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INTRODUCTION

Within the past few decades, unprecedented changes in the available means of human reproduction have made it possible to separate reproduction from sexuality, to distribute the tasks of biological maternity among different women, and to manipulate the spatial and temporal dimensions of reproduction. These possibilities challenge traditional assumptions about the facts of every stage of human reproduction: sexual intercourse, conception, gestation and birth. In addition, the new reproductive technologies confront traditional understandings of the family with novel familial constellations, which are not necessarily grounded in biological processes as firmly as old-fashioned family groups.

The dramatic development of new reproductive technologies within the past few decades coincides with extraordinary changes in the shape of the American family. As in vitro fertilization, cryopreserved embryos, and gestational surrogacy have become realities, divorce, single-parent families and working mothers have become commonplace.

Questions about the meaning of “mother”, “father”, and “child”, occasioned by reproductive technology, arise in a world already unsure of the meaning and contours of family. Traditional assumptions about the character, longevity, and membership of the family, as well as assumptions about the connection between the family as a social unit and the biological facts long thought to produce and undergird that unit, are in disarray. Yet families continue to be understood in traditional terms—as domains of love that...
contrast with the world of work and money. And the law continues rather consistently to invoke a traditional, old-fashioned conception of the family in regulating the creation and operation of family relationships.

The relevance of biological facts to the resolution of family disputes varies from case to case. Sometimes the facts of reproduction are expressly at issue, as in paternity suits. Sometimes, as with adoption orders, the facts of reproduction are disregarded or self-consciously superseded. The law in the United States has long acknowledged parent-child relationships not founded on biological connections, such as those formed through adoption or through artificial insemination using donor sperm. The law has also provided for the termination of biological parents' legal parenthood in cases of child abuse or neglect.

Rarely, however, have family law courts been confronted with an entirely new set of reproductive facts. Reproductive technologies, however, have produced such novel reproductive scenarios as multiple biological mothers, or embryos stored indefinitely in test tubes. Such cases require that the courts determine not only who is the mother, the father, or the baby, but what is a "mother," a "father," or a "baby." The simultaneous challenge to the social facts of family and to the biological facts of family preclude certainty of almost any sort. Thus, cases occasioned by reproductive technologies fundamentally challenge traditional assumptions about the social implications of human reproduction. This Article examines the response of the law to litigants' invocations of biological facts in cases occasioned by reproductive technology. Part I describes the ideological transformation of the family from an enduring social unit defined by reference to inexorable, natural facts to a collection of individuals governed by the rules of the marketplace. Part II analyzes the treatment of the biological facts of human reproduction in family law disputes, and suggests that through such disputes society is re-defining the scope and parameters of the family. Finally, Parts III and IV present and analyze three illustrative cases. In each case, courts and litigants invoked, disputed, disregarded and reformulated the biological facts of human reproduction. Like many cases occasioned by reproductive technology, each of the three cases reflects a basic tension underlying many current family law decisions. This

7. The exception has been artificial insemination, especially in cases in which the sperm of a donor rather than of the woman's husband was used. In such cases brought before the 1960s, courts were not always willing to recognize the woman's husband as the child's legitimate father, even if his consent to the insemination had been obtained. In Gursky v. Gursky, 39 Misc. 2d 1083, 242 N.Y.S.2d 406 (Sup. Ct. 1963), a New York court noted that other courts had found artificial insemination using a donor's sperm to "constitute . . . adultery." The court accordingly found that the child "is not the legitimate issue of the husband." Id. at 1088, 242 N.Y.S.2d at 411. This problem rarely arises outside the context of divorce since artificial insemination can be, and generally was, kept secret. See infra note 14 (presenting brief history of artificial insemination).

8. Reproductive technology has separated biological maternity into several aspects. Previously, a woman who gave birth to a child was assumed to be the child's biological mother. Now, a woman who gives birth may share biological maternity with an ovum donor and even with another gestator. 9. See infra notes 18-26 and accompanying text.
tension arises between a view of family that preserves traditional assumptions about kinship connections and a view of family that recognizes families as collections of autonomous individuals who, like actors in the marketplace, choose to join together at various times and for various purposes. Despite widespread changes in family law in recent decades, courts adjudicating family disputes continue to justify their decisions in reference to traditional family values and traditional models of reproduction. This pattern is especially stark in the context of cases occasioned by reproductive technology. The result is irony and confusion about the law's response to the changing structure and definition of family.

I. THE FAMILY AND THE IDEOLOGY\textsuperscript{10} OF FAMILY: TRADITION AND TRANSFORMATION

At least since the beginning of the Industrial Revolution, the family in the United States has been understood as a special, almost sacred, arena of social life grounded in inexorable natural relationships. Within the last few decades, that view of the family has begun to erode. The body of statutory rules and judicial decisions regulating the creation, operation and dissolution of families has come increasingly to resemble the law that governs interactions in the marketplace.\textsuperscript{11}

Traditionally, kinship claims have been understood to be anchored firmly in nature. Within the traditional family, rights and duties are largely established through reference to the "nature of things" and, to that extent, are not open to negotiation. So, for example, parents are expected to care for their children. This obligation defines and constitutes the parental role. Similarly, traditional differences between fathering and mothering have been assumed to follow inevitably from differences between males and females. Anthropologist Nancy Chodorow notes that social scientists studying kinship and families have failed to ask why women "mother" and men do not. The reason, suggests Chodorow,

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\item The term "ideology," as used here, does not mean a system of false beliefs. Rather "ideology" refers to the deep-seated system of beliefs, usually unarticulated, through which people make sense of their own lives and of the world in which they live. This definition follows that of the anthropologist and Indologist Louis Dumont. Dumont wrote:

Our definition of ideology thus rests on a distinction that is not a distinction of matter but one of point of view. We do not take as ideological what is left out when everything true, rational, or scientific has been preempted. We take everything that is socially thought, believed, acted upon, on the assumption that it is a living whole, the interrelatedness and interdependence of whose parts would be blocked out by the a priori introduction of our current dichotomies.


\item Janet L. Dolgin, \textit{The Family in Transition: From Griswold to Eisenstadt and Beyond}, 82 Geo. L.J. 1519, 1559-64 (1994) (describing changes in family law during past several decades).
\end{enumerate}
\end{footnotesize}
Reproductive Transformations

is largely that “[w]omen’s mothering . . . is seen as a natural fact,” and for social scientists, as for others, “natural facts . . . do not need explanation.”12

In contrast to family relationships, which are grounded in biological truths or in patterns of behavior that reflect those associated with “blood” relationships, relationships at work are understood as endlessly negotiable. Relationships at work endure, and are expected to endure, only as long as they are necessary to accomplish specific goals.13 That is to say that at work, rights and obligations result from the terms of the employment, not from the inherent nature of the personal relationships. At home, relationships are considered paramount and are defined through reference to lasting truths; at work, the autonomous individual, linked to other individuals through choice, is free to define the terms of everyday life through ceaseless negotiation.

