested that those men who have an additional Y chromosome (47, XYY males) may be at greater risk of developing aggressive antisocial behavior, committing criminal acts, and evincing mental retardation than are normal (46, XY) males.<sup>117</sup> But there is a lack of conclusive evidence that the criminal behavior derives from the additional chromosome rather than from some other factor;<sup>118</sup> and it appears that very few 47, XYY males are either retarded or criminal.<sup>119</sup> These facts are, in themselves, reasons not only for refraining from the routine abortion of all such karyotypically abnormal individuals, but also for forbearing from prenatal screening for this "defect." If an amniocentesis reveals an XYY karyotype, and the parents choose not to terminate the pregnancy, the information may cause the parents to be extremely anxiety-ridden and may effect either extra-punitive or overly-protective parental attitudes and behavior toward the child. Such a result may outweigh the potential gains to be derived from the use of amniocentesis for prenatal diagnosis of chromosomal disorders which are statistically, but not necessarily causally, related to aberrational behavior.

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<sup>115</sup> Motulsky, *The Significance of Genetic Disease*, in ETHICAL SYMPOSIUM, *supra* note 3, at 59.

<sup>116</sup> See Friedmann, *supra* note 6, at 41-42.

<sup>117</sup> See generally Miller, *supra* note 64, at 26.

<sup>118</sup> Friedmann, *supra* note 6, at 41.

<sup>119</sup> See Jacobs, Price, Richmond & Ratcliffe, *Chromosome Surveys in Penal Institutions and Approved Schools*, 8 J. MED. GENETICS 49, 52-53 (1971).

Finally, the possible development of post-natal treatment for genetic disorders<sup>120</sup> is an argument against the routine abortion even of afflicted fetuses.<sup>121</sup>

## II. GOVERNMENTAL REGULATION OF AMNIOCENTESIS

As amniocentesis becomes more prevalent, it is likely that governments will begin to regulate the conditions under which the procedure may, perhaps must, be performed.<sup>122</sup> Any potential government program would probably fall into one of three categories: a completely voluntary program; a statute mandating amniocentesis for some or all pregnant women but providing for voluntary selective abortion of defective progeny; or legislation mandating amniocentesis for some or all pregnant women, and further compelling abortion of fetuses found to be "defective."<sup>123</sup>

### A. *A Completely Voluntary Program*

A completely voluntary program combined with extensive public education might be effective in reducing the incidence of those genetic diseases which are prenatally detectable. Given the incidence of fetal and maternal injury,<sup>124</sup> amniocentesis should probably not be made accessible to all pregnant women, but simply to those who are at risk for a particular disorder.<sup>125</sup>

<sup>120</sup> See note 54 *supra* & accompanying text.

<sup>121</sup> Consider the analogy to diabetes prior to the development of insulin. A. WINCHESTER, *supra* note 9, at 300, 384.

<sup>122</sup> This has been the case with postnatal diagnosis of hereditary disorders. See Swazey, *Phenylketonuria: A Case Study in Biomedical Legislation*, 48 J. URB. L. 883 (1971).

<sup>123</sup> Similar questions may arise if health insurance policies are offered providing care contingent on amniocentesis and selective abortion:

The economic cost of genetic disease is indeed large and at least a portion of that cost is borne by the stockholders of, and premium payers to, health insurance companies whose myriad plans cover vast numbers of employed persons and their families. It takes little prescience to be certain that in the near future some insurance carrier will offer only a special form of maternity coverage. The insured and spouse under the plan will have to agree, as a condition of coverage, to submit (at the expense of the company) to the broadest form of genetic screening available at the time—sickle cell, cystic fibrosis, perhaps, all women over 35 for mongolism. If the pregnancy is at risk, the mother will be required to undergo amniocentesis (again, at the expense of the company), and if the fetus is affected, it will be aborted—at the expense of the company. But if such a fetus is carried to term, the delivery and after-care will *not* be at the expense of the company. Will we lawyers and counselors permit health insurance companies to offer such coverage?

Singer, *Impact of the Law on Genetic Counseling*, in 9 BIRTH DEFECTS, No. 4, at 34, 38 (1973).

<sup>124</sup> See notes 74-95 *supra* & accompanying text.

<sup>125</sup> See note 20 *supra*.

## 1. Existing Genetic Screening Programs

Ample prototypes already exist for a governmentally funded voluntary program for prenatal diagnosis. For example, at the federal level, the National Sickle Cell Anemia Control Act<sup>126</sup> provides that the Secretary of Health, Education, and Welfare may make grants and contracts for the establishment and operation of sickle cell anemia screening and counseling programs.<sup>127</sup> Participation of individuals in the program is completely voluntary,<sup>128</sup> and grant applicants must provide for the confidentiality of medical records and test results.<sup>129</sup>

At the local level, the Baltimore-Washington, D.C. area Tay-Sachs Screening Program, funded in part by the Maryland State Department of Health and Mental Hygiene, serves to illustrate that a governmentally sponsored voluntary genetic screening program can be met with widespread participation by large but identifiable population groups.<sup>130</sup> During the first five months of that program, approximately eight thousand individuals of Ashkenazi Jewish origin were screened for carrier states of Tay-Sachs disease. All couples found to be at risk for bearing afflicted children were informed of the availability of amniocentesis for the purpose of monitoring present or future pregnancies.<sup>131</sup>

The relative ease with which this program was implemented may be due to circumstances which would not be present in a program of voluntary amniocentesis for all high risk pregnant women. Under the Tay-Sachs program, there was a

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<sup>126</sup> 42 U.S.C. § 300b (Supp. II, 1972).

<sup>127</sup> *Id.* § 300b(a)(1). See Waltz & Thigpen, *Genetic Screening and Counseling: The Legal and Ethical Issues*, 68 Nw. U.L. REV. 696, 703 (1973).

<sup>128</sup> 42 U.S.C. § 300b-2 (Supp. II, 1972). A number of states, however, have statutes which require certain categories of persons to undergo sickle cell anemia testing. New York, for example, makes a sickle cell test mandatory for "each applicant for a marriage license who is not of the Caucasian, Indian or Oriental race," N.Y. DOM. REL. LAW § 13-aa (McKinney Supp. 1974), and further requires a one-time screening for all pupils between the ages of four and nine in "a city school district contained within a city." N.Y. EDUC. LAW § 904 (McKinney Supp. 1974). Persons who refuse to take either test on religious grounds are exempted. Illinois requires school children to undergo sickle cell testing whenever an examining physician determines that the test is necessary, but exempts pupils who object "on constitutional grounds." ILL. ANN. STAT. ch. 122, §§ 27-28 (Smith-Hurd Supp. 1974). See Waltz and Thigpen, *supra* note 127, at 704-07. See also GA. CODE ANN. § 88-1201 (Supp. 1972).

<sup>129</sup> 42 U.S.C. § 300b-3(a)(2) (Supp. II, 1972).

<sup>130</sup> See Kaback & Zeiger, *supra* note 44, at 132-34.

<sup>131</sup> None of the ten couples found to be at risk for bearing children with Tay-Sachs disease had a previous history of the disease in their immediate families. *Id.* 144.

connecting link between those running the program and those who were potential participants. Because screening was to be limited to persons of Ashkenazi Jewish origin, the organized Jewish community, particularly the rabbinate, served not only to educate potential participants as to the existence of the program but also to recommend participation.<sup>132</sup> Obviously, a voluntary program of amniocentesis for certain high risk groups (for example, pregnant women over the age of thirty-five) would have neither the clergy nor a well defined cohesive community to fulfill the related functions of education and persuasion. Thus, those roles would probably have to be assigned to the medical profession. All candidates for amniocentesis are pregnant, and thus are usually already under the care of a physician. If the medical profession were properly educated,<sup>133</sup> there would be no insurmountable obstacle to widespread participation.

The drafters of any amniocentesis statute, however, will have to face at least two legal issues: the problem of elective therapeutic abortion during the third trimester of pregnancy, and the conflict between the physician's duty to maintain privacy and his duty of disclosure.<sup>134</sup>

## 2. Elective Therapeutic Abortion During the Third Trimester of Pregnancy

Viability is usually placed at about seven months (28 weeks) but may occur earlier, even at 24 weeks.

. . . . For the stage subsequent to viability, the State in promoting its interest in the potentiality of human life may, if it chooses, regulate, and even proscribe, abortion except where it is necessary, in appropriate

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<sup>132</sup> Kaback & Zeiger, *supra* note 44, at 139.

<sup>133</sup> Discussion following Hall, *The Concerns of Doctors and Patients (Discussion)*, in ETHICAL SYMPOSIUM, *supra* note 3, at 34-35 (statement by Carter):

The National Health Service in England has dealt with this in the following way. The Central Advisory Council to the Ministry of Health has sent to every doctor in the United Kingdom a small pamphlet setting out very simply the principles of genetics, what genetic counseling can do, and which are appropriate families, in a broad way, to refer to a clinic. Listed at the back are individual clinics now established.

There is at least one clinic in each of the hospital administrative regions, so every general practitioner knows who is the appropriate genetic counselor to whom he can refer parents with a genetic problem.

<sup>134</sup> See notes 271-73 *infra*.

medical judgment, for the preservation of the life or health of the mother.

*Roe v. Wade*<sup>135</sup>

Any amniocentesis proposal will have to face the difficult issue of third trimester abortions of "defective" fetuses, for the results of the procedure will often not be available prior to that time. Because many physicians believe that the sixteenth week of gestation is the most fruitful time for amniocentesis,<sup>136</sup> and since biochemical analysis of the amniotic fluid requires an additional three (and sometimes four or five) weeks for completion,<sup>137</sup> the results of the test will usually not be known until at least the nineteenth or twentieth week of gestation. Should the procedure have to be repeated, or if there is delay for any other reason, a positive diagnosis of genetic disorder might not be made until subsequent to the twenty-fourth week of gestation. The question which then emerges is whether the state can restrict the mother's<sup>138</sup> right to opt for abortion at so late a stage in pregnancy. The issue arises because of language in *Roe v. Wade* to the effect that a state may not proscribe post-viability abortion if termination of the pregnancy is necessary to preserve "the life or health of the mother."<sup>139</sup> The ambiguity inheres in the term "health," which arguably embraces mental health.<sup>140</sup> Under that interpretation, a mother might qualify for a post-viability abortion free from state interference if she were extremely distressed by a belated diagnosis of a genetic disease.<sup>141</sup>

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<sup>135</sup> 410 U.S. 113, 160, 164-65 (1973).

<sup>136</sup> See note 21 *supra*.

<sup>137</sup> See note 30 *supra* & accompanying text.

<sup>138</sup> The question whether the father has the right to participate in the abortion decision is discussed in Note, *Implications of the Abortion Decisions: Post Roe and Doe Litigation and Legislation*, 74 COLUM. L. REV. 237, 242-45 (1974).

<sup>139</sup> 410 U.S. at 164-65.

<sup>140</sup> See *United States v. Viutch*, 402 U.S. 62, 72 (1971) (general usage and modern understanding of the word "health" includes psychological as well as physical well-being).

<sup>141</sup> One recent commentator has stated categorically that "[t]he Supreme Court held that even during the period of viability abortions to preserve the life or health—physical or mental—of the mother cannot be proscribed." Note, *supra* note 138, at 241. *Roe* is quoted in support: "Maternity, or additional offspring, may force upon a woman a distressful life and future. Psychological harm may be imminent. Mental and physical health may be taxed by child care . . ." 410 U.S. at 153. It appears, however, that the Supreme Court's concern for maternal mental health was limited to points in gestation prior to the viability of the fetus. After discussing the right of the mother to be free from psychological distress, the Court continued:

[A] state may properly assert important interests in safeguarding health, in maintaining medical standards, and in protecting potential life. At some point in preg-

But it is possible that the *Roe* Court intended to give states wide latitude to proscribe post-viability abortions except when maternal life or physical health is in jeopardy. A few states have expressly interpreted *Roe* in exactly this manner.<sup>142</sup> Other states, less stringent in their discretionary regulation of post-viability abortions, have specifically provided that preservation of mental as well as physical health is a legitimate justification for a third trimester abortion.<sup>143</sup> Either of these options seems to be permitted by *Roe*, leaving only the question which alternative is more desirable. In the case of an abortion statute standing alone, the answer depends on one's ethical, societal, and theological viewpoint. However, if the abortion law is coupled with an amniocentesis provision, then the choice is clearer—the state should permit third trimester abortions of fetuses which have been prenatally diagnosed as “defective.” Otherwise the state will be in the position of offering (or forcing) prenatal diagnosis, but prohibiting some women from acting fully upon the information obtained. Thus, any jurisdiction which establishes an amniocentesis program should include in its abortion law a provision such as the following:

Between the \_\_\_\_\_ and \_\_\_\_\_ weeks of pregnancy a licensed physician is justified in performing an abortion if prenatal diagnosis has revealed that there is a substantial likelihood that the child would be born with grave physical or mental defect.<sup>144</sup>

### 3. The Physician's Duty to Maintain Privacy Versus His Duty of Disclosure

The genetic counselor will ultimately be presented with a conflict between the duty to protect the patient's privacy and the duty to inform the patient's relatives that they, too, are at risk of bearing a child similarly afflicted.<sup>145</sup> For example, sup-

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nancy these respective interests become sufficiently compelling to sustain regulation of the factors that govern the abortion decision.

*Id.* at 154.

<sup>142</sup> See, e.g., IDAHO CODE ANN. § 18-608(3) (Supp. 1973); IND. ANN. STAT. § 10-108 (Supp. 1974).

<sup>143</sup> See e.g., ILL. ANN. STAT. ch. 38, § 81-14(c) (Smith-Hurd Supp. 1974).

<sup>144</sup> Cf. MODEL PENAL CODE § 230.3(2) (Proposed Official Draft, 1962).

<sup>145</sup> Hall, *The Concerns of Doctors and Patients*, in ETHICAL SYMPOSIUM, *supra* note 3, at 23, 30; Lubs, *Privacy and Genetic Information*, in ETHICAL SYMPOSIUM, *supra* note 3, at 267-68; Motulsky, *The Significance of Genetic Disease*, in ETHICAL SYMPOSIUM, *supra* note 3, at 59, 64.



pose that an amniocentesis performed on patient *A* reveals that the fetus is affected with translocation mongolism. A subsequent chromosomal study of *A* and her husband shows that *A* is the carrier of the disease. Thus, the chances are relatively high that *A*'s sister, *B* (a woman of child-bearing age), and *A*'s first cousin, *C* (a woman who is two months pregnant), are also carriers of this permanently aberrant chromosome pattern.<sup>146</sup> *A*, stating that her sister and cousin are terrible gossips, requests that the information not be disclosed to them. Since *A* plans to have her mongoloid baby aborted, *B* and *C* need never know. Do the Hippocratic Oath<sup>147</sup> and the ethics of the doctor's profession<sup>148</sup> demand that he refrain from revealing the condition of *A* and her unborn child? Or do the very real medical needs of *B* and *C* (and the needs of society in general) transcend *A*'s right to confidentiality?