Within the past three decades, the fundamental assumptions underlying understandings of family have become subject to debate. To some extent, a new vision of the family has emerged. To reflect that new vision, family law has changed to accommodate new understandings of marriage, divorce, and to a lesser extent, a new understanding of the parent-child relationship.

Ideologically, the transformation has involved acknowledgment that families and familial relationships are not natural or inevitable but constructed and contingent. The development of reproductive technology disrupts our understanding of biological facts, thus rendering disputes involving family relationships increasingly uncertain. While virtually no one dismisses biological facts entirely in defining the parameters of family, it is no longer clear precisely how those facts affect the organization of familial life. Instead, the social implications of biological reproduction have been reinterpreted and reshaped by society and by the law.

The family, once understood as an essential unit comprised of members linked by relationships, is now increasingly understood as a collection of autonomous individuals whose relationships to one another can be re-designed and re-imagined as often as the parties choose. If certain forms of biological connection are no longer essential to the creation of family, then the options for defining families are almost endless.

II. THE DEBATE ABOUT THE BIOLOGICAL FACTS OF HUMAN REPRODUCTION

Only recently has it become possible for humans to orchestrate the processes of human reproduction.14 Previously, whatever people might have

12. CHODOROW, supra note 6, at 14.
13. Obviously, relationships formed “at work” may endure beyond the work itself. In that case, however, the relationships have been transformed into other kinds of relationships, such as friendships.
14. The so-called new reproductive technologies are sometimes described to include artificial insemination. In fact, this procedure is quite old and provides a remarkable, although until recently rarely used, exception to the claim that the technological manipulation of human reproduction is only decades
imagined “the miracle of birth” to imply, they agreed with remarkable consistency about the facts of reproduction. For more than a hundred years, Western society, reflecting the views of Western science, understood human reproduction as a continuous process beginning with sexual intercourse between a man and a woman, including the fertilization of an egg (provided by the woman’s body) by sperm (provided by the man’s body), the subsequent development of the embryo within the woman’s body, and then the birth of a baby from the body of the woman in whom conception occurred.

Reproduction still occurs that way; but it occurs in numerous other ways as well. As a result of the new reproductive technologies, conception need not involve sexual intercourse and need not begin in a woman’s body. After conception, the resulting embryo may be divided into two or four or more identical embryos; it may be tested for genetic disease and discarded if defective; it may be frozen and stored for months, or even years, and then thawed for implantation and gestation. The woman who provides the egg need not be the woman who gestates the resulting embryo. Two different women can give birth to “identical twins” or one woman may give birth to “twins” years apart. Moreover, women well into menopause may gestate and give birth to babies; babies may be born years after the deaths of their genetic “parents,” and soon eggs for the production of human children may be retrieved from aborted fetuses.

Reproductive technology multiplies the ways through which human reproduction can occur. However, reproductive technology has not widely challenged the scientific understanding of the biological facts of human reproduction with a competing understanding of those facts. It does not entail a dramatically novel theory of reproduction, but represents an elaboration and development of an existing scientific paradigm. Reproductive technology uses that paradigm and even serves to demonstrate its accuracy and power by multiplying the possibilities for manipulating the processes of reproduction.

The changes made possible by reproductive technology do not challenge the theories which explain how reproduction occurs. Rather, they challenge

old. Assisted insemination (as some prefer to term the practice) was probably used for humans as early as the late eighteenth century. WINFRED FINEGOLD, ARTIFICIAL INSEMINATION 5-6 (2d ed. 1976). Many sources claim that the procedure was used by Arabs to inseminate mares as early as the fourteenth century; that claim may be apocryphal. CARMEL SHALEY, BIRTH POWER: THE CASE FOR SURROGACY 59 (1989).

15. A 59-year old British woman gave birth to twins in 1993. Other similar cases have been reported as well. Eugene Robinson, Furor Over Fertility Options: Should Eggs From Fetuses or Cadavers Be Used to Help Women Become Pregnant?, WASH. POST, Jan. 11, 1994, at Z6.


18. Such a theory would offer a completely different understanding of human reproduction; it might suggest, for example, that an embryo is not, in fact, formed from an egg and a sperm; or that the genetic composition of a fetus comes largely from one gamete donor but not from the other. The possibilities are endless. Such theories, if taken seriously, would constitute what historian of science Thomas Kuhn has called a paradigm shift—actually, a new view of the way things in fact are. THOMAS KUHN, THE STRUCTURE OF SCIENTIFIC REVOLUTIONS (2d ed. 1970).
the fundamental assumption that human reproduction is the result of natural processes which inevitably define social relationships. The challenge is not to one scientific theory, however familiar and however significant to the social order, but to the very notion that the science of human reproduction reflects a natural, unyielding process. If babies can be manufactured in laboratories, a possibility that has not (yet) been realized, then the biological correlates of human reproduction can no longer be used to ground securely the system of values and beliefs that Americans have traditionally attached to family. As a result, disputes occasioned by the new reproductive technologies provide remarkably fruitful contexts for furthering the more fundamental debate—the debate about the form and future of the family itself.

For instance, family disputes resulting from surrogate motherhood or cryopreserved embryos occur in a context in which both the social and biological aspects of family are questioned. Consequently, traditional understandings of the social order can be invoked to justify or to mask the significance of transformations in the processes of reproduction. At the same time, those seeking to condemn reproductive technologies can contrast those traditional understandings with the apparent implications of reproductive technology to demonstrate the untoward, even immoral, consequences of the latter. Moreover, the biological facts can be invoked and analyzed to justify a decision about the scope and design of the social order or to condemn changes that seem to defy the dictates of natural truth.

Some supporters, for example, justify traditional surrogate motherhood by pointing out that it helps infertile couples have children. Similarly, the parties to a dispute involving a baby produced from a gestational surrogacy arrangement may attempt to invoke biological facts in order to identify the one natural mother; or they may question the relevance of biological facts entirely. Whatever the strategy, such cases make it impossible for litigants and courts to continue to assume that the biological facts of human reproduction ground the family and familial relationships in unyielding, natural truth.

In short, disputes occasioned by reproductive technology provide a particularly rich context for debating the definition and fate of the family. Almost all the traditional anchors—the biological and social correlates of family—are simultaneously dislocated. Ultimately, the terms through which such disputes are aired and resolved can broadly affect society’s understanding


20. “Traditional surrogate motherhood” refers to surrogacy arrangements that involve a surrogate whose gametes are used in conception and who gestates and gives birth to the resulting fetus. In contrast, gestational surrogacy involves a separation of the genetic and gestational aspects of motherhood between two women.

21. See infra notes 28-91 and accompanying text (analyzing understandings of biological facts in case of gestational surrogacy).
of family and of personhood. Therefore, discourse about reproductive technology promises far-reaching implications for the connections between the biological facts of reproduction and the meaning of family.

The new reproductive technologies may be taken to signal the end of order or, alternatively, the achievement of unprecedented possibilities of choice and happiness. For some, the new reproductive technologies violate the natural order, and thus augur social chaos. For others, they simply afford more joy by providing more ways of producing good, old-fashioned families. One British journalist, arguing that reproductive technology does not alter the character of families, proclaimed: “This is what science is for, the extension of human happiness through choice.”

In the face of the myriad confusions and uncertainties posed by reproductive technology, disputing parties rely with remarkable consistency on biological facts to present their arguments in court. Since the facts themselves are rarely in dispute, opposing litigants rely on essentially the same biological facts. Those facts are then presented to the court, by the disputing litigants taken as a group, as conclusive evidence of contradictory social truths.

Consequently, the biological facts dim in significance. For example, if the biological facts can demonstrate equally that a genetic mother and a gestational mother are “real” mothers, then a dispute between competing mothers must be resolved without appeal to biology. In the end, defining the family as a social reality through resort to the biological facts of family becomes increasingly difficult. That consequence is of tremendous significance to a society that has assumed for hundreds of years that kinship follows from biogenetic relationships.

III. WHAT IS A BIOLOGICAL MOTHER?

In vitro fertilization has made it possible to fragment biological maternity. Gestational surrogacy, for instance, whereby one woman agrees to gestate and give birth to a child, conceived through the gametes of another woman and a man, separates maternity into aspects. That separation, suggesting
possibilities such as two mothers or, alternatively, no "real" mother, challenges long-standing assumptions about the nature of maternity. Ovum donation, an arrangement indistinguishable from gestational surrogacy from a biological and technological perspective, involves a different social context. In ovum donation, the gestational, rather than the genetic, mother intends to be the social mother of the resulting child.

Many of the interpretive conundrums to which gestational surrogacy can give rise emerged in the context of two recent cases. The first case involved a custody battle between a married couple and a gestational surrogate. In the second case, a New York couple engaged in divorce proceedings battled for custody of twin daughters who had been gestated by the wife, but were the genetic offspring of the husband and an ova donor.

A. Johnson v. Calvert

In Johnson v. Calvert all three parties predicated their parenthood on a biological connection to one baby. Crispina and Mark Calvert, married for several years, wanted to have a baby. Although a hysterectomy had made it impossible for Crispina to gestate a fetus, the surgery had not interfered with her body's production of ova. Anna Johnson, a co-worker in the hospital in which Crispina was employed as a nurse, volunteered to serve as a gestational surrogate for the Calverts. The couple and Johnson agreed that Anna would gestate and bear a baby produced from Crispina's ovum and fertilized in vitro by Mark's sperm. Johnson agreed that at the baby's birth she would relinquish "all parental rights" to Mark and Crispina. In return, the Calverts agreed to pay Johnson $10,000 in a series of installments and to pay for a $200,000 life insurance policy on Johnson's life.

In January, 1990, an embryo produced from the Calverts' gametes was implanted in Johnson's uterus. Johnson's pregnancy was soon confirmed. In July, during the seventh month of her pregnancy, Johnson sought a $5,000 payment from the Calverts ahead of schedule, threatening to keep the baby if the payment was not forthcoming. In response, the Calverts sued, seeking a declaration of their parental rights.

be entered by unmarried couples or by unmarried single people who use their own gametes or donated ova and sperm.


29. Anna Johnson, unmarried and the mother of a young daughter, was a vocational nurse in the same hospital in which Crispina Calvert worked as a registered nurse. Karen H. Rothenberg, Gestational Surrogacy and the Health Care Provider: Put Part of the "IVF Genie" Back into the Bottle, 18 LAW, MED. & HEALTH CARE 345, 345 (1990).

30. Anna J., 286 Cal. Rptr. at 372.

31. Id.

32. Id. at 372-73.
1. The Decisions

All three California courts that heard the case held for the Calverts, though on remarkably different grounds. The trial court, characterizing Johnson as a "gestational carrier," but a "genetic hereditary stranger" to the child, identified the "family unit" by reference to the "shared genes" among the baby, Crispina, and Mark. Judge Parslow for the court said: "In this case we have a family unit, all genetically related. You have Mark Calvert, Crispina Calvert and their child they call Christopher, three people in a family unit."3

The appellate court affirmed, relying on state statutes that regulated the law's recognition of the parent-child relationship. Thus, the appellate court recognized Crispina Calvert as the baby's natural mother because blood tests identified genetic similarities between her and the baby but not between the baby and Johnson. However, unlike the trial court, the appellate court explicitly acknowledged the existence of other rational schemes for identifying a baby's mother in such cases.36

The California Supreme Court also affirmed the decision to declare Crispina and Mark Calvert Christopher's mother and father, but on grounds that differed from those of either the trial court or the appellate court. The court found that the state's statutory scheme offered virtually no help in identifying the real mother in this case. The statutory provisions on which the appellate court relied had been promulgated in 1975, about a decade before most legislators had even contemplated a need to regulate gestational surrogacy arrangements. Thus, the state supreme court recognized that both Anna and Crispina "adduced evidence of a mother and child relationship as contemplated by the Act." Concluding that neither biology nor law provided adequate criteria for selecting between Crispina and Anna, the court skirted both areas in its analysis.