Any governmentally sponsored amniocentesis program, even a completely voluntary one, must face this problem. Since the conflict between the duty to maintain privacy and the duty to disclose can be anticipated in advance, it should be resolved statutorily. Otherwise physicians will be forced to undergo malpractice suits for the purpose of retrospectively determining their obligations. A legislature confronted with the problem would have three alternatives. First, it could provide, as does the National Sickle Cell Anemia Control Act,<sup>149</sup> for the confidentiality of medical records and test results. In a completely voluntary amniocentesis program, such a provision might have the advantage of encouraging the participation of some who would otherwise be reluctant to subject themselves to the procedure. The disadvantages of such a provision are obvious: our hypothetical *B* or *C* might bear an affected child before realizing that she, too, was a candidate for amniocentesis.

A second statutory alternative would be to impose a duty

<sup>146</sup> Motulsky, *supra* note 145, at 64.

<sup>147</sup> The Hippocratic Oath provides, *inter alia*: "Whatever, in connection with my professional practice, or not in connection with it, I see or hear, in the life of men, which ought not to be spoken of abroad, I will not divulge as reckoning that all such should be kept secret." B. GORDON, *MEDICINE THROUGHOUT ANTIQUITY* 517 (1949).

<sup>148</sup> *E.g.*, *Principles of Medical Ethics* § 9, in *AMERICAN MEDICAL ASS'N, OPINIONS AND REPORTS OF THE JUDICIAL COUNCIL VII* (1971):

A physician may not reveal the confidences entrusted to him in the course of medical attendance, or the deficiencies he may observe in the character of patients, unless he is required to do so by law or unless it becomes necessary in order to protect the welfare of the individual or of the community.

<sup>149</sup> 42 U.S.C. § 300b (Supp. II, 1972); see notes 126-29 *supra* & accompanying text.

on the physician to divulge the information to those family members who are at risk but to no one else. This approach seems undesirable; it would serve neither to protect privacy fully (there is no guarantee that the information would stay within family circles) nor fully to promote the public health functions of disclosure. If *B* and *C* must be notified, what about *D*, *A*'s distant cousin who lives three thousand miles away, and who also bears a risk, albeit a lesser one, of being a carrier of the disorder? What about other relatives whose existences are unknown to the doctor and not revealed by the patient?

A third possibility, discussed in the following section, is to devise a state or federal system for reporting genetic disease.

#### 4. A State or National Registry System for Reporting Genetic Disease

It has been argued that any voluntary amniocentesis or genetic counseling program should be accompanied by a registry system for reporting genetic disease.<sup>150</sup> British physician Cedric O. Carter has concluded that

there is a need for a registry, not necessarily to trace and counsel these other people at risk, but to tell their doctors. Then the decision as to what should be done rests, as it should, with the family doctor. He may decide to keep quiet about it or may decide that he should refer the person involved for counseling.

Having a registry system also has the advantage that one can contact people at the age when they need genetic counseling. One will know automatically that there are 30 individuals in the country who are 18 or 19 years old with 50 percent risk of Huntington's chorea.<sup>151</sup>

In the United States, there are already at least two state-wide private genetic registries which depend on voluntary participation. One physician in Oregon and another in Colorado are currently computerizing the histories of all families in those states who have been afflicted with genetic disorders.<sup>152</sup>

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<sup>150</sup> Discussion following Motulsky, *The Significance of Genetic Disease*, in ETHICAL SYMPOSIUM, *supra* note 3, at 66-67 (statement by Carter); Lubs, *supra* note 145, at 267, 273.

<sup>151</sup> Carter, *supra* note 150, at 66-67.

<sup>152</sup> Lubs, *supra* note 145, at 273.

New York's Genetic Alert Program, an experiment with a public registry, was established in part to determine the possibility of accumulating "fundamental, useful data

A governmentally established and controlled reporting and registry system would undoubtedly be more complete, and hence more effective, than the current private systems. There is no doubt, however, that such a system would make inroads on the traditional concept of doctor-patient confidentiality. A recent Second Circuit opinion indicates that a governmental reporting system which impinges on that confidential relationship may be unconstitutional. In *Roe v. Ingraham*,<sup>153</sup> several doctors and patients challenged a New York statute which required physicians and pharmacists to file with state officials copies of prescriptions (which contained, among other information, the name, address, and age of the patient) for addictive drugs. This information was to be fed to a computer which would then determine which patients used addictive drugs and which physicians prescribed them. The state argued that the filing requirement was necessary in order for the Department of Health to be able to detect a number of serious abuses, such as the same patient going from doctor to doctor and thereby obtaining great quantities of addictive drugs, which could either be used by the patient or sold illicitly. The Second Circuit characterized the state's contentions as "powerful" but noted: "Should the constitutionally protected zone of privacy be extended . . . the individual's interest in keeping to himself the existence of his physical ailments and his doctor's prescriptions for them would lie rather close in the continuum."<sup>154</sup> The court thus reversed the district court's dismissal of the complaint and remanded the action so that the trial court could balance the state's need for a central information system against the patient's right to confidentiality and privacy,<sup>155</sup> and explore fully the manner in which the confidentiality of identifying data was being preserved.

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about the abnormalities of the human gene pool." Swazey, *supra* note 122, at 922. Between 1965 and 1967, the program compiled genetic information and histories of approximately 4,000 children. The data accumulated were placed not only in the child's medical records but also on punched computer cards for later study. It was hoped that this program would serve as a model for a national Genetic Alert, but that goal has not been realized. *Id.*

<sup>153</sup> 480 F.2d 102 (2d Cir. 1973).

<sup>154</sup> *Id.* at 108 (footnotes omitted).

<sup>155</sup> See *Schulman v. New York City Health & Hosps. Corp.*, 41 App. Div. 2d 714, 341 N.Y.S.2d 242 (1973), *rev'g* 70 Misc. 2d 1093, 335 N.Y.S.2d 343 (Sup. Ct. 1972), which involved a New York ordinance that required, after abortion, the filing of a fetal death certificate including the mother's name and address. The trial court held that the death certificate procedure violated the mother's right of privacy. The Appellate Division re-

*Roe v. Ingraham* would seem to cast doubt on the validity of a centralized amniocentesis registry. However, the governmental interest in obtaining complete genetic data appears stronger than the governmental interest at issue in *Ingraham*. The absence of a centralized drug prescription registry normally would damage the health and safety only of "consensual" victims—patients who obtained large quantities of addictive drugs and persons who made illicit purchases from those patients. The purpose of an amniocentesis registry, however, would be to protect those who might not realize that they are at risk for a particular disorder. In this respect an amniocentesis reporting system would be very similar to the many state statutes which require physicians to disclose cases of communicable diseases to public health officials.<sup>156</sup> Genetic disorders are not communicable, but they are transmissible, and their transmission might be greatly curtailed by a statewide, or perhaps even nationwide, reporting system. A centralized amniocentesis registry would embody the same principle which underlies not only communicable disease reporting statutes, but also the American Medical Association Principles of Medical Ethics: the recognition that the physician-patient privilege must sometimes be modified "in order to protect the welfare of the individual or of the community."<sup>157</sup>

Even the Second Circuit in *Ingraham* recognized that one way of reconciling the public health needs of the community with the privacy needs of the individual is for the government to ensure that the reported data will remain as confidential as

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versed and remanded "in fairness to all parties and in light of judicial decisions handed down since the determination herein, most notably *Roe v. Wade*." 41 App. Div. 2d at 714, 341 N.Y.S.2d at 243. Upon reconsideration, the lower court examined the possible state interests involved and found that those interests did not justify infringement of the rights guaranteed by *Roe v. Wade*, 410 U.S. 113 (1973). *Schulman v. New York City Health & Hosp. Corp.*, 75 Misc. 2d 150, 346 N.Y.S.2d 920 (Sup. Ct. 1973). *Cf. Doe v. Rampton*, 366 F. Supp. 189 (D. Utah 1973).

<sup>156</sup> *E.g.*, CONN. GEN. STAT. ANN. § 19-89 (1969); LA. REV. STAT. ANN. § 40:39 (1965); MASS. ANN. LAWS ch. 111, § 111 (1967); MICH. COMP. LAWS ANN. § 329.152 (1967); N.J. STAT. ANN. § 26:4-15 (1964); N.Y. PUB. HEALTH LAW § 2101 (McKinney 1971); WIS. STAT. ANN. § 143.04 (1974).

Similarly, several states require physicians to report cases of child abuse to state officials, and specifically provide that the physician-patient privilege is not applicable to such situations. *E.g.*, MICH. COMP. LAWS ANN. §§ 722.571, 722.573 (1968); OHIO REV. CODE ANN. § 2151.421 (Page Supp. 1973); PA. STAT. ANN. tit. 11, §§ 2103, 2107 (Supp. 1974); WIS. STAT. ANN. § 48.981 (Supp. 1974). See Note, *Recent Legislation: An Exception to Use of the Physician-Patient Privilege in Child Abuse Cases*, 42 U. DET. L.J. 88 (1964).

<sup>157</sup> See note 148 *supra*.

possible. If this is done, a disclosure statute might withstand constitutional challenge.

While the Constitution does not condemn a state to using ineffective means in dealing with a problem as serious as the use of the opiates and stimulants . . . , it may well condition use of a more effective means which involves a danger to constitutionally-protected privacy on the taking of all reasonable precautions to limit the risk . . . . If it were clear that the State had taken or proposed to take effective steps, by regulation or otherwise, to limit access to the patients' names on the prescription forms as rigidly as is consistent with accomplishment of the asserted statutory purpose, the grounds for constitutional attack might disappear.<sup>158</sup>

Information submitted to an amniocentesis registry need not be generally available, and any provision for an amniocentesis reporting system should specifically require the confidentiality of all data obtained.

Requirements for disclosure should vary according to disease type. For example, if amniocentesis reveals a fetus affected by an autosomal recessive disorder, then both parents must be carriers of the gene, and consequently both maternal and paternal relatives should be notified.<sup>159</sup> If amniocentesis reveals a sex-linked disorder, however, normally only maternal female relatives need be notified.<sup>160</sup> In each case, the goal would be notification sufficiently broad to encompass all relatives at risk, but no broader.

#### B. *Mandatory Amniocentesis Followed by Voluntary Selective Abortion of Defective Fetuses*

A slightly more stringent government program would involve mandatory amniocentesis of all women who are at risk for carrying fetuses with genetic defects. These are women who are known to be carriers of a genetic disease or who have some other characteristic, such as being over thirty-five years old, that makes the appearance of genetic defects in their progeny substantially more likely than in the population as a whole.<sup>161</sup> In this program, government intervention would be limited to

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<sup>158</sup> 480 F.2d at 109.

<sup>159</sup> See notes 14-19 *supra* & accompanying text.

<sup>160</sup> See note 9 *supra* & accompanying text.

<sup>161</sup> See Cowie, *supra* note 20.

compelling amniocentesis of pregnant women in the relevant population; the decision whether to abort a genetically defective fetus would be left entirely to the parents.

In developing the program, the government would be concerned with two specific goals. The first one is easing the pressure on the fisc caused by the need to place many genetically defective children in public institutions. The second is the more generalized state interest in alleviating the pain and suffering that inevitably accompany the birth of a defective child. Both of these goals are met only indirectly by the proposed program; without the requirement that defective fetuses be aborted, the state cannot ensure that either one will be met. The state's interest is not totally *de minimis*, however; it is most likely that at least some women who choose abortion would not have learned of their fetus' defects, and would not have aborted it, without the mandatory amniocentesis program. The state's goals will thus be furthered by the program, but admittedly not as substantially as they would be if the program included mandatory abortion in appropriate cases as well. Perhaps the program can be viewed as a first step toward that end.

Several ethical objections to the program can be raised. For example, there may be no justification for compelling amniocentesis of a woman who has stated in advance that she will not have an abortion regardless of the test result.<sup>162</sup> Given the risks of injury and invasion of privacy, it might be unethical to subject such a patient to the test.<sup>163</sup> On the other hand, at least one gynecologist<sup>164</sup> believes that amniocentesis should be performed on a voluntary basis even if the parents are not willing to terminate the pregnancy in the event of a positive diagnosis. He reasons that if the fetus is found to be normal, the slight risk involved in the technique is outweighed by the peace of mind gained by the patient for the several remaining months of gestation. Moreover, if the fetus is found to be defective, the

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<sup>162</sup> It is clear that some parents will not opt for abortion even after an affected child is diagnosed. For example, in one study 119 amniocenteses were performed for 21 different inherited disorders. Thirty-three affected fetuses were diagnosed, but only 27 sets of parents opted for abortion. Littlefield, Milunsky & Jacoby, *supra* note 56, at 43, 45. These authors state, "[M]any centers feel that amniocentesis should not be done unless parents are prepared to take appropriate action. Other geneticists feel differently on this point, however." *Id.* 44-45.

<sup>163</sup> Waltz & Thigpen, *supra* note 127, at 739.

<sup>164</sup> Discussion following Littlefield, Milunsky & Jacoby, *Prenatal Genetic Diagnosis: Status and Problems*, in *ETHICAL SYMPOSIUM*, *supra* note 3, at 52 (statement by Valenti).

parents might, and sometimes do, change their minds and opt for abortion.<sup>165</sup> Finally, and most importantly, if disorders become amenable to prenatal treatment, abortion will not be the only "cure" for genetic disease.

These ethical arguments are not the only ones that can be marshalled for or against a mandatory amniocentesis program. A statute which compels high risk women to submit to amniocentesis also gives rise to constitutional questions.<sup>166</sup>

### 1. Compulsory Amniocentesis and the Free Exercise of Religion

Even without requiring abortion of defective progeny, a statute mandating amniocentesis might impinge on the free exercise of religion in two respects. First, the procedure is a medical one, and thus ipso facto would violate the tenets of several religious faiths. Second, it is arguable that mandatory amniocentesis is simply the first step in a program of negative eugenics<sup>167</sup> which contemplates (even though it does not re-

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<sup>165</sup> *Id.*

<sup>166</sup> In addition to the first and fourth amendment issues analyzed in the text accompanying notes 167-200 *infra*, a mandatory amniocentesis program could conceivably run afoul of the equal protection clause. Statutory categorizations which are based on suspect classifications must be justified by the showing of a compelling state interest. *See, e.g.,* *Graham v. Richardson*, 403 U.S. 365, 372 (1971); *Loving v. Virginia*, 388 U.S. 1, 11 (1967). A compulsory amniocentesis statute would, of necessity, classify pregnant women into two categories—those who are at risk for a disorder and are therefore required to submit, and those who are not known to be at risk and are not obligated to submit. It could be argued that such a classification is "suspect" in that, just like classifications based on race, *Loving v. Virginia*, 388 U.S. 1, 11 (1967), alienage, *Graham v. Richardson*, 403 U.S. 365, 372 (1971), or national origin, *Oyama v. California*, 332 U.S. 633, 644-46 (1948), it singles out persons solely on the basis of their heritage rather than on the basis of something over which they have control, *cf. Vukowich, The Dawning of a Brave New World—Legal, Ethical, and Social Issues of Eugenics*, 1971 U. ILL. L.F. 189, 208-09. A genetic categorization would appear to be at least rationally related to a state interest; but would the state interest be compelling? A mandatory amniocentesis statute, in and of itself, cannot ensure that the defective fetus will not be born. It can serve to identify at risk fetuses and to exert pressure on parents to abort them, as well as to warn unknowing relatives of their risk. But it is doubtful that these interests would be deemed compelling, because a voluntary program might be almost as effective in achieving the same purpose. *See* notes 130-33 *supra* & accompanying text. If a genetic classification is suspect, then, the purposes of identifying and encouraging the abortion of at risk fetuses and the notification of relatives of their potential risk would not provide a compelling justification for compulsory amniocentesis. But if a genetic classification is not suspect, these interests seem to be rational, and thus would be sufficient to uphold a compulsory amniocentesis statute.

<sup>167</sup> *See generally* notes 223-35 *infra* & accompanying text.

quire) abortion of defective fetuses.<sup>168</sup> To that extent, forced participation in such a program might violate the principles of any religion which believes that life begins at conception<sup>169</sup> and that the sanctity of such life is an absolute.

When confronted with the issue of when a state can compel conduct contrary to religious beliefs and principles, the Supreme Court has said that "only those interests of the highest order and those not otherwise served can overbalance legitimate claims to the free exercise of religion."<sup>170</sup> To protect free exercise interests, the Court has applied the "compelling state interest" test to statutory restrictions on those interests.<sup>171</sup> But the interest in protecting children from serious danger or disease has been held sufficient to overcome a free exercise attack. In *Prince v. Massachusetts*,<sup>172</sup> the Supreme Court sustained the validity of a child labor law which prohibited minors from selling materials in public places and made it unlawful to furnish any article to a minor with knowledge that the child intended to sell it in violation of the law. An adult Jehovah's Witness challenged the statute on the ground that it impinged on the exercise of religious beliefs by prohibiting her from furnishing her

<sup>168</sup> To the extent that amniocentesis is used in conjunction with intrauterine and immediate post-natal therapy rather than with subsequent abortion, however, the process would seem entirely consistent with respect for the value of fetal life.

<sup>169</sup> This is the official belief of the Catholic Church. *Roe v. Wade*, 410 U.S. 113, 160-61 & n.61 (1973) (citing D. CALLAHAN, *ABORTION: LAW, CHOICE, AND MORALITY* 409-47 (1970), and Noonan, *An Almost Absolute Value in History*, in *THE MORALITY OF ABORTION* 1, 3-7 (J. Noonan ed. 1970)).

<sup>170</sup> *Wisconsin v. Yoder*, 406 U.S. 205, 215 (1972). The Court held that Wisconsin could not compel certain Amish parents to send their children to a formal high school until age sixteen in violation of their religious beliefs. The children, the Court noted, were formally educated through the eighth grade, and there was no showing of "any harm to the physical or mental health of the child or to the public safety, peace, order, or welfare" attributable to the children's lack of formal secondary schooling. *Id.* at 230.

<sup>171</sup> *Sherbert v. Verner*, 374 U.S. 398, 403 (1963):

[T]he Court has rejected challenges under the Free Exercise Clause to governmental regulation of certain overt acts prompted by religious beliefs or principles, for "even when the action is in accord with one's religious convictions, [it] is not totally free from legislative restrictions." *Braunfeld v. Brown*, 366 U.S. 599, 603. The conduct or actions so regulated have invariably posed some substantial threat to public safety, peace or order. . . . [A]ny incidental burden on the free exercise of appellant's religion may be justified by a "compelling state interest in the regulation of a subject within the State's constitutional power to regulate . . ." *NAACP v. Button*, 371 U.S. 415, 438.

<sup>172</sup> 321 U.S. 158 (1944). In *Jehovah's Witnesses v. King County Hosp.*, 390 U.S. 598 (1968) (per curiam), *aff'g* 278 F. Supp. 488 (W.D. Wash. 1967), the Supreme Court, with only a citation to *Prince*, affirmed a decision upholding the Washington state scheme for authorizing necessary blood transfusions for children over parents' objections on religious grounds.



minor ward with religious materials to sell on the streets. In concluding that religious freedoms must, in that situation, be subordinated to the state's interest in protecting minor children, the Court stated:

The right to practice religion does not include liberty to expose the community or the child to communicable disease or the latter to ill health or death. . . .

. . . .  
 . . . Parents may be free to become martyrs themselves. But it does not follow they are free, in identical circumstances, to make martyrs of their children before they have reached the age of full and legal discretion when they can make that choice for themselves.<sup>173</sup>

This language has been relied upon by several state courts in upholding the validity of statutes mandating the vaccination of school children<sup>174</sup> and requiring blood transfusions<sup>175</sup> and operations<sup>176</sup> for children against challenges by parents on religious grounds. Obviously, however, such requirements are very different from mandatory amniocentesis. The former are designed to protect children and others from the dangers of illness and communicable disease, and hence further a compelling interest of the state.

In contrast, subjecting religious objectors to a mandatory amniocentesis program without a mandatory abortion program would not further any compelling interest of the state. Those who are opposed to prenatal diagnosis on religious grounds would be very unlikely candidates for voluntary selective abortion; subjecting them to compulsory amniocentesis would thus

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<sup>173</sup> 321 U.S. at 166-67, 170.

<sup>174</sup> See, e.g., *Cude v. State*, 237 Ark. 927, 377 S.W.2d 816 (1964) and cases cited therein. The Supreme Court case which sustained the validity of compulsory vaccination, *Jacobson v. Massachusetts*, 197 U.S. 11 (1905), did not involve a free exercise challenge. *Zucht v. King*, 260 U.S. 174 (1922), dismissed on the ground that no substantial constitutional question was presented, likewise did not involve a religious challenge.

<sup>175</sup> *People ex rel. Wallace v. Labrenz*, 411 Ill. 618, 104 N.E.2d 769 (1952). The courts have uniformly upheld the authority of the state to authorize the administration of blood transfusions where the child's life is in danger, but differ where the child's life is not in danger. See, e.g., *In re Sampson*, 65 Misc. 2d 658, 317 N.Y.S.2d 641 (Family Ct. 1970), *aff'd mem.*, 37 App. Div. 2d 668, 323 N.Y.S.2d 253 (1971), *aff'd mem.*, 29 N.Y.2d 900, 278 N.E.2d 918, 328 N.Y.S.2d 686 (1972) (authorizing transfusion for plastic surgery); *In re Green*, 448 Pa. 338, 292 A.2d 387 (1972) (parent's religious objections prevail where child's life is not immediately endangered).

<sup>176</sup> *State v. Karwath*, 199 N.W.2d 147 (Iowa 1972) (authorizing removal of children's adenoids and tonsils).

not, by itself, improve the health of the population generally or reduce the number of dependent individuals brought into the world. The state might claim an interest in compelling amniocentesis so that the relatives of the carriers of genetic defects can be informed of their danger, but this interest does not seem substantial enough to overcome religious objections, particularly since the subsequent birth of a genetically defective child will impart the same information to most relatives who may be at risk.

However, should more genetic disorders become amenable to prenatal or immediate postnatal treatment, a combined mandatory amniocentesis and treatment statute would serve to protect the child from "ill health or death"<sup>177</sup> and hence might withstand a free exercise challenge. At present, since abortion is normally the only "cure" for those genetic disorders which are diagnosable prenatally, any mandatory amniocentesis statute should contain an exemption for those who object to the procedure on religious grounds.<sup>178</sup>

## 2. Compulsory Amniocentesis as an Unreasonable Search of the Person

A statutory scheme mandating amniocentesis for all pregnant, at risk women would very likely be challenged as violative of the fourth amendment's proscription of "unreasonable searches and seizures."<sup>179</sup> Such a challenge would probably succeed under current fourth amendment law.

It is relatively certain that compulsory amniocentesis would constitute a search under the principles of *Schmerber v. California*.<sup>180</sup> The Supreme Court there held a blood alcohol test performed over Schmerber's objections to be a search.<sup>181</sup> That aspect of the case is indistinguishable from a mandatory amniocentesis regime; both involve state-imposed intrusions into the body.

The fact that compulsory amniocentesis would not involve a search for evidence of a crime, while *Schmerber* did, should

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<sup>177</sup> *Prince v. Massachusetts*, 321 U.S. 158, 167 (1944).

<sup>178</sup> Of the states which have requirements that neonates be tested for phenylketonuria, at least 29 provide exemptions for infants whose parents object on religious grounds. See Swazey, *supra* note 122, at 909-12; N.D. CENT. CODE § 25-17-04 (1970); TENN. CODE ANN. § 53-631 (Supp. 1974).

<sup>179</sup> U.S. CONST. amend. IV.

<sup>180</sup> 384 U.S. 757 (1966).

<sup>181</sup> The Court held the search constitutionally permissible.

not be relevant to whether there is a search in the former situation. It is well established that the protections of the fourth amendment are designed to protect citizens from intrusive state activity itself; the nature of the proceeding is not germane to the existence of the constitutional protection. Justice White recognized this for the Court in *Camara v. Municipal Court*,<sup>182</sup> where he stated, "It is surely anomalous to say that the individual and his private property are fully protected by the Fourth Amendment only when the individual is suspected of criminal behavior."<sup>183</sup>

The mandatory amniocentesis statute is arguably within the Supreme Court's holding in *Wyman v. James*<sup>184</sup> that a compelled visit by a welfare department caseworker to a recipient's home, carried out for the department's administrative purposes over the recipient's objections, did not constitute a search. Both situations involve an intrusion by the state into a person's private domain in order to carry out the goals of an administrative program. In neither case is the government attempting to uncover evidence of crime. However, the *Wyman* decision was predicated upon the Court's perception that the result of the welfare recipient's refusal to allow the visit was not a "penalty"; it was merely the discontinuation of welfare payments, the withdrawal of a state-granted benefit.<sup>185</sup> To be effective, the

<sup>182</sup> 387 U.S. 523 (1967).

<sup>183</sup> *Id.* at 530 (dictum) (footnote omitted). "The basic purpose of [the Fourth] Amendment, as recognized in countless decisions of this Court, is to safeguard the privacy and security of individuals against arbitrary invasions by governmental officials." *Id.* at 528. See *Abel v. United States*, 362 U.S. 217, 254-56 (1960) (Brennan, J., dissenting).

The Court seemed to reaffirm this doctrine in *Wyman v. James*, 400 U.S. 309, 317 (1971). The *Wyman* Court appears to have been rather confused on the question, however. Compare *id.* at 317 ("[O]ne's Fourth Amendment protection subsists apart from his being suspected of criminal behavior.") with *id.* at 323 (Assuming it is a search, a home visit, see text accompanying note 184 *infra*, is a reasonable search because it "is not a criminal investigation, does not equate with a criminal investigation, and despite the announced fears of [appellee] and those who would join her, is not in aid of any criminal proceeding."). The force of Justice White's *Camara* dictum, repeated in *Wyman*, is probably strong enough for the rule stated there to remain good law.

While almost all fourth amendment case law arises in the criminal context, lower courts have recognized the applicability of the amendment to civil actions. See, e.g., *Laprease v. Raymours Furniture Co.*, 315 F. Supp. 716, 722 (N.D.N.Y. 1970); *United States v. Undetermined Quantities of Depressant or Stimulant Drugs*, 282 F. Supp. 543, 546 (S.D. Fla. 1968); *Finkenburg Furniture Corp. v. Vasquez*, 67 Misc. 2d 154, 158, 324 N.Y.S.2d 840, 846 (Civ. Ct. 1971) (dictum). See generally *Warden v. Hayden*, 387 U.S. 294, 301-02 (1967) (dictum).

<sup>184</sup> 400 U.S. 309, 317 (1971).

<sup>185</sup> *Id.* at 325. But cf. *Goldberg v. Kelly*, 397 U.S. 254, 262 (1970): Welfare benefits "are a matter of statutory entitlement for persons qualified to receive them. Their ter-

amniocentesis statute must include a fine for noncompliance. This use of an affirmative penalty distinguishes it from *Wyman*.

The search resulting from mandatory amniocentesis has all the major characteristics of a regulatory search, a unique type of search that has been given special consideration by the Supreme Court. The constitutional limitations on regulatory searches were set down in *Camara v. Municipal Court*,<sup>186</sup> where the Supreme Court held that the state interest in inspecting residential structures for possible violations of a municipal housing code is sufficient to justify searches of individual houses upon presentation of a search warrant if one is requested by the homeowner. This is true, the Court held, even if there is probable cause to believe only that the houses in a locale generally, rather than one house in particular, may be a fire or health hazard. In other words, the probable cause standard in a regulatory search is one that applies to a whole population rather than to a single individual. This standard for probable cause was adopted by the Court because the aim of the regulatory program—and hence the focus of the public's interest—was “city-wide compliance with minimum physical standards for private property.”<sup>187</sup> The need for the particular search thus had to be viewed in the context of a generalized public need, one which contrasts with the rather particularized public interest in seizing evidence from a lone individual suspected of criminal behavior, which requires a showing of probable cause as to that single person.<sup>188</sup> These aspects of the regulatory pattern in *Camara* are identical to those contemplated by the mandatory amniocentesis statute. Under that statute, the public interest does not lie in the inspection of any single individual. Rather, it is the broad, non-specific interest in determining whether any particular members of a rather large population—at risk pregnant women—create a “hazard” for the society by carrying a genetically defective fetus, one whose birth the state has an economic interest in preventing for the good of all.

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mination involves state action that adjudicates important rights. The constitutional challenge cannot be answered by an argument that public assistance benefits are a “privilege” and not a “right.”” See also Van Alstyne, *The Demise of the Right-Privilege Distinction in Constitutional Law*, 81 HARV. L. REV. 1439 (1968).

<sup>186</sup> 387 U.S. 523 (1967). See *v. City of Seattle*, 387 U.S. 541 (1967), a companion case to *Camara*, involved a regulatory search of commercial structures, as distinguished from *Camara*'s residential buildings; the two cases reached the same results.

<sup>187</sup> *Id.* at 535.