Moreover, the court refused to accept the plea of amicus curiae that both women be denominated "mother." Under California law, the court proclaimed, there is "only one natural mother, despite advances in reproductive technology rendering a different outcome biologically possible." For this conclusion,
the court offered only enough explanation to suggest that, if needed, the traditional conception of family would be invoked to justify legal determinations about the form of family.\(^4\)

In identifying the baby's mother, however, the court rejected both statutory regulation and biological truth in favor of "the parties' intentions as manifest in the surrogacy agreement."\(^4\) In the court's view, the parties' competing biological and statutory claims proved indeterminate. The court therefore concluded:

> [A]lthough the Act recognizes both genetic consanguinity and giving birth as means of establishing a mother and child relationship, when the two means do not coincide in one woman, she who intended to procreate the child—that is, she who intended to bring about the birth of a child that she intended to raise as her own—is the natural mother under California law.\(^3\)

In relying on intent to establish parentage, the court bypassed the state's statutory scheme as well as most of the arguments presented by the parties in their briefs to the court. Both the briefs of Anna Johnson and those of Crispina and Mark Calvert focused on and elaborated Anna's and Crispina's respective biological claims to maternity. Almost all of the many briefs written in this case were punctuated by each side's insistence that the biological facts conclusively demonstrated that side's parentage. Each woman claiming to be the baby's mother stressed the biological roots of her own claim to maternity. And, in turn, each party discussed and then dismissed as inconclusive the biological claims presented by the other.

2. Invocations of Biological Truth

In premising her parenthood on biological truth, Anna Johnson argued that nature inevitably affects a bond between a woman and a baby that she gestates and bears, and that the preservation and development of that bond establishes the mother-child connection. She further argued that the link between a woman and the baby she gestates is more significant from a biological perspective "than [that] of the genetic donors."\(^4\) The Calverts also stressed their

\(^{41}\) In a footnote, the court acknowledged the existence of families with more than two parents, created as a result of divorce, but distinguished those families from that at issue in the present case. In finding the family in the case to consist of Mark and Crispina Calvert and their new-born son, the court referred to the Calverts' genetic connections to the child as well as to their parental intent. "The Calverts," the court wrote, "are the genetic and intending parents of their son and have provided him, by all accounts, with a stable, intact, and nurturing home." \(\text{Id. at 781 n.8.}\)

\(^{42}\) \(\text{Id. at 782.}\)

\(^{43}\) \(\text{Id.}\)

\(^{44}\) Petitioner's Opening Brief at 8, Johnson v. Calvert, 5 Cal. 4th 84, 851 P.2d 776 (Cal. 1993) (No.
biological link to the child as conclusive of their parentage and of Anna's essentially incidental role in the creation of their child. They argued that the embryo, produced from their gametes and fertilized in vitro, was "already defined [as] a new human individual" before it was implanted in Johnson's uterus. Thus, in the Calverts' presentation, Johnson could not premise her maternity on biology since, as a biological matter, the embryo—and thus the complete being that was their child—existed before uterine implantation.

The briefs as a whole demonstrate the remarkable flexibility with which the society and the law can invoke and interpret biological definitions of reproduction. Once assumed to represent the essence of natural parentage, genes can be defined variously and may, among other things, represent an almost incidental donation to the woman who maintains a "blood relationship" with a baby she has gestated and to which she has given birth. Similarly, gestation, understood for so long as the symbol and essential instance of biological maternity—as the inviolable biological fact that distinguished maternity from paternity and that made biological maternity synonymous with social and legal maternity—can now be reinterpreted as creative of a social rather than biological connection between a woman and the baby she gestates and bears.

Moreover, the briefs in Johnson challenge—and affirm—a wide array of meanings that society presently attaches to the terms that define human reproduction—terms such as fertilization, embryo, fetus, blood relationship, and gene. Despite growing indications, as the case moved through the California courts, that biological truths would prove conclusive for neither side, each side continued vehemently to argue that its biological connection to the child should be determinative.

a. The Symbols of Reproduction

Each prospective mother argued that her connection to the child was more substantial than the connection of the "other mother" in the sense that her connection was more real. Crispina Calvert and Anna Johnson each tried to distinguish the real, enduring relationship (her own) from the more ephemeral one. Each defined her relationship to the child in terms of an inexorable

S023721) [hereinafter Johnson Opening Brief to Supreme Court of California].
45. Respondents' Brief at 23, Anna J. v. Mark C., 286 Cal. Rptr. 369 (Ct. App. 1991) [hereinafter Calvert Brief to Court of Appeal].
46. Id.
48. See Dolgin, supra note 36, at 651-63 (analyzing Supreme Court distinctions between biological maternity and biological paternity in cases concerning legal rights of unmarried biological fathers).
49. Judge Parslow, for the trial court in Johnson, described Anna Johnson's role as "analogous to that of a foster parent providing care, protection and nurture during the period of time that the natural mother, Crispina Calvert, was unable to care for the child." Johnson v. Calvert, No. X-633190, slip op. at 5 (Cal. App. Dep't Super. Ct. Oct. 22, 1990).
biological connection. The women argued that their own biological connection was more significant, either qualitatively (e.g., more natural) or quantitatively (e.g., involving a greater investment of pain, time, or energy). Yet, for both sides, the shadow of the other's biological connection to baby Christopher, however fleeting, made it impossible to rely upon traditional assumptions about the substantial connection that links mothers to their children.

The power of the claim that biological mothers could once make in asserting their maternity depended on the exclusivity of that claim. In cases occasioned by reproductive technology, assertions of biological maternity no longer determine social maternity. Once the traditional assumptions about maternity—and blood relations generally—are challenged by novel reproductive possibilities, the entire scheme within which those relations once made sense collapses.

In the wake of that collapse, the old terms continue to seem important—even momentarily conclusive. In fact, the frame within which their conclusiveness was once assured has eroded. Consequently, the parties in Johnson, and in other similar cases, continue to argue back and forth, each asserting her special claims to maternity in light of traditional understandings of motherhood. But as the arguments proceed, each side's claims are confused with, and ultimately become substitutable for, those of the other. Thus, the claims of both sides flounder. Moreover, the respect once accorded biological truth as an arbiter in defining familial relationships necessarily diminishes.

In Johnson, the differences between, and comparative significance of, genetic and gestational contributions to the production of a child defined the terms of the debate. In other cases, the terms of the debate are differently defined. In cases occasioned by reproductive technology, the debate about the significance and implications of particular biological facts becomes a debate about something even larger. Ironically, Johnson and other cases like it question the fundamental relevance of biological facts to the definition of family relationships. Consequently, such cases almost inevitably enter the contemporary debate about the changing meaning and implications of family in American society. A more specific analysis of the controversies regarding biological facts in Johnson, as they arose between the parties, and as they affected the three courts that rendered opinions, reflects the wider debate.

b. The Symbols of Maternity in Johnson v. Calvert

Several sorts of contentions, more or less expressly articulated by the parties, constituted the principle themes presented to the courts in Johnson. Among these were conflicting contentions about the meanings of mother and

50. See, e.g., McDonald v. McDonald, 608 N.Y.S.2d 477 (N.Y. App. Div. 1994) (holding mother who did not provide eggs for in vitro fertilization was nevertheless "parent" or "natural mother" of resulting twins); see infra notes 92-119 and accompanying text (analyzing McDonald).
parent, the particular meaning of the term "blood mother," and conflicting contentions about the role that choice can or should play for society and the law in determining parentage. The parties considered each of these contentions through reference to the comparative significance of genetic and gestational contributions to the creation and development of a baby.

Significantly, none of the parties in Johnson argued that familial, including maternal, relationships should be determined without reference to biological connection. In fact, either side could have argued that culture, not nature, should determine parentage. Johnson, for instance, might have emphasized that based on her social and psychological bonds with the baby, forged in fact during the long months of gestation, she, and she alone, had already psychologically become a parent—the only parent figure in the young child's life. The Calverts, in turn, might have presented (as the supreme court did) the surrogacy contract and the parties' pre-conception plans as conclusive of the child's parentage.\textsuperscript{51}

Instead, each side premised its claim to parenthood on the unique significance of its biological connection to the baby. The Calverts argued that a person is the consequence of his or her parents' combined gametic material, and that, accordingly, at the fertilization stage of development, the identity of a new human individual has already been defined.\textsuperscript{52} The Calverts defined Anna Johnson's role as essentially indistinguishable from that of the laboratory where the egg was fertilized and developed before implantation in Johnson's uterus. They declared:

From the moment that sperm successfully penetrates the ovum and impregnation is achieved a new generation of human exists. It is within the care and custody of medical experts that in the laboratory provide the environment in which the embryo grows and matures until it is ready for implantation into the uterus. These laboratories and experts sustained the embryo during a time when it could not survive in utero, at a time when Anna Johnson could not provide the environment and care needed.

Likewise, Crispina Calvert could not provide the uterus with which to care for the embryo, Anna Johnson could. She was entrusted with the embryo's care until it developed and matured and Crispina and Mark Calvert were able to provide the proper environment and care.

It cannot rationally be said that there is a distinction between paying for the care of the ovum by the doctors and

\textsuperscript{51} Although the Calverts obviously argued for the legality and enforceability of the surrogacy contract entered into between themselves and Anna Johnson, even that argument was embedded in the discussion of the parties' comparative biological claims. See Calvert Brief to Court of Appeal, supra note 45, at 22-26.

\textsuperscript{52} Id. at 23.
Thus, the Calverts suggested that while Anna Johnson's role may have been biological, it was not the role of a biological mother.

Johnson, in response, took issue with the Calverts' (and the trial court's) understanding of biological reproduction. "There is no foundation in science," she declared in presenting her case to the appellate court, "to contribute to the conclusion that an actual birth mother is not a natural Biological parent." Johnson defined her psychological relationship to the child as a natural consequence of her having gestated and given birth to the baby. She further argued that because her biological maternity (unlike that of Crispina Calvert) entailed a relationship to the baby, her gestational role, unlike the Calverts' genetic role, reliably predicted that she would not just be a mother but that she would be a good mother—a better mother—to the baby.

In presenting her case to the appellate court, Johnson quoted extensively in her brief from the testimony of Dr. Michelle Harrison, a psychiatrist who had served as an expert for Johnson at trial. "The baby in Anna Johnson's womb," Dr. Harrison asserted, "is not the same baby that would have been in the womb of Mrs. Calvert. Therein lies the total misconception." That misconception, Dr. Harrison explained, was that "a baby is made from DNA." Harrison agreed without qualification when asked at trial whether it could be said that "the biological contribution of the birth mother to the creation of the baby is greater than the biological contribution of the commissioning parents who donate egg and sperm." Harrison further characterized Johnson's gestational bond to the baby as the bond of "love." She continued:

In my interview with Ms. Johnson, she talked tearfully about the experience of nursing the baby . . . of her belief that he recognizes her by odor, and when she has him he roots to

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53. Id. at 26.
55. Dr. Harrison interviewed Johnson about her relationship to the baby and her desire to be that baby's mother.
56. Johnson Opening Brief to Supreme Court of California, supra note 44, at 8.
57. Id.
58. Johnson Opening Brief to Court of Appeal, supra note 54; at 5-xii (quoting transcript of testimony offered at trial, R.T. Vol. III p. 579)
59. Id. at 5-ii (quoting from transcript of testimony offered at trial, R.T. Vol. III p. 483).
60. When Harrison was later asked to explain the assertion that the baby recognized Johnson "by odor," she responded:

There are actually some scientific studies demonstrating newborn's familiarity with the odor of the mother they have been nursed. And Anna in this case described how it felt to her when he began to root. In other words, when she would pick him up after many days of not seeing him and he would begin to root for her breast.
nurse since she has continued to nurse even during the visitations. She believes that he feels safe and falls asleep easily in her arms . . . .

Finally, Johnson's lawyer asked Harrison what "make[s] a woman a mother." She answered:

What makes her a mother is her emotional and physical work in the nurturing of the fetus, and the way in which . . . her body builds the baby. Her body brings it oxygen, her body takes away waste, her body protects it both . . . from bacteria [and] from external assault.

Harrison's testimony answered the Calvert's claim to genetic exclusivity and allowed Johnson to argue that her biological connection to the baby, unlike that of the Calverts, encompassed, and thus guaranteed, the fact and the success of her psychological and social maternity. Johnson proclaimed that she was the baby's social mother because she was the gestational mother. In short, she argued that her social relationship to the child was an inevitable result of a natural process and, therefore, superior to any relationship the Calverts might effect with the child.

(1) What is a "Blood" Mother?

In this broad debate over the relationship between biological facts and natural motherhood, the parties engaged in several subsidiary controversies. For instance, Anna Johnson and Crispina Calvert each presented herself to the court as the baby's blood mother. Traditionally, the term "blood mother" has been synonymous with "real mother"; for centuries blood has been understood, at least metaphorically, as the essential substantial connection between a mother and her child. In the post-Mendelian era, at least until recently, the terms

Id. at 5-v (quoting transcript of testimony offered at trial, R.T. Vol. III p. 491).
61. Id. at 5-iv (quoting transcript of testimony offered at trial, R.T. Vol. III p. 491) (footnote added).
62. Id. at 5-vi (quoting transcript of testimony offered at trial, R.T. Vol. III p. 496).
63. Id. Harrison further declared:

[T]he mother's body in a sense relabels the embryo as being the same, because normally the body rejects foreign tissue. And so when a woman becomes pregnant there is an immunologic process that goes on by which the embryo gets labeled as being the same as her own tissue so that she doesn't reject it. So that her body takes this in as her, her body treats this as though it were the same tissue as the tissue of her hands or her heart or anything else. And as that process goes on, she also incorporates the baby into her psychological development. She becomes two people, both herself and the baby within her.