<sup>188</sup> *Id.*

In order to make searches of pregnant women within the regulatory system established by the amniocentesis statute, then, the state initially needs only to demonstrate probable cause to believe that the general population of at risk pregnant women creates a danger that the aims of the program will be defeated if the searches do not take place. That showing is not hard to make; decreasing the financial burden created by public institutionalization of the genetically defective will not come about easily without implementation of the amniocentesis program.<sup>189</sup>

Before the searches can be allowed, however, even on a showing of general probable cause, the state must show that they are "reasonable."<sup>190</sup> This requires a balancing of the state's interests in the search against the privacy interests of the individual being searched.<sup>191</sup>

The state's interests in the search have already been discussed.<sup>192</sup> The primary one is the indirect economic benefit of not having to spend public monies on the care of genetically defective citizens. The other interest is that of alleviating the inevitable pain and suffering felt by both parents and children when someone is born with a genetic defect. Some of the factors used by the *Camara* court in finding regulatory searches reasonable apply by analogy to amniocentetic searches. For example, one major reason for the *Camara* holding was that "the public interest demands that all dangerous conditions be prevented or abated, yet it is doubtful that any other canvassing technique would achieve acceptable results."<sup>193</sup> The Court also observed that an inspection not aimed at the discovery of evidence of crime inherently involves a lesser intrusion into a person's privacy than one that is.<sup>194</sup> Similarly, the analysis in *Wyman v. James* included several elements that apply to the amniocentetic search. Hypothesizing that the home visitation was a

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<sup>189</sup> It could better be argued that these goals could only be met with a more stringent program—compulsory amniocentesis followed by compulsory abortion of fetuses determined to be genetically defective. See text accompanying notes 201-57 *infra*.

<sup>190</sup> "It is unreasonableness which is the Fourth Amendment's standard. *Terry v. Ohio*, 392 U.S. 1, 9 (1968); *Elkins v. United States*, 364 U.S. 206, 222 (1960)." *Wyman v. James*, 400 U.S. 309, 318 (1971).

<sup>191</sup> "[T]here can be no ready test for determining reasonableness other than by balancing the need to search against the invasion which the search entails." *Camara v. Municipal Court*, 387 U.S. 523, 536-37 (1967).

<sup>192</sup> See text accompanying notes 161-62 *supra*.

<sup>193</sup> 387 U.S. at 537.

<sup>194</sup> *Id.* But cf. notes 181-83 *supra* & accompanying text.

search, the Court concluded that it was a reasonable one. This result was founded upon the public's special interest in the dependent child whose family was receiving the welfare assistance, the absence of any desire to obtain information about criminal activity, and the fact that all the desired information could be obtained only through a home visit.<sup>195</sup>

While the state's interest in the amniocentesis statute parallels those interests presented in *Camara* and *Wyman*, it is certainly a much weaker one. Without mandatory abortion of defective fetuses, there is no guarantee that the aim of the program—economic savings for the state, and alleviation of the pain and suffering that accompany the birth of a genetically defective child—will ever be met. The state's interest is thus only indirect at best.

In addition to the absence of a strong state interest, the bodily interest of the pregnant woman would also make the search unreasonable. Although the fourth amendment seems to equate searches of "persons" with those of "houses," there is good reason to believe that the privacy interest in a search of the amniocentetic type—into the body—is stronger than the personal interest involved in a search of the home or a mere seizure of the person.<sup>196</sup> The special consideration given searches of this kind is perhaps best seen in the context of border searches. Casual border searches of luggage, wallets, purses, pockets, and the like can be made without any special showing of probable cause. The courts typically hold that "there is reason and probable cause to search every person entering the United States from a foreign country, by reason of such entry alone."<sup>197</sup> When the state wants to search a body cavity, however, the rule is different. A showing akin to the probable cause normally required must then be made.

*Henderson v. United States*<sup>198</sup> is a classic example of the rec-

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<sup>195</sup> 400 U.S. at 318, 321-22.

<sup>196</sup> "Because we are dealing with intrusions into the human body rather than with property relationships of private papers—houses, papers, and effects—we write on a clean slate." *Schmerber v. California*, 384 U.S. 757, 767-68 (1966).

<sup>197</sup> *Witt v. United States*, 287 F.2d 389, 391 (9th Cir.), *cert. denied*, 366 U.S. 950 (1961). See generally *Boyd v. United States*, 116 U.S. 616, 623 (1886) (dictum). The rule has become so ingrained in our jurisprudence that courts rarely state the reason behind it any more; they merely parrot the rule itself, and go on to the next question involved in the case. See, e.g., *United States v. Abarca-Espinoza*, 440 F.2d 1354 (9th Cir. 1971), *cert. denied*, 405 U.S. 930 (1972); *Bloomer v. United States*, 409 F.2d 869, 871 (9th Cir. 1969).

<sup>198</sup> 390 F.2d 805 (9th Cir. 1967).

ognition that the increased privacy interest of the person being searched requires the state to make a comparably higher showing of probable cause. The government forced the appellant to undergo a medical procedure in which two packets of heroin were extracted from her vagina; the Ninth Circuit reversed the conviction for the government's failure to show enough cause for the intrusive search.

[I]f there is to be a more than casual examination of the body, if in the course of the search of a woman there is to be a requirement that she manually open her vagina for visual inspection to see if she has something concealed there, we think that we should require more than a mere suspicion. Surely, to require such a performance is a serious invasion of personal privacy and dignity, and so unlawful if "unwarranted."<sup>199</sup>

This statement is given extra force by the fact that in the same opinion the court expressly restated the normal rule for border searches: no probable cause, not even showing of mere suspicion, need be shown.<sup>200</sup>

The privacy interest presented in a mandatory amniocentesis situation is thus greater than in the *Camara* or *Wyman* case, where no bodily intrusion occurred. At the same time, the state's interest was far stronger in those cases than in this. For example, there is surely a stronger state interest in preventing a ravaging fire in a large and densely populated urban area than in preventing the birth of a relatively small number of genetically defective children, some of whom will never be a financial burden on the state in any case. The relative strength of the interests becomes even more clear when it is remembered that the statutory scheme here proposed does not include compulsory abortion, so that the state has no way of ensuring that the genetically defective fetuses discovered by amniocentesis will not be born. The state's interest in searching a pregnant woman to determine whether she is carrying a genetically defective fetus must bow to the woman's greater interest in her own bodily privacy, dignity, and integrity.

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<sup>199</sup> *Id.* at 808. *Accord*, *United States v. Sosa*, 469 F.2d 271, 272 (9th Cir. 1972), *cert. denied*, 410 U.S. 945 (1973).

<sup>200</sup> 390 F.2d at 806, 808 & n.3 (dictum).

### C. Mandatory Amniocentesis Followed by Compulsory Abortion

We have seen more than once that the public welfare may call upon the best citizens for their lives. It would be strange if it could not call upon those who already sap the strength of the State for these lesser sacrifices, often not felt to be such by those concerned, in order to prevent our being swamped with incompetence. It is better for all the world, if instead of waiting to execute degenerate offspring for crime, or to let them starve for their imbecility, society can prevent those who are manifestly unfit from continuing their kind.

Mr. Justice Holmes<sup>201</sup>

At least one legal expert believes that any mandatory screening or prenatal diagnosis program will inevitably result in compulsory abortion legislation.<sup>202</sup> He reasons that "those [found to be carriers] who reject the ever more popular solution of abortion [will] appear more and more to be recalcitrants."<sup>203</sup> Hence, legislation will be enacted to force them into line. While such a prophecy may seem far-fetched, it should not be forgotten that compulsory sterilization statutes still exist in twenty-one states.<sup>204</sup> Under the current state of the law, society thus is allowed to prevent the conception of potentially

<sup>201</sup> *Buck v. Bell*, 274 U.S. 200, 207 (1927).

<sup>202</sup> Discussion following Green, *Mechanisms for Public Policy Decision-Making*, in ETHICAL SYMPOSIUM, *supra* note 3, at 395, 399 (statement by Havighurst).

<sup>203</sup> *Id.*

<sup>204</sup> A partial list of these statutes can be found in Note, *Governmental Control of Research in Positive Eugenics*, 7 J.L. REFORM 615, 616 n.13 (1974). See also Note, *Eugenic Sterilization—A Scientific Analysis*, 46 DENVER L.J. 631, 633 n.10 (1969). The rationale behind such legislation is two-fold. First, it is presumed that mentally retarded women are incapable of taking care of their offspring. Second, it is believed that mental retardation is inherited and that society has an independent interest in preventing the birth of defective offspring. See *Buck v. Bell*, 274 U.S. 200 (1927).

Subsequent to *Buck*, several lower courts have been called upon to decide the validity of compulsory sterilization laws. Several have declared the laws unconstitutional, but their decisions were based on procedural inadequacies within the statute. See, e.g., *Brewer v. Valk*, 204 N.C. 186, 167 S.E. 638 (1933); *In re Hendrickson*, 12 Wash. 2d 600, 123 P.2d 322 (1942). Those courts which have faced the issue of the substantive constitutionality of the statute have concluded that compulsory sterilization laws are valid. See, e.g., *State v. Troutman*, 50 Idaho 673, 299 P. 668 (1931); *In re Clayton*, 120 Neb. 680, 234 N.W. 630 (1931).

During the fifty years since *Buck*, more than 70,000 retarded people have been sterilized. E. OGG, *SECURING THE LEGAL RIGHTS OF RETARDED PERSONS* 8-9 (Public Affairs Pamphlet No. 492, 1973). See also S. BRACKEL AND R. ROCK, *THE MENTALLY DISABLED AND THE LAW* 207-25 (rev. ed. 1971).



defective human beings. Does it not follow as a corollary that society may also prevent the birth of potentially defective human beings via mandatory abortion legislation? That is, since the Supreme Court has held that a fetus, particularly prior to viability, is not a person within the meaning of the fourteenth amendment,<sup>205</sup> can there be any legal distinction between preventing conception of the fetus and preventing its birth? The following sections will discuss the definitional and constitutional issues raised by any such proposal.

### 1. The Definitional Issue

But no perfection is so absolute,  
That some impurity doth not pollute.<sup>206</sup>

It is unlikely that a sensible, workable, and humane mandatory abortion system could ever be created; it would be impossible to establish guidelines determining which genetic disorders were serious enough to warrant mandatory action. Both the number and the nature of diseases which are amenable to prenatal diagnosis are expanding.<sup>207</sup> Moreover, it is possible that many presently incurable genetic diseases will eventually become treatable, either prenatally or post-natally. In each case, the legislature would have to decide if the development of a cure warranted removing the defect from the mandatory abortion list. Any statute or regulation setting forth concrete guidelines concerning which disorders must be aborted would have to be amended frequently.

An alternative would be to establish a board<sup>208</sup> with broad discretion to determine which pregnancies must be terminated. However, even assuming that each board member possessed a

<sup>205</sup> *Roe v. Wade*, 410 U.S. 113, 158 (1973).

<sup>206</sup> W. SHAKESPEARE, *RAPE OF LUCRECE*, 11. 853-54.

<sup>207</sup> See, e.g., Bloom, Schmickel, Barr & Burdi, *Prenatal Diagnosis of Autosomal Mosaicism* 84 J. PEDIATRICS, No. 5, at 732 (1974); see generally Nadler, *supra* note 30.

<sup>208</sup> An existing analogy can be found in a current Oregon statute which has created a "Board of Social Protection" to administer the state's compulsory sterilization law. ORE. REV. STAT. § 436.010-.150 (1973). This board, which consists of physicians and mental health workers, is empowered to order sterilization of any person if their procreation would produce, *inter alia*, children "who would have an inherited tendency to mental retardation or mental illness." ORE. REV. STAT. § 436.020, .050, .070. A 1961 opinion of the Oregon Attorney General contains a list of persons who are candidates for compulsory sterilization. Among these are:

Feeble-minded, insane, epileptic, habitual criminals, incurable syphilitics, moral degenerates or sexual perverts, who are, or, in the opinion of the institution heads, are likely to become menaces to society. . . . [and] persons convicted of

high degree of knowledge of genetics and would always act in good faith, the potential for abuse of such a system would be awesome. First, the line of demarcation between the normal and abnormal is often unclear.<sup>209</sup> Even more importantly, in the absence of concrete guidelines, the board's functions would never cease. If some groups of genetic diseases were eliminated, through either abortion or treatment, the board would probably shift its focus to other, perhaps less severe, forms of illness. For example, many genetically disabled youngsters are mentally retarded. But

retardation cannot be "wiped out," because it is defined in relative terms. If all those presently defined as retarded are wished out of sight tomorrow, then society would simply turn its attention to a new group to whom it would give the same label, the same worry, the same treatment or neglect.<sup>210</sup>

Moreover, even if "genetic imperfection" could be defined and a workable system could be created for aborting those "qualifying," a mandatory abortion program would undoubtedly give rise to serious constitutional questions.

## 2. Does the Right of "Procreational Privacy" Encompass the Right to Give Birth to a Disabled Child?<sup>211</sup>

Any compulsory abortion proposal would raise first and fourth amendment issues similar to those considered in the discussion of mandatory amniocentesis. In addition, compulsory abortion legislation may impermissibly infringe on the right of "procreational privacy," enunciated in a series of Su-

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. . . an act of sustained osculatory relations with the private parts of any person, or permitting such relations.

1960-62 OP. ATT'Y GEN. ORE. 139.

<sup>209</sup> See note 114 *supra* & accompanying text. See also Littlefield, Milunsky & Jacoby, *supra* note 56, at 43, 48.

<sup>210</sup> Seeley, "The Law of Retardation and the Retardation of the Law," in MENTAL RETARDATION AND THE LAW: BULLETIN OF THE CANADIAN ASSOCIATION FOR RETARDED CHILDREN, June, 1964, at 6-7.

<sup>211</sup> This section deals with the constitutional rights of parents. If the state chose to enforce the statute through denial of state assistance in the rearing of a child born in violation of the statute (instead of the more likely sanction of criminal penalties against the parents), then the child's constitutional rights would also be implicated.

For example, two federal courts have recently held that retarded and disabled children have a constitutional right to public-supported education when such educational opportunity is afforded other children. *Mills v. Board of Educ.*, 348 F. Supp. 866 (D.D.C.

preme Court decisions beginning with *Skinner v. Oklahoma*<sup>212</sup> and culminating in *Roe v. Wade*.<sup>213</sup>

In *Skinner* the Supreme Court invalidated a statute which provided for the compulsory sterilization of persons who had been convicted two or more times of certain classes of felonies, but which expressly excluded those convicted of "white collar" felonies, such as embezzlement. In holding that the law violated the fourteenth amendment by laying "an unequal hand on those who have committed intrinsically the same quality of offense," the Court referred to the right to procreate as "a basic liberty" and "one of the basic rights of man."<sup>214</sup>

Although *Skinner* struck down a law which prevented certain people from procreating, the decision was used as authority for the invalidation of laws which, in effect, promoted procreation. In *Griswold v. Connecticut*,<sup>215</sup> the Supreme Court held unconstitutional a Connecticut statute which forbade the use of contraceptives. Citing *Skinner*, the Court held that the statute had a "maximum destructive impact upon [the marital] relationship,"<sup>216</sup> and that the privacy of that relationship was protected by the specific guarantees of the Bill of Rights.<sup>217</sup>

1972); *Pennsylvania Ass'n for Retarded Children v. Pennsylvania*, 343 F. Supp. 279 (E.D. Pa. 1972). Moreover, in many jurisdictions legislation has recently been enacted requiring publicly financed education for all disabled children. See, e.g., ALA. CODE tit. 45, § 252(a9) (Supp. 1973); these statutes are summarized and discussed in Abeson, *Movement and Momentum: Government and the Education of Handicapped Children*, 39 EXCEPTIONAL CHILDREN 63 (1972). However, some state laws contain a ceiling on how many disabled students can be given financial aid. See, e.g., CAL. EDUC. CODE § 6752 (West Supp. 1974). In jurisdictions covered by these laws and decisions, could the state deny educational aid to those youngsters whose conditions were (or could have been) prenatally diagnosed, and whose parents refused to have them aborted?

Such a measure would punish the child solely because of the action (or the inaction) of the parents, and would be unconstitutional under the analogous recent Supreme Court rulings in illegitimacy cases. The Court has repeatedly held that the state may not deny public benefits to a child solely on grounds of illegitimacy, because to do so "is contrary to the basic concept of our system that legal burdens should bear some relationship to individual responsibility or wrongdoing." *Jimenez v. Weinberger*, 94 S. Ct. 2496, 2499 (1974) (quoting *Weber v. Aetna Casualty & Surety Co.*, 406 U.S. 164, 175 (1972)). See also *New Jersey Welfare Rights Org'n v. Cahill*, 411 U.S. 619 (1973); *Gomez v. Perez*, 409 U.S. 535 (1973); *Levy v. Louisiana*, 391 U.S. 68 (1968). But see *Labine v. Vincent*, 401 U.S. 532 (1971).

<sup>212</sup> 316 U.S. 535 (1942).

<sup>213</sup> 410 U.S. 113 (1973).

<sup>214</sup> 316 U.S. at 541.

<sup>215</sup> 381 U.S. 479 (1965).

<sup>216</sup> *Id.* at 485.

<sup>217</sup> *Id.* at 484.

Another case in this line, dealing with the privacy of the home but not specifically with procreation, is *Stanley v. Georgia*, 394 U.S. 557 (1969), where the Court held that

Six years later, the Court made it clear that the right to procreate or not to procreate extended to all individuals, married or not. *Eisenstadt v. Baird*<sup>218</sup> invalidated a Massachusetts law which forbade distribution of contraceptives to unmarried persons. In holding that contraception was a fundamental right and that it therefore must be equally available to married and unmarried persons, the Court stated: "If the right of privacy means anything, it is the right of the *individual*, married or single, to be free from unwarranted governmental intrusion into matters so fundamentally affecting a person as the decision whether to bear or beget a child."<sup>219</sup>

Finally, in invalidating the Texas anti-abortion statute in *Roe v. Wade*,<sup>220</sup> the Supreme Court concluded that "the right of personal privacy includes the abortion decision, but . . . this right is not unqualified and must be considered against important state interests in regulation."<sup>221</sup>

These decisions indicate that there is a constitutional right to privacy which includes rights to procreate or to refrain from procreation, to terminate a pregnancy, and, by implication, to refrain from terminating a pregnancy. These rights are not absolute, however, and may be abridged if the state can advance an interest which is "sufficiently compelling."<sup>222</sup>

The question thus presented is whether the state has a compelling interest in preventing the birth of disabled offspring and whether a compulsory abortion statute is an appropriate instrument for the achievement of that goal. A state might advance three possible justifications for the enactment of such a statute: eugenics, euthanasia, and economics. But none of these is a legitimate, let alone "compelling" rationale for a compulsory abortion law.

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"the mere private possession of obscene matter cannot constitutionally be made a crime." *Id.* at 559. The Court distinguished "mere private possession" from the facts in prior obscenity cases, which had dealt with public distribution or use of the mails to disseminate obscene material. *Id.* at 560-64. Stanley's conviction was reversed because the usual first amendment interests were supplemented by the "fundamental . . . right to be free, except in very limited circumstances, from unwanted governmental intrusions into one's privacy. . . . [S]tatutes regulating obscenity . . . do not . . . reach into the privacy of one's own home." *Id.* at 564-65.

<sup>218</sup> 405 U.S. 438 (1972).

<sup>219</sup> *Id.* at 453.

<sup>220</sup> 410 U.S. 113 (1973). See notes 135-44 *supra* & accompanying text.

<sup>221</sup> *Id.* at 154.

<sup>222</sup> *Id.*

a. *Eugenics*<sup>223</sup>

Laws and proposals which aim to improve human stock through the manipulation of heredity are not new in this country. For example, in 1922, advocates of negative eugenics proposed a model eugenical sterilization law which would have subjected the following classes of persons to compulsory sterilization:

- (1) Feeble minded;
- (2) Insane (including psychopathic);
- (3) Criminalistic (including the delinquent and wayward);
- (4) Epileptic;
- (5) Inebriate (including drug-habitues);
- (6) Diseased (including the tuberculous, the syphilitic, the leprous, and others with chronic, infectious and legally segregable diseases);
- (7) Blind including those with seriously impaired vision);
- (8) Deaf (including those with seriously impaired hearing);
- (9) Deformed (including the crippled);
- and (10) Dependent (including orphans, ne'er-do-wells, the homeless, tramps, and paupers).<sup>224</sup>

Fortunately, this provision was not enacted in any state, and the influence of those advocating such measures declined sharply in the 1930's, when their notions of national purity became associated in the public mind with the Nazi ideal.<sup>225</sup> In recent years, however, there has been increased interest in eugenics.<sup>226</sup> As the focus has shifted from the elimination of social faults to the deletion of biological flaws, the concept of human improvement through the manipulation of heredity may be regaining respectability.

Against this very abbreviated background, the following issue is raised: Is there a compelling state interest in improving the biological lot of mankind and in using mandatory abortion of disabled fetuses as an instrument to achieve this end? It is

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<sup>223</sup> Eugenics assumes that certain types of individuals are socially more desirable than others, and it proposes to improve future generations by increasing the proportion of individuals of desirable types through decreasing the rate of propagation of the inferior individuals (negative eugenics) and increasing that of the superior individuals (positive eugenics).

Jennings, *Eugenics*, 3 *ENCYCLOPAEDIA OF THE SOCIAL SCIENCES* 617, 618-19 (1931).

<sup>224</sup> H. LAUGHLIN, *EUGENICAL STERILIZATION IN THE UNITED STATES* 446-47 (1922).

<sup>225</sup> Note, *Governmental Control of Research in Positive Eugenics*, 7 *J.L. REFORM* 615, 616-17 (1974).

<sup>226</sup> See, e.g., Littlefield, *Prenatal Diagnosis and Therapeutic Abortion*, 280 *NEW ENG. J. MED.* 722, 723 (1969).

arguable that *Buck v. Bell*<sup>227</sup> and its progeny<sup>228</sup> have already given judicial imprimatur to negative eugenics, and that mandatory abortion is a less restrictive alternative than the procedure which was sanctioned in those cases—compulsory sterilization. That is, if society is deeply committed to a particular eugenic goal such as the eradication of the gene associated with Tay-Sachs disease, then the propriety of mandatory abortion to achieve this end would have to be measured against other possible alternatives, such as restrictions on intramarriage between Ashkenazi Jews, restrictions on marriage between known heterozygotes, or compulsory sterilization of couples when both partners are known heterozygotes. Restriction on intramarriage between Ashkenazi Jews or known heterozygotes, although recently advocated by a French geneticist,<sup>229</sup> is the most sweeping and probably the most clearly unconstitutional<sup>230</sup> option. Compulsory sterilization, while arguably constitutional,<sup>231</sup> also seems to be a more drastic measure than would be needed. To sterilize heterozygote couples would be to deny them the right to give birth to unafflicted and even non-carrier offspring<sup>232</sup> and therefore would probably be constitutionally overbroad.<sup>233</sup> Mandatory abortion would be a much less restrictive alternative. It would eliminate defective fetuses, while in no way interfering with the parents' right to give birth to unaffected progeny.

However, mandatory abortion of defective fetuses would not only be the least restrictive negative eugenics measure; it would also be the least effective. A law mandating abortion of all fetuses afflicted with, for example, Tay-Sachs disease, would not eliminate or even reduce the incidence of that particular deleterious gene in the human gene pool. Indeed, some geneticists believe that the elimination of afflicted fetuses will actually

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<sup>227</sup> 274 U.S. 200 (1927). See text accompanying note 201 *supra*.

<sup>228</sup> See cases cited in note 204 *supra*.

<sup>229</sup> See discussion following Fraser, *Survey of Counseling Practices*, in ETHICAL SYMPOSIUM, *supra* note 3, at 17 (statement by LeJeune).

<sup>230</sup> It would run counter to *Loving v. Virginia*, 388 U.S. 1, 12 (1967) (alternative holding).

<sup>231</sup> See notes 227-28 *supra* & accompanying text.

<sup>232</sup> There is a 25% probability that any child born to two Tay-Sachs carriers will be homozygous normal. See note 16 *supra* & accompanying text.

<sup>233</sup> See *United States v. Robel*, 389 U.S. 258 (1967); *Shelton v. Tucker*, 364 U.S. 479 (1960).

increase the incidence of such genes,<sup>234</sup> because a parent who is forced to abort a disabled child might desire to "replace" him. The replacement child has a fifty percent probability of being a non-affected carrier of the gene. Whereas the homozygote, had he not been aborted, would probably not have survived to child-bearing age, the heterozygote will—and he may, in turn, pass the gene on to his own progeny, thus necessitating an ever-increasing number of genetic abortions.

Hence, a mandatory abortion law would be a truly effective eugenics measure only if it required the abortion not only of afflicted fetuses but also of carriers. Carriers are, of course, phenotypically normal, will not suffer, and will not be a burden to their families or to society. To deny their parents the right to give them birth because of a long range eugenics goal would be to destroy any right of procreational privacy, and would undoubtedly be unconstitutional.<sup>235</sup>

#### b. *Euthanasia*

In contrast to eugenics, euthanasia ostensibly focuses on the lot of the individual rather than of society; it contemplates the alleviation of human suffering via the "mercy killing" of disabled fetuses. The legal and moral obstacles to such an approach are obvious. Euthanasia has met with almost complete rejection from the courts.<sup>236</sup> A few decisions which have given judicial sanction to the notion of withholding treatment have predicated their opinions upon the refusal of the dying person to submit to it.<sup>237</sup> The issue in these cases was not whether the state (or another individual) can make the decision to terminate human life, but whether an individual can consent to his own natural death.<sup>238</sup> The fetus obviously is not capable of having

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<sup>234</sup> See, e.g., Hall, *The Concerns of Doctors and Patients*, in ETHICAL SYMPOSIUM, *supra* note 3, at 23, 20-31.

<sup>235</sup> A less drastic eugenic goal, such as the abortion of afflicted fetuses only, would not be truly eugenic as applied to most genetic defects detectable through amniocentesis, for children afflicted with such defects are seldom able to procreate. The justifications for such a goal must therefore rest in the alleviation of suffering and in economics.

<sup>236</sup> See, e.g., Note, *Legal Aspects of Euthanasia*, 6 ALB. L. REV. 674, 675 (1972). Nevertheless, juries often acquit defendants charged with such killings. See Morris, *Voluntary Euthanasia*, 45 WASH. L. REV. 239, 241-42 & n.7 (1970).

<sup>237</sup> See, e.g., Guardianship of Gertrude Raasch, No. 455-996 (Milwaukee County Ct. P. Div., Jan. 25, 1972), discussed in Sullivan, *The Dying Person—His Plight and His Right*, 8 NEW ENG. L. REV. 197 (1973); cf. *In re Osborne*, 294 A.2d 372 (D.C. Ct. App. 1972); *Erickson v. Dilgard*, 44 Misc. 2d 27, 252 N.Y.S.2d 705 (Sup. Ct. 1962).

<sup>238</sup> Some courts have disregarded even a clear refusal by the patient to be treated.

desires, much less making them known, but at least one court has postulated that a disabled fetus, if given a choice, "would almost surely choose life with defects as against no life at all."<sup>239</sup> If the courts adopt this approach generally, a mandatory abortion statute would certainly not be justifiable on the basis of euthanasia. Even if no assumptions were made regarding the desire of the fetus to live, the only persons who would be capable of giving their consent to euthanasia would be the parents of the genetically imperfect fetus; yet even their wishes would be totally ignored by a mandatory abortion statute. Thus, the state would have to argue that such consent is neither necessary nor appropriate because prospective parents do not understand the nature of genetic disease or the suffering that it entails,<sup>240</sup> that the government has the right to coerce prospective parents into doing what is "best" for themselves and their unborn progeny.<sup>241</sup> Courts should not be expected to sanction this approach while firmly rejecting euthanasia for adults. Although the state's case is stronger because of the ruling that fetuses are not persons within the meaning of the fourteenth amendment,<sup>242</sup> the argument that parents are incapable of making a sound decision with respect to their interests and those of the child would appear to be foreclosed by *Roe v. Wade* and its predecessors.<sup>243</sup>

Beyond these legal barriers to euthanasia as a justification for mandatory abortion is the moral rejoinder so vividly pre-

See, e.g., *United States v. George*, 239 F. Supp. 752 (D. Conn. 1965); *Powell v. Columbian Presbyterian Medical Center*, 49 Misc. 2d 215, 267 N.Y.S.2d 450 (Sup. Ct. 1965).

<sup>239</sup> *Gleitman v. Cosgrove*, 49 N.J. 22, 30, 227 A.2d 689, 693 (1966).

<sup>240</sup> One recent study, for example, involved 42 families of children with phenylketonuria who attended a hospital clinic. The parents were repeatedly counseled with respect to the basic facts, genetic and metabolic, about their child's disease and treatment. In addition to frequent discussions, the parents were given pamphlets containing the pertinent material concerning the disease. However, when parents were asked to write in essay form their understanding of the nature of the disease, potential consequences and treatment, only 19% were able to give adequate answers. See discussion following Migeon, *The Concerns of Doctors and Patients*, in *ETHICAL SYMPOSIUM*, *supra* note 3, at 32-33 (statement by Migeon).

<sup>241</sup> Although courts have on occasion overruled the stated desire of parents in making life or death decisions for their children, they have done so only when the parents have jeopardized the life of the child by refusing medical treatment—clearly not the same as overruling parents who have decided that they wish to allow their defective child to live. See *Raleigh Fitkin-Paul Morgan Mem. Hosp. v. Anderson*, 42 N.J. 421, 201 A.2d 537, *cert. denied*, 377 U.S. 985 (1964); *In re Brooklyn Hospital*, 45 Misc. 2d 914, 258 N.Y.S.2d 621 (Sup. Ct. 1965).