Id. (quoting transcript of testimony offered at trial, R.T. Vol. III p. 497).
64. That Crispina Calvert was married to the baby's genetic father was of great significance to the way in which the case was presented and decided. See Dolgin, supra note 44, at 687 (considering importance of social facts to interpretation of biological facts in Johnson).
65. The advent of gestational surrogacy makes it possible to argue that a child's genetic mother and blood mother are two different people. The genetic mother, according to this argument, is the ovum donor;
“blood mother” and “genetic mother” have generally been understood to be synonymous. It has been assumed that the real relationship between a woman and her child results not from a literal contribution of maternal blood to a fetus, but from a woman's genetic contribution to the embryo.

In a curious twist, the advent of gestational surrogacy, along with other technological possibilities such as DNA blood-testing, once again encourages people to understand blood literally, as a substance shared between a woman and baby and as an indicator of fetal-maternal identity. Thus, each woman was able to present herself as the baby's blood mother. Presumably, in characterizing herself as the blood mother, each woman intended to draw on the power traditionally associated with the metaphoric attribution “blood mother.” Each woman used scientific and legal discourse to show that her maternity could conclusively and uniquely be premised on similarities between her blood and that of the child.

The Calverts invoked several provisions of California law that together allowed a child's genetic mother to be declared the child's legal mother. Focusing on the blood testing which can be used to establish genetic relationships, they hypothesized:

Assuming this, or for that matter, any child were confused with a number of other children in the hospital nursery. Assuming further that no other identifying data is available. Could then Anna Johnson prove her maternity? Indeed, only Crispina Calvert could, by blood tests, prove her maternal connection to the child.

The Calverts also urged that the law recognize the continued importance of preserving “human blood lines.” The “social value” of human blood lines, they declared, “is incalculable, for it is through our progeny that we perpetuate culture, traditions and history.”

The Calverts specifically denied that there was a blood relationship between Johnson and the baby. Presumably, the Calverts intended the term “blood relationship” to serve as a synonym for “genetic relationship.” Anna

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66. The provisions in question were found in the Uniform Parentage Act, enacted in California in 1975 as Part 7 of Division 4 of the California Civil Code §§ 7000-7021 (West 1983) (cited in Anna J. v. Mark C., 286 Cal. Rptr. at 373-74) and in the state's Evidence Code § 621. The statute was repealed in 1992.

67. Calvert Brief to Court of Appeal, supra note 45, at 41.

68. Id. at 41.

69. Id. at 49.

70. Id. at 51. In response to Johnson's claim that her partial Indian heritage made the Indian Child Welfare Act applicable to the case, the Calverts asserted that the baby "has no blood relationship to Anna Johnson." Id. That Act requires notification to the relevant tribe should an Indian child be made available for adoption. 25 U.S.C. §§ 1903-1919. For the Calverts' argument against the relevance of the Indian Child Welfare Act to this case, see Calvert Brief to Court of Appeal, supra note 45, at 49-52.
Johnson, in turn, presented herself as the child's blood mother. In doing so, she relied on her gestational connection to the baby, referring to the “mixing of blood between mother and baby” that occurs through the placenta and at birth. Dr. David Chamberlain, who testified for Johnson at trial, described Johnson and the baby as “intimately attached and biochemically related.” In the language of medical science, he described that attachment concretely:

> There is a flooding of catecholamines. The mother's blood stream carries adrenal hormones through the placenta to the baby's blood. "Virtually everything that the mother has going on in her body and blood stream goes directly through to the baby." This is absolutely mainstream medical thinking.

Finally, in characterizing herself as the baby's blood mother, Johnson asserted that she too could claim parenthood on the basis of blood tests. In response to the hypothetical the Calverts had presented to demonstrate their exclusive parentage, Anna Johnson maintained:

> Respondents [the Calverts] claim that it would be impossible for Anna Johnson to prove her maternity if the hospital nursery had mixed up the babies in the hospital. Not only was this issue never litigated or proved at trial, but the premise, once again is a total falsehood.

> Dr. Klaus, Dr. Call, Dr. Chamberlain and Dr. Harrison all agreed that the baby was born with Anna Johnson's antibodies and hormones. Testing the antibodies and hormones could therefore prove maternity and clearly identify the baby.

Thus, both the Calverts and Anna Johnson used expert testimony presenting the biological facts of maternity to persuade the courts that Crispina or Anna, respectively, should be exclusively identified as Christopher's blood mother—and therefore as his real mother.

In the end, the parties' claims about the identity of the baby's blood mother prove inconclusive, as do their claims about the comparative significance of Anna's gestational, and Crispina's genetic, contribution to the baby's development. Indeed, the parties' contentions almost neutralize each other, so

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71. Johnson Reply Brief to Court of Appeal, supra note 47, at 8.
72. Id. at 6-7 (citing transcript R.T. Vol. III p. 621).
73. Id. at 7 (quoting Dr. Chamberlain's trial testimony) (citations to transcripts omitted).
74. Supra text accompanying note 68.
75. Drs. Klaus, Chamberlain, and Harrison testified at trial as experts for Anna Johnson; Dr. Call testified as an expert for Crispina and Mark Calvert.
76. Johnson Reply Brief to Court of Appeal, supra note 47, at 8 (citations to transcripts omitted).
that the identification of a single "real" mother on the basis of the biological facts and arguments presented becomes largely a matter of social choice.

The obvious challenge such controversies pose to the biological facts themselves—and, more importantly, to the relevance of biological facts altogether in defining the family and characterizing familial relationships—encourages new interpretations of human reproduction and its social implications. Two further examples from the Johnson case illustrate this point:

(2) When Is a Mother a Father?

Anna Johnson responded to the Calvert's presentation of the biological facts by reinterpreting the social implications of those facts so as to define the Calverts, or at least Crispina Calvert, as biologically—and thus presumably also socially—abnormal. Anna acknowledged the importance of Crispina's genetic contribution, but re-defined that contribution to be something other than that of a mother.