<sup>242</sup> *Roe v. Wade*, 410 U.S. 113, 158 (1973).

<sup>243</sup> Notes 212-22 *supra* & accompanying text.



sented several years ago by Professor Yale Kamisar, who quoted the following parable: "At the Crystal Palace Aquarium not long ago I saw a crab euthanatising a sickly fish, doubtless from the highest motives."<sup>244</sup> More recently, a prominent theologian expressed a similar viewpoint: "Whenever a strong group argues on behalf of a weaker group that their removal would be better than their survival, we should not be duly impressed."<sup>245</sup> A mandatory abortion law can never be justified with certainty on the basis of humaneness toward the fetus. Perhaps "[a]bortion is never therapeutic for the fetus."<sup>246</sup>

### c. *The Economic Interest of the State*

To statutorily compel the abortion of defective fetuses on the ground that they represent a potential drain on economic resources may be not only "unjust, insensitive and outrageous,"<sup>247</sup> but also unconstitutional. Several recent decisions have indicated that the state cannot deny fundamental rights merely because the exercise of those rights will be economically burdensome on the state. In *Mills v. Board of Education*,<sup>248</sup> for example, the District Court for the District of Columbia declared that mentally retarded children are entitled to receive public education on a par with other children. The school district could not justify its failure to provide that education on the ground that it lacked sufficient economic resources.<sup>249</sup>

If economic burden is not sufficient to justify a denial of equal education to the mentally retarded, it would seem that the right to bear a child—a more fundamental right<sup>250</sup>—should not be infringeable merely because a particular child would be an economic burden on the state. The compulsory steriliza-

<sup>244</sup> Kamisar, *Some Non-Religious Views Against Proposed "Mercy-Killing" Legislation*, 42 MINN. L. REV. 970 (1958) (quoting anonymous letter to the editor, 46 *The Spectator* 241 (1873)).

<sup>245</sup> Fletcher, *Parents in Genetic Counseling: The Moral Shape of Decision-Making*, in ETHICAL SYMPOSIUM, *supra* note 3, at 301, 323.

<sup>246</sup> *Id.*

<sup>247</sup> Callahan, *The Meaning and Significance of Genetic Disease: Philosophical Perspectives*, in ETHICAL SYMPOSIUM, *supra* note 3, at 83, 86.

<sup>248</sup> 348 F. Supp. 866 (D.D.C. 1972).

<sup>249</sup> *Id.* at 876. See also *Pennsylvania Ass'n for Retarded Children v. Pennsylvania*, 343 F. Supp. 279 (E.D. Pa. 1972).

<sup>250</sup> The Supreme Court has repeatedly declared that the right to procreate is a fundamental right. See notes 212-22 *supra* & accompanying text. The Court recently held, however, that education is not a fundamental right. *San Antonio Independent School Dist. v. Rodriguez*, 411 U.S. 1, 35-37 (1973).

tion cases which hold to the contrary generally predate the modern development of the constitutional right of procreational privacy,<sup>251</sup> and should not be relied on as precedent. Although *Roe v. Wade* cited *Buck v. Bell* with approval,<sup>252</sup> a direct confrontation between them would require a complete rethinking of the older cases in light of subsequent constitutional developments. No prediction can be certain, but it seems unlikely that the state could muster an economic case sufficient to overcome a childbearing right. While it is true that the cost of caring for some disabled children may be very high,<sup>253</sup> the rationale underlying the compulsory sterilization cases seems inapplicable in that, in those cases, there was a substantial likelihood that the mother, who was mentally retarded, would not be able to care for her child, and that the child therefore would become a public charge.<sup>254</sup> Carriers of genetic defects are not necessarily similarly handicapped. Many of these women and their husbands may be capable, financially, intellectually, and emotionally, of caring for their disabled offspring. Compelling them to terminate their pregnancies would not necessarily conserve the economic resources of the state.<sup>255</sup>

In the final analysis, however, the argument for the unconstitutionality of mandatory abortion is based not so much on the weakness of the state's economic interest as on the peculiar

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<sup>251</sup> See text accompanying notes 212-22 *supra*.

<sup>252</sup> 410 U.S. at 154.

<sup>253</sup> It has been roughly estimated, for example, that in the United States the cost of institutionalizing and maintaining persons afflicted with Down's syndrome (mongolism) is \$1.7 billion each year. Etzioni, *Doctors Know More than They're Telling You about Genetic Defects*, PSYCHOLOGY TODAY, NOV. 1973, at 26, 35.

<sup>254</sup> *E.g.*, *In re Simpson*, 180 N.E.2d 206 (Ohio P. Ct. 1962); see also note 204 *supra*.

<sup>255</sup> This presents an interesting problem for drafters of legislation. Assuming that economics is a valid justification for mandatory abortion, and that there is no other valid justification, a statute imposing criminal penalties on all women who refuse to abort their defective offspring could be constitutionally overbroad. See *United States v. Robel*, 389 U.S. 258 (1967); *Shelton v. Tucker*, 364 U.S. 479 (1960). But in order to cure this defect, by reaching only those pregnancies which present potential economic burdens to the state, a mandatory abortion statute might discriminate against parents on the basis of wealth. This might produce equal protection problems. The Supreme Court has required the state to show a compelling interest in order to classify on the basis of wealth only when fundamental rights have been at stake. See, *e.g.*, *Harper v. Virginia Bd. of Elections*, 383 U.S. 663 (1966) (right to vote); *Douglas v. California*, 372 U.S. 353 (1963) (right to court-appointed counsel on direct criminal appeal); *Griffin v. Illinois*, 351 U.S. 12 (1956) (right to receive a transcript of criminal trial in order to perfect an appeal); but see *Ross v. Moffitt*, 94 S. Ct. 2437 (1974) (no right to appointed counsel for second, discretionary criminal appeal). In the absence of a fundamental right, however, the Supreme Court "has never . . . held that wealth discrimination alone provides an adequate basis for invoking strict scrutiny . . ." *San Antonio Inde-*

strength of the countervailing individual interests. Those with religious convictions against abortion would almost certainly be granted an exemption from a compulsory statute.<sup>256</sup> More generally, those who otherwise objected could argue that abortion against their will would violate not only the new concept of procreational privacy, but also the prohibition of unreasonable searches and seizures.<sup>257</sup> Such a clear, direct infringement on these two powerful doctrines, the one so conceptual and the other so graphic, is unlikely to prevail.

The argument for the unconstitutionality of mandatory amniocentesis, on the other hand, derives from the absence of any legitimate state interest—for amniocentesis itself, when not coupled with abortion, will not reduce the number of genetically disabled persons brought into the world. As long as abortion remains the only “cure” for genetic disease, a mandatory prenatal diagnosis program seems unwarranted. However, should more congenital disorders become amenable to prenatal or immediate postnatal treatment, a compulsory amniocentesis program might be justifiable on the basis of alleviating suffering or conserving economic resources and hence might withstand constitutional attack.

At present, a governmentally funded voluntary amniocentesis program seems the most feasible. The Tay-Sachs experience indicates that most parents who are at risk will opt for prenatal diagnosis and abortion of a fetus diagnosed as afflicted with a genetic defect.<sup>258</sup> The number of genetically defective children who would then become a burden to themselves, their parents, and the state would be only a fraction of the 200,000 currently born annually.<sup>259</sup>

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pendent School Dist. v. Rodriguez, 411 U.S. 1, 29 (1973). *See id.* at 121 (Marshall, J., dissenting).

When faced with a mandatory abortion statute that is applied only to women whose children, if born, would potentially become a financial burden on the state, courts should give cognizance to the possibility that the right to refuse to terminate a pregnancy may be a fundamental one. *See* text accompanying note 222 *supra*. If this status is given such a refusal, the courts would be required to apply the compelling state interest test to the statutory classification; it is highly unlikely that the statute could withstand scrutiny under that test.

<sup>256</sup> There is no precedent that is even analogous, but a contrary ruling in a case of such direct infringement of free exercise is almost unthinkable.

<sup>257</sup> *See* notes 179-84 *supra* & accompanying text.

<sup>258</sup> *See* notes 130-33 *supra* & accompanying text. *But see* note 162 *supra*.

<sup>259</sup> *See* note 1 *supra* & accompanying text. Of those parents who would not voluntarily abort an afflicted fetus, a considerable number would probably be acting out of

### III. A MALPRACTICE ACTION FOR WRONGFUL LIFE

Regardless of whether the procedure is ultimately regulated by statute, the proliferating use of amniocentesis will, in all likelihood, generate the usual gamut of malpractice actions. Among these are suits arising from the mishandling of the procedure,<sup>260</sup> misdiagnosis resulting in the abortion of a "healthy" fetus,<sup>261</sup> the physician's fail-

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religious conviction. Compulsory abortion would trespass much more directly than mandatory amniocentesis on the free exercise of religion, *see* note 169 *supra* & accompanying text, and the legislature or courts might well carve out a religious exception to a mandatory abortion statute. *See generally* notes 170-78 *supra* & accompanying text. If so, the extra number of burdensome children from a completely voluntary program would be smaller still.

<sup>260</sup> Problems of causation, while inherent in all malpractice litigation, will obviously be seriously compounded when the suit involves a fetal injury allegedly caused by the mishandling of an amniocentesis. Unlike any other surgical diagnostic procedure, amniocentesis involves two patients, one of whom has never been seen by the doctor or by any other witness. Rather than being indicative of a physician's negligence, fetal injuries may be the result of an unrelated trauma or an aberrational response, which can neither be reported by the fetus nor perceived by those who know him. For example, when a neonate is born with an injured eye, how can one ever be certain that it was amniocentesis rather than a forceps delivery or a congenital defect which brought about the damage?

<sup>261</sup> This problem was recently discussed by two medical experts on amniocentesis. Dr. Elliot Vesell of the Department of Pharmacology of Pennsylvania State University stated:

I have heard of a diagnosis of severe chromosomal abnormality made on the basis of karyotype analysis on only a single culture of amniotic fluid. The pregnancy was interrupted by abortion, and an entirely normal fetus was found. What should the parents be told?

Dr. Peter Condliffe, of the National Institutes of Health's Fogarty International Center, argued:

Is this any different from appendectomies in which perhaps one appendix in every five removed is not diseased? The surgeon has intervened usually for a good reason, and no damage is done, but there were risks. I think in many cases, nothing at all is said to the patient.

Discussion following Motulsky, *The Significance of Genetic Disease*, in *ETHICAL SYMPOSIUM*, *supra* note 3, at 70.

The doctor's liability for aborting a healthy fetus, may, however, be significantly greater than the liability resulting from the removal of a healthy appendix. Should the doctor's misdiagnosis result in the genetic abortion of a "healthy" fetus, a cause of action for wrongful death might lie. The right of prospective parents to bring such suits in cases of fetal death caused by the negligent operation of motor vehicles has been recognized in many jurisdictions, *e.g.*, *Hale v. Manion*, 189 Kan. 143, 368 P.2d 1 (1962), but not in some others, *e.g.*, *Drabbels v. Skelly Oil Co.*, 155 Neb. 17, 50 N.W.2d 229 (1951). For a more thorough listing of cases, *see* Annot., 15 A.L.R.3d 992 (1967). Recovery, where permitted, has been limited to situations involving wrongful death of a viable fetus—*i.e.*, one capable of extrauterine life. *See* *Mace v. Jung*, 210 F. Supp. 706 (D. Alas. 1962). This restriction, however, need not necessarily apply to wrongful death resulting from an abortion based on misdiagnosis of the fetal genetic composition. A major rationale behind the "viability" limitation has been the courts' inability to ascertain the existence of proximate cause between the defendant's act and fetal death or in-

ure to consult with a specialist,<sup>262</sup> failure to inform the patient of risks inherent in the procedure,<sup>263</sup> and products

juries in early gestation. W. PROSSER, HANDBOOK OF THE LAW OF TORTS § 55, at 337-38 (4th ed. 1971). Clearly, any such causation problem would be eliminated if fetal death resulted from the doctor's intentional performance of a genetic abortion.

Another rationale for denying recovery is that the fetus upon its death was still part of its mother. *Id.* at 357. This would seem consistent with the Supreme Court declaration, in *Roe v. Wade*, 410 U.S. 113, 158 (1973), that "the word 'person,' as used in the Fourteenth Amendment, does not include the unborn." The Court later rationalized the coexistence of its decision with wrongful death actions on behalf of fetuses: "Such an action, however, would appear to be one to vindicate the parents' interest and is thus consistent with the view that the fetus, at most, represents only the potentiality of life." *Id.* at 162.

In fact, it has been said that when the wrongful death action is denied the woman may still recover for both physical and mental injuries, including emotional upset, attending still birth. *Endresz v. Friedberg*, 24 N.Y.2d 478, 487, 248 N.E.2d 901, 906, 301 N.Y.S.2d 65, 72 (1969).

<sup>262</sup> Doctors and lawyers have suggested that states may eventually license genetic counseling as a medical specialty. *E.g.*, Singer, *supra* note 123, at 35. *See also* Green, *Mechanisms for Public Policy Decision-Making*, in *ETHICAL SYMPOSIUM*, *supra* note 3, at 385, 389. If this occurs, perhaps the courts will establish a duty on the part of general practitioners to seek advice from a genetic counselor as part of standard practice in advising pregnant patients, especially when a patient's history reveals that she or the child's father may be a carrier of a particular disease.

It is well established that physicians are duty bound under certain circumstances either to seek a consultation or to advise their patients that such an opportunity exists. In *Morgan v. Engles*, 372 Mich. 514, 127 N.W.2d 382 (1964), for example, the Supreme Court of Michigan held that a doctor's failure to consult a specialist in setting an infant's broken arm could be sufficient as the proximate cause of permanent damage that would have been avoided by a specialist. Likewise, in *Steeves v. United States*, 294 F. Supp. 446 (D.S.C. 1968), a federal district court held that a physician's failure to obtain a consultation was negligent and was the proximate cause of plaintiff's ruptured appendix; hence, the plaintiff recovered.

The "duty to consult" argument is further buttressed by the American Medical Association's *Principles of Medical Ethics*, which include the duty to "seek consultation . . . in doubtful or difficult cases." *Principles of Medical Ethics* § 8, in *AMERICAN MEDICAL ASS'N, OPINIONS AND REPORTS OF THE JUDICIAL COUNCIL* 45 (1971).

<sup>263</sup> *See generally* Plante, *An Analysis of "Informed Consent"*, 36 *FORD. L. REV.* 639, 640-48 (1968); Waltz & Scheuneman, *Informed Consent to Therapy*, 64 *NW. U.L. REV.* 628 (1969); Note, *Informed Consent in Medical Malpractice*, 55 *CAL. L. REV.* 1396 (1967); Note, *Failure to Inform as Medical Malpractice*, 23 *VAND. L. REV.* 754 (1970).