In doing this, Johnson relied on a line of Supreme Court decisions concerning the paternal rights of unwed fathers.77 In those cases, the Court distinguished paternity from maternity, asserting that the relationship between a mother and her child is developed and cemented during the gestational period and gives rise automatically to a parent-child relationship, while the connection between a father and his child must be actualized in an ongoing social relationship in order to merit legal recognition.78 For "natural fathers," proclaimed Justice Stevens, "the biological connection ... offers ... an opportunity that no other male possesses to develop a relationship with his offspring." In order to enjoy legal recognition of his paternal role, the Court continued, the father must "grasp" the opportunity provided by his biological link to the child.80 Extrapolating the Court's distinction between biological maternity and biological paternity, Johnson asserted that Crispina resembled a biological father more than a biological mother.

Dr. Harrison, testifying as an expert for Johnson at trial, declared:

[I]t's really I think more like Anna is the mother and the Calverts are the other half, the other interest. Like as I say,

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78. See Dolgin, supra note 36, at 647-72 (analyzing implications of Supreme Court decisions in unwed father cases).
80. Id.
again, much more like a father, and again, that’s not—I mean, our language is gender related so it has implications which I don’t mean in this sense, but they are the genetic part of the child.82

Accordingly, Johnson argued: “Both appellees stood in the shoes of an expectant father, as each provided genetic material which impregnated Appellant.”83

The argument illustrates the remarkable flexibility with which the symbols of human reproduction can be interpreted. By elaborating the implications of a rather traditional association between gestation and maternity and between a seminal (genetic) donation and paternity, Johnson defined a genetic mother as more like a father than a mother. Johnson in effect suggested that she be recognized as the baby’s mother—the parent for whom biology both encompasses and assures an ongoing social connection with the child—and that the Calverts, together, be recognized as the baby’s “father.” Under this reading, Crispina is either defined as incidental (since the child clearly has a father already) or as perverse, with the lurking suggestion that a woman so distorted should not be recognized as the mother of a child who has a normal mother already at hand.

(3) The Possibility of Two Biological Mothers

The American Civil Liberties Union’s suggestion that the law find not two fathers but two mothers, provides yet another example of the far-reaching reinterpretation of human reproduction that gestational surrogacy arrangements can suggest. The ACLU, writing as an amicus curiae, declared that Anna and Crispina should each be recognized as mother.84 The courts, anxious to preserve a more traditional view of family, rejected the notion.85

Certainly, the courts could have identified three biological parents, including two biological mothers. Had they been determined to define the biological, rather than the contractual or social, parents as the baby’s legal parents, then a conclusion that both Anna and Crispina were biological mothers would have been quite plausible—even perhaps inevitable. While none of the courts accepted this conclusion, each court’s reasoning allowed for such a possibility. Judge Parslow for the trial court declined “to split this child emotionally between two mothers.” He explained: “I’ve got a mother and father genetically related to the child on one side of this equation. I believe he should be raised exclusively by the Calverts as natural parents.”86 Thus

82. Id.
83. Id. at 46.
84. Johnson v. Calvert, 19 Cal. Rptr. 2d 494, 499 n.8.
85. Id.
86. Johnson, No. X 63 31 90, slip op. at 14.
Judge Parslow appears to have recognized the possibility of finding two mothers, but not two natural mothers.\(^7\) Expressly relying on statutes, rather than on an interpretation of biological facts, the appellate court found Crispina to be the only natural mother. However, the decision leaves open the possibility that under a different statutory scheme, or under a different interpretation of the existing statute, Anna, might be defined as the child's natural mother. This implies, in theory at least, that both women could be named as mothers.

The state supreme court directly addressed the possibility of two biological mothers,\(^8\) declaring that both women "have adduced evidence of a mother and child relationship as contemplated by [California law]. Yet for any child California law recognizes only one natural mother, despite advances in reproductive technology rendering a different outcome biologically possible."\(^9\) The court only hinted at the reasoning behind this declaration. Recognizing the growing incidence of "multiple parent arrangements" in the context of divorce, the court concluded that

\[\text{[N]}\text{o compelling reason [exists] to recognize such a situation here.}
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The Calverts are the genetic and intending parents of their son and have provided him, by all accounts, with a stable, intact, and nurturing home. To recognize parental rights in a third party with whom the Calvert family has had little contact since shortly after the child's birth would diminish Crispina's role as mother.\(^{90}\)

The court's recognition of Crispina Calvert's exclusive maternity rested on some combination of biological, social, and contractual factors and cannot be read to imply that, in the eyes of the supreme court, Anna Johnson presented no viable claim to biological maternity.

Even the Calverts, who had argued consistently for their exclusive biological parentage, responded to the ACLU's recommendation by asserting

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\(^8\) Johnson v. Calvert, 851 P.2d 776, 781.

\(^9\) 851 P.2d at 781. The court's assertion is reminiscent of one made several years earlier by the United States Supreme Court in a case that tested the constitutionality of a California statute providing that "the issue of a wife cohabiting with her husband, who is not impotent or sterile, is conclusively presumed to be a child of the marriage." Michael H. v. Gerald D., 491 U.S. 110, 115 (1989) (Scalia, J.) (plurality opinion) (citing CAL. EVID. CODE § 621(a) (West Supp. 1989)). The statute, which was repealed in 1992, actually stated that "the issue of a wife cohabitating with her husband, who is not impotent, is conclusively presumed to be legitimate." CAL. EVID. CODE § 621 (West 1966 & Supp. 1994). Under the statute, biological fathers were given no opportunity to rebut the marital presumption. See CAL. EVID. CODE § 620 (West 1994) (establishing "conclusive presumptions"). In Michael H., Michael sought paternity of his biological child, whose mother was married to Gerald. Under the statute, the court could not recognize Michael's paternity. 491 U.S. at 113-15. In his plurality opinion, Justice Scalia declared that "California law, like nature itself, makes no provision for dual fatherhood." Id. at 118. By the time Johnson was heard, it had become far less certain that nature was in accord with the law on this point. See Dolgin, supra note 36, at 668-70 (analyzing Justice Scalia's uses of the term "natural" in Michael H.).

\(^{90}\) 851 P.2d at 781 n.8.
that a judicial finding of two mothers (or three parents) would ill serve the child's best interests. That contention averts, but does not gainsay, Anna Johnson's claim to biological maternity.