In the landmark case of *Salgo v. Leland Stanford Jr. Univ. Bd. of Trustees*, 154 *CAL. APP. 2d* 560, 578, 317 *P.2d* 170, 181 (1957), the California District Court of Appeal held that a physician will be culpable for malpractice "if he withholds any facts which are necessary to form the basis of an intelligent consent by the patient to the proposed treatment." A subsequent California decision characterized the "informed consent" requirement as follows:

[T]he patient's right of self-decision is the measure of the physician's duty to reveal. That right can be effectively exercised only if the patient possesses adequate information to enable an intelligent choice. The scope of the physician's communications to the patient, then, must be measured by the patient's need, and that need is whatever information is material to the decision. Thus the test for determining whether a potential peril must be divulged is its materiality to the patient's decision.

liability.<sup>264</sup>

Moreover, it is conceivable that prenatal diagnosis will give rise to some rather unique tort problems, based on a physician's failure to perform the procedure or his inaction subsequent to an amniocentesis which has revealed a fetal defect. The uniqueness of these problems derives from the possibility that such failure or inaction might give rise not only to a tradi-

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Cobbs v. Grant, 8 Cal. 3d 229, 245, 502 P.2d 1, 11, 104 Cal. Rptr. 505, 515 (1972) (citation omitted). While this "materiality of peril" language has been used often, it has been defined rarely. See, e.g., Canterbury v. Spence, 464 F.2d 772, 786 (D.C. Cir.), cert. denied, 409 U.S. 1064 (1972); Waltz & Scheuneman, *supra*, at 638-41; Note, CAL. L. REV., *supra*, at 1407 n.68. Some courts seem to have confused the concept of "materiality" with that of probability, and have apparently denied recovery merely because the risk of the resultant complication was relatively low. In Yeates v. Harms, 193 Kan. 320, 393 P.2d 982 (1964), modified on other grounds, 194 Kan. 675, 401 P.2d 659 (1965), for example, the plaintiff brought suit against a hospital and eye surgeon for damages resulting from a post-cataract surgery infection which required removal of an eye. After noting that the risk of this post-operative complication was approximately one percent, the court held that the physician was under no duty to forewarn of risks which occurred with such a low frequency:

[Plaintiff] . . . would have this court extend the duty of a physician or surgeon to the extreme where he would have to apprise his patient not only of the known risks but also of each infinitesimal, imaginative, or speculative element that would go into making up such risks.

193 Kan. at 333, 393 P.2d at 991.

It is submitted that a risk of one percent (which is the approximate risk of fetal-maternal damage incident to amniocentesis, see note 74 *supra* & accompanying text) is neither "infinitesimal" nor "speculative" and should be disclosed to the patient prior to surgery. A material risk is any risk which is pertinent to a patient's freedom of choice, and therefore involves not only probability, but also severity—both of which must be balanced against the patient's informed view of the necessity and desirability of submitting to the procedure.

It could be suggested that the average patient is not capable of balancing the risk of surgery against its desirability, that he or she lacks the capacity to make an intelligent choice. This argument, in addition to being paternalistic, seems particularly inapplicable to amniocentesis patients, for often there will be no objective medical criteria as to what constitutes a wise choice. Consider, for example, the plight of a 42-year-old woman who desperately desires to have a child, but does not wish to give birth to a mongoloid. Only she and her spouse (and not the physician) can possibly weigh all the subjective factors involved in deciding whether to submit to amniocentesis (in which case there is a one to two percent risk of fetal or maternal injury or death), or to refrain (in which case there is a slightly less than one percent probability that the child will be afflicted with Down's syndrome).

Believing that the informed consent doctrine requires physicians to explain the possible hazards and limitations of amniocentesis to the patient, one prominent amniocentesis specialist, Dr. M. Neil MacIntyre of Cleveland, requires both the patient and her husband to sign an "Informed Consent and Release" form. This form apprises the patient of the specific risk of "premature labor possibly resulting in spontaneous abortion," as well as the general risk of other "damage to the mother or fetus." Discussion in EARLY DIAGNOSIS SYMPOSIUM, *supra* note 3, at 144-45 (statement by MacIntyre).

<sup>264</sup> See generally Note, *The Medical Profession and Strict Liability for Defective Products—A Limited Extension*, 17 HASTINGS L.J. 359 (1965).

tional malpractice action by the parents, but also to a "wrongful life" action on behalf of the child who is born as a result of the physician's tortious action or inaction.

#### A. *Contexts in Which the Problem Might Arise*

An action based on the idea that the child should have been aborted could arise from a doctor's failure to perform amniocentesis, misdiagnosis to the effect that the fetus is healthy, failure to inform the parents of the results of the amniocentesis, or refusal to perform an abortion.

In general, the standard of care required of a physician is one of applying "customary and usual" procedures and knowledge.<sup>265</sup> If amniocentesis becomes customary and usual, a physician who, out of negligence or ignorance, neglects to perform the test on a high risk patient will have violated this standard.<sup>266</sup> On the other hand, well informed and careful doctors might also refuse to conduct the test even for a woman at risk, because of a scarcity of medical and diagnostic facilities. This would be a valid defense to a malpractice action,<sup>267</sup> if the exclusion of the particular patient was based on a reasonable method of allocation.<sup>268</sup>

The situation in which the fetus is misdiagnosed as healthy speaks for itself; beyond that, however, is the position of some doctors who believe that certain fetal abnormalities, such as sex chromosome aberrations, do not justify genetic abortion, and that disclosure to the parents might adversely affect the future rearing of the child.<sup>269</sup> Moreover, full disclosure is a

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<sup>265</sup> W. PROSSER, *supra* note 261, § 32, at 165.

<sup>266</sup> *Carmichael v. Reitz*, 17 Cal. App. 3d 958, 976, 95 Cal. Rptr. 381, 391 (1971); W. PROSSER, *supra* note 261, § 32, at 165; discussion following Green, *Mechanisms for Public Policy Decision-Making*, in ETHICAL SYMPOSIUM, *supra* note 3, at 400 (statement by Havighurst); discussion following Littlefield, Milunsky & Jacoby, *Prenatal Genetic Diagnosis: Status and Problems*, in ETHICAL SYMPOSIUM, *supra* note 3, at 54 (statement by Singer).

<sup>267</sup> Where resources are inadequate, their use cannot be customary and widespread. "Hence whenever there is an allocation problem there can be no malpractice problem." Note, *Scarce Medical Resources*, 69 COLUM. L. REV. 620, 629-30 (1969).

<sup>268</sup> In general, the appropriate basis at the present time would appear to be the statistical odds. For example, a pregnant woman over the age of 35 has a slightly less than one percent chance of giving birth to a mongoloid child, *see* note 40 *supra*. Her need for amniocentesis would normally be less than that of two mates who are both heterozygous for Tay-Sachs disease; they have a twenty-five percent chance of conceiving an afflicted fetus, *see* note 16 *supra* & accompanying text.

<sup>269</sup> *See, e.g.*, Lubs, *Privacy and Genetic Information*, in ETHICAL SYMPOSIUM, *supra* note 3, at 267, 270.

difficult and time-consuming task. As Professor Alexander Capron has noted, in a slightly different context,

[T]he really "efficient" course for most counselors is not full disclosure on a computer print-out, but the withholding of information which if disclosed would involve the counselor in a long and arduous process of truly "counseling" his patients. In short, it is more "efficient" (and certainly easier) for him to make the choices himself rather than to bring into open discussion facts . . . which are difficult to contemplate or discuss.<sup>270</sup>

It appears, however, that the withholding of such information might be medical malpractice. Some courts have found that a physician has a duty to reveal to a patient, or to one properly acting for him, the nature of the patient's ailment.<sup>271</sup> Other authorities differ with respect to the patient stricken with a fatal illness,<sup>272</sup> contending that in such a case the "brutal" truth serves no useful purpose, and may in fact exacerbate the patient's disease; but this objection would not apply to the case of a diagnosed fetal genetic defect. If disclosure sufficient to assure informed consent to therapy is the legal norm,<sup>273</sup> then this principle should encompass the patient's right to receive information which will provide informed consent to *non-therapy*—that is, carrying the fetus to term.

Another conceivable legal duty of a physician would be to carry out a requested abortion if amniocentesis has revealed a genetic defect. Normally a physician who abandons his patient is liable for breach of contract<sup>274</sup> or of a "duty undertaken";<sup>275</sup> but the physician in this case may argue that the fetal defect is not of sufficient magnitude to justify an abor-

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<sup>270</sup> Capron, *Legal Rights and Moral Rights*, in *ETHICAL SYMPOSIUM*, *supra* note 3, at 221, 229.

<sup>271</sup> *Lester v. Aetna Cas. & Surety Co.*, 240 F.2d 676, 679 (5th Cir. 1957); *Natanson v. Kline*, 186 Kan. 393, 403, 350 P.2d 1093, 1106 (1960); *see* Annot., 49 A.L.R.3d 501 (1973).

<sup>272</sup> *Smith, Therapeutic Privilege to Withhold Specific Diagnosis from Patient Sick With Serious or Fatal Illness*, 19 TENN. L. REV. 349, 351 (1946); *see Haggerty v. McCarthy*, 344 Mass. 136, 144, 181 N.E.2d 562, 567 (1962) (Spiegel, J., dissenting); *Oken, What to Tell Cancer Patients*, 175 J.A.M.A. 1120 (1961).

<sup>273</sup> *See* note 263 *supra*.

<sup>274</sup> *Sanders & Dukeminier, Medical Advance and Legal Lag: Hemodialysis and Kidney Transplantation*, 15 U.C.L.A.L. REV. 357, 382 (1968).

<sup>275</sup> W. PROSSER, *supra* note 261, § 32, at 340.



tion, and that refusal to abort is simply the exercise of sound medical judgment. The patient—particularly if she is in the early stages of pregnancy, and the doctor is employed by a state or city institution—might counter that the physician's refusal to abort violates her constitutional right to control her own body, as established in *Roe v. Wade*.<sup>276</sup> However, the *Wade* decision was rooted not only in the right of a woman to control her body, but also in the freedom of the physician "to determine . . . that, in his medical judgment, the patient's pregnancy should be terminated."<sup>277</sup> When the physician determines otherwise, it appears that the patient cannot compel him solely on the grounds that she has a constitutional right to abort an unwanted fetus.<sup>278</sup> Indeed, subsequent to the *Wade* decision, one writer suggested that doctors "can be prosecuted if they perform abortions conflicting with [their best medical or clinical] judgment."<sup>279</sup>

### B. *The Genetically Imperfect Child as Plaintiff*

It seems quite certain that with further advances in genetics, our concept of human rights, and our concern with the quality of life, we will be enriched with a new right; that of being born without the handicap of a readily preventable serious genetic defect.

—Editorial, *New England Journal of Medicine*<sup>280</sup>

While American law recognizes the existence of a cause of action for wrongful death,<sup>281</sup> the courts have yet to hold that life, too, can be wrongful and hence compensable. A cause of action for wrongful life was first raised in, and rejected by,

<sup>276</sup> 410 U.S. 113 (1973).

<sup>277</sup> *Id.* at 163. See also *Doe v. Bolton*, 410 U.S. 179, 192 (1973).

<sup>278</sup> This problem is not mooted by the fact that the woman can procure a substitute physician, for that will require time, during which the woman may have progressed from the second trimester of pregnancy to the third trimester. If this happens, the state then may prohibit her from terminating her pregnancy, unless the substitute physician feels that an abortion is "necessary . . . for the preservation of the life or health of the mother." *Id.* at 163-65.

<sup>279</sup> Ely, *The Wages of Crying Wolf: A Comment on Roe v. Wade*, 82 *YALE L.J.* 920, 922 n.22 (1973).

<sup>280</sup> Editorial, 285 *NEW ENG. J. MED.* 799, 800 (1971).

<sup>281</sup> In most states, the remedy for wrongful death has been statutorily created. W. PROSSER, *supra* note 261, § 127. See also 39 *IOWA L. REV.* 494 (1954).

an Illinois court of appeals in 1963 in *Zepeda v. Zepeda*.<sup>282</sup> In that case, an infant brought suit against his father, seeking damages for the stigma of being born illegitimately and for being deprived of a normal home, life, legal father, and rights of inheritance. The court acknowledged that "the elements of a willful tort are presented by the allegations of the complaint,"<sup>283</sup> but nevertheless denied recovery because of its fear of opening the floodgates to a new form of litigation:

What does disturb us is the nature of the new action and the related suits which would be encouraged. . . . One might seek damages for being born of a certain color, another because of race; one for being born with a hereditary disease, another for inheriting unfortunate family characteristics . . . .<sup>284</sup>

Two years later, a similar action arose in New York. In *Williams v. State*,<sup>285</sup> an infant sued a state hospital for negligently allowing her mother to be raped in an unattended mental ward. The complaint sought damages for deprivation of "property rights . . . a normal childhood and home life . . . proper parental care, support and rearing," as well as for being "caused to bear the stigma of illegitimacy."<sup>286</sup> In affirming

<sup>282</sup> 41 Ill. App. 2d 240, 190 N.E.2d 849 (1963), *cert. denied*, 379 U.S. 945 (1964).

<sup>283</sup> *Id.* at 259, 190 N.E.2d at 858.

<sup>284</sup> *Id.* at 259-60, 190 N.E.2d at 858. One commentator has noted that the consequences feared by the *Zepeda* court may have been misapprehended. See Capron, *supra* note 270, at 236:

But opening the court to the infant Zepeda would not necessarily open it to the others cited by the court, for poverty, race and genetic makeup do not constitute "moral wrong(s) and . . . criminal act(s)" which the court held Mr. Zepeda's sexual relations with the plaintiff's mother to be. Being poor or carrying an hereditary disease are not crimes; procreating in these circumstances violates no legal right of the child conceived.

<sup>285</sup> 46 Misc. 2d 824, 260 N.Y.S.2d 953 (Ct. Cl. 1965), *rev'd*, 25 App. Div. 2d 907, 269 N.Y.S. 2d 786, *aff'd*, 18 N.Y.2d 481, 223 N.E.2d 343, 276 N.Y.S.2d 885 (1966).

<sup>286</sup> 46 Misc. 2d at 825, 260 N.Y.S.2d at 954. The trial judge, in upholding the sufficiency of the complaint, noted his "disinclination to approve the appellation: 'a cause of action for wrongful life,'" and stated that it was for the appellate court to determine whether the plaintiff had a cause of action and what it should be called. *Id.* at 830, 260 N.Y.S.2d at 959. The Appellate Division dismissed the claim largely on the grounds that damages were not ascertainable:

In essence, and regardless of the verbiage of the claim above quoted, the damages asserted rest upon the very fact of conception and would have to comprehend the infirmities inherent in claimant's situation as against the alternatives of a void, if nonbirth and nonexistence may thus be expressed; and could not, without incursion into the metaphysical, be measured against the hypoth-

the Appellate Division's dismissal of the claim, the New York Court of Appeals held:

Impossibility of entertaining this suit comes not so much from the difficulty in measuring the alleged "damages" as from the absence from our legal concepts of any such idea as a "wrong" to a later born child caused by permitting a woman to be violated and to bear an out-of-wedlock infant. . . . Being born under one set of circumstances rather than another or to one pair of parents rather than another is not a suable wrong that is cognizable in court.<sup>287</sup>

The following year, a Florida appellate court held that to recognize such a claim would be to ignore "our understanding of both the laws of men and the laws of nature."<sup>288</sup>

Finally, *Gleitman v. Cosgrove*<sup>289</sup> arose in a context which is closely analogous to any wrongful life litigation which might result from failure to perform an amniocentesis or failure to inform of defects discovered through prenatal diagnosis. In that case, Mrs. Gleitman informed her physician during early pregnancy that she had recently recovered from an illness diagnosed as German measles. Upon the advice of her doctor, she continued her pregnancy; she subsequently gave birth to a child who was blind, deaf, and mentally retarded. The mother, father, and child brought suit, alleging malpractice through failure to inform Mrs. Gleitman that her pregnancy was at risk. In affirming the trial court's dismissal of the complaint, the Supreme Court of New Jersey, on the authority of *Zepeda* and *Williams*, held that the infant's "action for 'wrongful life'" did "not give rise to damages cognizable at law."<sup>290</sup> The court based its decision as to the child on the impossibility of determining damages:

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esis of a child or imagined entity in some way identifiable with claimant but of normal and lawful parentage and possessed of normal or average advantages.

25 App. Div. 2d at 907, 908, 269 N.Y.S.2d at 787.

<sup>287</sup> 18 N.Y.2d at 484, 223 N.E.2d at 344, 276 N.Y.S.2d at 887. Judge Keating's concurrence was based "not . . . upon any fear of creating a new cause of action or the fact that the child was not in being when the alleged tortious act occurred or upon . . . a misguided fear of the possible ramifications of a decision permitting recovery," but instead on the impossibility of ascertaining damages. *Id.* at 484-85, 223 N.E.2d at 344-45, 276 N.Y.S.2d at 888 (Keating, J., concurring).

<sup>288</sup> *Pinkney v. Pinkney*, 198 So. 2d 52, 54 (Fla. App. 1967).

<sup>289</sup> 49 N.J. 22, 227 A.2d 689 (1967).

<sup>290</sup> *Id.* at 29, 227 A.2d at 692.

The infant plaintiff would have us measure the difference between his life with defects against the utter void of nonexistence, but it is impossible to make such a determination. . . . By asserting that he should not have been born, the infant plaintiff makes it logically impossible for a court to measure his alleged damages because of the impossibility of making the comparison required by compensatory remedies.<sup>291</sup>

The dismissal of the parents' claims was founded on a policy against abortions. Citing Theocritus and Jonathan Swift, the court rested its holding on its "felt intuition of human nature" that if the infant "could have been asked as to whether his life should be snuffed out before his full term of gestation could run its course . . . he would almost surely choose life with defects as against no life at all."<sup>292</sup>

The Supreme Court's recent abortion decision<sup>293</sup> may reverse the judiciary's reluctance to recognize actions for wrongful life in prenatal diagnosis situations. The holding in *Gleitman* was predicated, in large measure, on judicial antipathy for "genetic abortion" and a desire to preserve "[t]he right to life [which] is inalienable in our society."<sup>294</sup> Such a position is no longer tenable after *Roe v. Wade*. In fact, there have been recent reports of conduct extending beyond *Wade*: Physicians, after receiving consent from parents, have refrained from performing lifesaving surgery on severely defective neonates, allowing them to die during the first few months of life.<sup>295</sup> If

<sup>291</sup> *Id.* at 28, 227 A.2d at 692.

<sup>292</sup> *Id.* at 30, 227 A.2d at 693. See also *Stewart v. Long Island College Hosp.*, 58 Misc. 2d 432, 296 N.Y.S.2d 41 (1968), *aff'd mem. as modified*, 35 App. Div. 2d 531, 313 N.Y.S.2d 502, *appeal dismissed*, 27 N.Y.2d 804, 264 N.E.2d 354, 315 N.Y.S.2d 863 (1970), which was a malpractice action arising from a doctor's refusal to perform an abortion on a woman who had been ill with rubella during early pregnancy and who subsequently gave birth to a defective child. The Appellate Division, in affirming the trial court's dismissal of the action, held that abortion was against public policy, and that any contrary decision would have to come from the legislature.

<sup>293</sup> *Roe v. Wade*, 410 U.S. 113 (1973).

<sup>294</sup> 49 N.J. at 30, 227 A.2d at 693.

<sup>295</sup> See Duff & Campbell, *Moral and Ethical Dilemmas in the Special-Care Nursery*, 289 NEW ENG. J. MED. 890 (1973):

Of 299 consecutive deaths occurring in [the Yale University Hospital] special-care nursery, 43 (14 per cent) were related to withholding treatment. In this group were 14 with multiple anomalies, eight with trisomy, eight with cardiopulmonary disease, seven with meningomyelocele, three with other central-nervous system disorders, and two with short-bowel syndrome. After careful

this indicates that our society will now tolerate a balancing of the quality of life against the sanctity of life, the court's anti-abortion policy against wrongful life actions may have lost much of its force.

Moreover, there are recent cases which uphold a parental right of recovery for expenses of rearing an unwanted but healthy child. In *Troppi v. Scarf*,<sup>296</sup> a druggist negligently dispensed a tranquilizer, in lieu of prescribed birth control pills, to a woman who already had seven children. A healthy child was born, and the parents sued for the mother's lost wages, pain and anxiety, medical and hospital expenses, and the economic costs of raising the child. The lower court held the demands to be against public policy,<sup>297</sup> but the Michigan Court of Appeals reversed, holding that the pharmacist's negligence was the proximate cause of the birth, and that giving birth to an unwanted child was a compensable plight. *Troppi* and decisions recognizing that there is a cause of action for negligent sterilization which results in the birth of unwanted offspring<sup>298</sup> are not direct authority for the recognition of wrongful life actions, but they do provide judicial support for the principle that the birth of a child is not always an unmixed blessing, and may be compensable at law.

Futhermore, a "wrongful life" action will not always be based on the allegation that the defective child should have been aborted. Some genetic disorders are partially amenable to prenatal treatment.<sup>299</sup> In others, prenatal diagnosis can facilitate immediate post-natal therapy.<sup>300</sup> There is no reason of law or policy for denying a remedy to a defective child

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consideration of each of these 43 infants, parents and physicians in a group decision concluded that prognosis for meaningful life was extremely poor or hopeless, and therefore rejected further treatment. The awesome finality of these decisions, combined with a potential for error in prognosis, made the choice agonizing for families and health professionals. Nevertheless, the issue has to be faced, for not to decide is an arbitrary and potentially devastating decision of default.

See also Shaw, *Dilemmas of "Informed Consent" in Children*, 289 NEW ENG. J. MED. 885 (1973), which indicates that the practice at the University of Virginia Medical Center is similar.

<sup>296</sup> 31 Mich. App. 240, 187 N.W.2d 511 (1971).

<sup>297</sup> *Troppi v. Scarf*, Civ. No. 53523 (Cir. Ct., Wayne County, Mich., Mar. 24, 1969).

<sup>298</sup> See, e.g., *Bishop v. Byrne*, 265 F. Supp. 460 (S.D. W. Va. 1967); *Jackson v. Anderson*, 230 So. 2d 503 (Fla. App. 1970).

<sup>299</sup> See notes 49-52 *supra* & accompanying text.

<sup>300</sup> See notes 46-48 *supra* & accompanying text.

whose disorder could have been alleviated had it only been prenatally diagnosed.

For example, in *Sylvia v. Gobeille*,<sup>301</sup> a defective child brought suit against a physician for negligently failing to prescribe gamma globulin for her mother, who had been exposed to German measles during pregnancy. The Supreme Court of Rhode Island held that the child did have a right of action against the physician, and remanded the case for trial on the issue whether the physician's failure to prescribe was the proximate cause of the plaintiff's injury. In so holding, the court stated:

"[J]ustice requires that the principle be recognized that a child has a legal right to begin life with a sound mind and body," and that "If the wrongful conduct interferes with that right, and it can be established by *competent proof* that there is a causal connection between the wrongful interference and the harm suffered by the child when born, damages for such harm should be recoverable by the child."<sup>302</sup>

It is clear from *Sylvia* that a child with a disorder which is prenatally diagnosable and treatable has a legally cognizable claim against a physician who negligently fails to diagnose or treat the disorder. In such a case, the measure of damages would be based not on the comparison between a disadvantaged life and no life at all, but instead on a contrast between a disadvantaged life and a healthy one.

The second ground for judicial reluctance to sustain "wrongful life" actions—the difficulty of ascertaining damages—should not be an insurmountable obstacle. If the difficulty is based on the notion that any life, no matter how painful, is of some benefit to the plaintiff, damages could be determined by measuring the value of that benefit, and subtracting that amount from the emotional and physical cost to plaintiff of enduring such a life.<sup>303</sup> This is what the courts would do if a physician performed lifesaving surgery on an

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<sup>301</sup> 220 A.2d 222 (R.I. 1966).

<sup>302</sup> *Id.* at 224 (citation omitted).

<sup>303</sup> *Restatement of Torts* § 920 (1939):

Where the defendant's tortious conduct has caused harm to the plaintiff [and] . . . has conferred upon the plaintiff a special benefit to the interest which was

adult, but in the course of the surgery negligently injured the patient for life.<sup>304</sup> The fact that this could not be done with mathematical precision should not be a bar to recovery. The courts have long recognized that

[w]here the tort itself is of such a nature as to preclude the ascertainment of the amount of damages with certainty, it would be a perversion of fundamental principles of justice to deny all relief to the injured person, and thereby relieve the wrongdoer from making any amend for his acts.<sup>305</sup>

Thus neither judicial enmity toward abortion nor the difficulty of ascertaining damages presents a cogent reason for denying recovery for wrongful life. There exist, however, two dangers in the creation of such a cause of action. First, judicial recognition of wrongful life actions might induce some physicians to abort all "borderline fetuses" (both those whose karyotypes or biochemical patterns are ambiguous and those whose prenatal diagnoses reveal simply a minimal genetic defect), because only by so doing could they immunize themselves from the possibility of wrongful life suits. This fear would be misplaced, of course; the better course would be full disclosure and parental decision. Second, judicial recognition that genetic disadvantage is a compensable plight could, when coupled with the increasing use of amniocentesis and selective abortion, help create a societal attitude that only pristine pure "health" is tolerable. Such an attitude would generate disdain for genetic defectives and would exert pressure on parents to opt for abortion when confronted with the likelihood of a genetically disadvantaged child.<sup>306</sup> A cogent policy justification for the continued dismissal of wrongful life actions is the possible societal acceptance of the belief that if the life of a genetically defective human being is wrongful, then only

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harmed, the value of the benefit conferred is considered in mitigation of damages, where this is equitable.

See also *Troppe v. Scarf*, 31 Mich. App. 240, 255, 187 N.W.2d 511, 518 (1971); 50 MINN. L. REV. 593, 599 (1966).

<sup>304</sup> See Capron, *Informed Decisionmaking in Genetic Counseling: A Dissent to the "Wrongful Life" Debate*, 48 IND. L.J. 581, 597 n.59 (1973).

<sup>305</sup> *Story Parchment Co. v. Paterson Parchment Paper Co.*, 282 U.S. 555, 563 (1931).  
See also *Eastman Kodak Co. v. Southern Photo Materials Co.*, 273 U.S. 359 (1927).

<sup>306</sup> See notes 111-15 *supra* & accompanying text.

his death can be rightful. A societal intolerance for the genetically disabled, however, would be caused only partially by the judicial creation of wrongful life actions; these attitudes, if they do come to exist, would primarily be the result of the availability and increasing use of amniocentesis and genetic abortion themselves.

It seems likely that *Roe v. Wade*, coupled with a shift in social attitudes concerning abortion and the sanctity of life, will cause a reversal in the courts' negative attitudes toward wrongful life suits. Indeed, once one accepts the propriety of abortion as a "cure" for genetic disease, a wrongful life action seems almost indistinguishable from any other type of action brought by an infant for injuries sustained during its period of gestation.<sup>307</sup>

#### IV. CONCLUSION

As Aldous Huxley's fantasy from the 1930's<sup>308</sup> merges into tomorrow's reality, the science of human genetics continues to forge its virtually uncontrolled path beyond our somnolent legal institutions. The development of amniocentesis is one example of a scientific advance which promises to provide not only medical and social assistance but also litigative and legislative entanglements.

It does seem clear that lawmakers must be made aware of and begin to address themselves to advances in human genetics. To understand the importance of this problem, one need only recall past achievements in the physical sciences and the corresponding lag of our legal institutions.<sup>309</sup> As author-physicist C. P. Snow recently admonished:

People are already [thinking about the ramifications of prenatal diagnosis and genetic engineering] . . . . They are telling us we ought to make some legalistic preparations in advance. It won't do us any harm to

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<sup>307</sup> See, e.g., *Sinkler v. Kneale*, 401 Pa. 267, 164 A.2d 93 (1960); *Smith v. Brennan*, 31 N.J. 353, 157 A.2d 497 (1960).

<sup>308</sup> A. HUXLEY, *BRAVE NEW WORLD* (1932).

<sup>309</sup> See, e.g., A. MILLER, *THE ASSAULT ON PRIVACY: COMPUTERS, DATA BANKS AND DOSSIERS* (1971); Estep & Forgotson, *Legal Liability for Genetic Injuries from Radiation*, 24 L.A. L. REV. 1 (1963); *A Symposium on Communications Satellites: Modern Challenge to Traditional Doctrine*, 58 Nw. U.L. REV. 215 (1963).



take note, and to have a few elementary considerations in mind.

First, if this thing is ever possible technologically, it will happen. It is no use expecting international agreements to stop it, or a self-denying ordinance among scientists. In fact, most of us, if the power were given us, would be morally confused. For the first application of genetic engineering almost certainly would be to eradicate the grosser genetic misinstructions—that is the prescriptions that produce dystonia or spina bifida or mongoloidism or other fearful forms of human suffering. If you had the power, wouldn't you do that? I would, whatever the consequences. If society had that power and wouldn't use it, I should feel like Ivan Karamozov returning his ticket.

The consequences though, would be inescapable.<sup>310</sup>

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<sup>310</sup> Snow, *Human Care*, 225 J.A.M.A. 617, 620 (1973).