In fact, the unanimity with which the courts rejected the possibility of a three-parent family is at least partly explained by the threat such a possibility poses to traditional understandings of family, apart from any accounting or interpretation of the biological facts. In divorcing families, step-parents may be understood clearly as social parents, related to the children only through marriage to one of the biological parents. The increasing incidence of divorce and step-parent families in the last several decades has itself threatened the traditional family; but that threat is understood as one of social change rather than of changes in the very nature of things, and therein differs from the threat to traditional notions of the family posed by gestational surrogacy cases. The latter at once directly challenges traditional assumptions about both the biological correlates of parentage and traditional assumptions about the parameters of family.

c. The Biological and Social Facts of Family

To the extent that assumptions about biological facts continue to anchor society's and the law's conceptions of what families are, shifts in the meaning or use of those facts more seriously threaten traditional understandings of the family than do shifts in what appear to be social patterns. Social patterns can be altered, and later rejected; but biological facts, Western society has long held, reflect the very nature of things and thus pose seemingly secure limits to the definition of family. Gestational surrogacy cases present a particularly dramatic challenge to that presumption—and a forceful symbol of the traditional order's demise.

Gestational surrogacy simultaneously suggests both a new form of family and a new understanding of the biological facts through which shifts in social patterns might be understood and assimilated. As a result of this simultaneous shift in our understanding of the social and biological facts of family, the possibilities for new forms of family multiply accordingly. Ultimately, given the astonishing range of options for reinterpreting the family that gestational surrogacy suggests, the Johnson case is remarkable for the consistency with which both parties invoked traditional views of family in arguing their

91. The Calverts declared:
   The court [below] here found the best interests of the child would be served by the judgment entered declaring the Calverts to be the legal parents. And further, the court found that to inject Appellant [Johnson] into an intact family unit with a parental role would not be in the best interests of the child.

respective cases: Each woman claiming to be the child’s only mother premised her maternity on her unique biological connection to the baby.

B. McDonald v. McDonald

A New York case decided in 1994, McDonald v. McDonald offers a comparative frame within which to examine anew the various claims about the significance (and comparative significance) of the biological and social parameters of parenthood asserted by the courts and the parties in Johnson. A divorce action filed in New York in 1990, McDonald resembles Johnson in that it too involved a dispute over the parentage of children born to a gestational mother. In McDonald, however, the woman who intended from the start to be the social mother provided the gestational—but not the genetic—component of biological maternity. The case further differs from Johnson in that the dispute in McDonald was between a man (a father) and a woman (a mother) rather than between two women (or rather, one woman and another woman together with her husband).

1. The Decision

The McDonalds, both doctors, married in 1988. Unsuccessful at conceiving a child, the couple sought medical assistance from an infertility clinic. Eventually, an embryo was created through the use of donor eggs, fertilized by Robert McDonald’s sperm. The embryos were implanted in Olga’s uterus, and in February, 1991 twin girls were born.

Before the birth of the children, Robert filed for divorce. He sought sole custody of both children. As described by a New York appellate court, Robert argued that he, as the “only genetic and natural parent available,”

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93. Id. at 478.
94. Robert J. McDonald provides a very different story of the case, both in his briefs and supporting papers and in two telephone interviews (July 7 and 8, 1994) (notes of interviews on file with author). According to Robert, the case involved massive fraud on the part of his wife Olga and the infertility clinic. In the first place, Robert asserts that he had been told originally that the babies were produced from donor sperm and that his own sperm were probably inadequate to fertilize an egg. Brief for Plaintiff-Appellant, Robert J. McDonald at 8-9, McDonald v. McDonald, 608 N.Y.S.2d 477 (1994) (No. 91-08907) [hereinafter McDonald Appellant Brief]. Moreover, Robert asserts that Olga had initially informed him that her pregnancy had resulted from the fertilization of her own eggs. In fact, the pregnancy resulted from the fertilization of donor egg. Id. at 6. At present, Robert continues his efforts to discover the identity of the donor whose eggs, once fertilized with his sperm, resulted in the conception of the twin girls involved in the case. The appellate division denied Robert’s request that the medical records pertaining to the in vitro fertilization and implantation be made available to him. The court declared:

Clearly, resolution of the custody issue in the instant case does not require revelation of the wife’s medical records concerning her in-vitro fertilization. . . . Since any information regarding the egg donor is not relevant to the issue of custody in this case, that branch of the husband’s motion was properly denied.

McDonald, 608 N.Y.S.2d at 481.
95. McDonald Appellant Brief, supra note 94, at 3.
brought the superior claim to parentage. Accordingly, he contended that Olga, as a gestational but not a genetic parent, should play no custodial role as long as a genetic parent was available to do so. The appellate division disagreed and affirmed the trial court's grant of custody to Olga.

From a biological perspective, the facts in *McDonald* are a mirror image of those in *Johnson*. The two cases differ in that, in *McDonald*, the intending mother was the gestational but not the genetic mother. In contrast, Crispina Calvert was Christopher's genetic but not his gestational mother. Almost reflexively, courts and others, including the media, have characterized the role of the gestational mother entirely differently in the two sorts of cases. Anna Johnson has been called a gestational surrogate and the case has been referred to as a gestational surrogacy case. In contrast, Olga McDonald has been described as a gestational mother, or as a mother who used donor eggs to conceive her child. In either case, she has been described as a mother, and *McDonald* has been characterized as an “ovum donor” case. The California Supreme Court in *Johnson* justified those differences by concluding that, in such cases, the intentional mother is the natural (and thus legal) mother. Some commentators have posited that the class differences that often exist between intentional mothers and gestational surrogates have affected the assumptions society and the law bring to such cases. On the other hand, class differences do not generally distinguish intentional/gestational mothers from ovum donors.

96. When the appellate division heard the case, the trial court had not granted a divorce. Thus the case was heard pendente lite. As of early July, 1994, a divorce still had not been ordered. Telephone Interview with Donna Harrison, Esq., attorney for Robert J. McDonald (July 7, 1994).

97. The court affirmed the trial court's order. *McDonald*, 608 N.Y.S.2d at 481. The court ordered that Olga retain custody temporarily, pending resolution of the custody dispute by the trial court. *Id.* at 480.

98. *Id.* at 479.

99. *Id.* at 480.

100. One study of 41 surrogate mothers found that 29% were receiving welfare or reported no income at the time of insemination. The mean annual income of the remaining 71% of the women in the study sample was $15,709. Nancy E. Reame & Philip J. Parker, *Surrogate Pregnancy: Clinical Features of Forty-four Cases*, 162 AM. J. OBSTETRICS & GYNECOLOGY 1220, 1221 (1990). Helena Ragone, in an ethnographic analysis of surrogate mothers and intending couples, describes the two groups as differentiated along class lines but reports that it "proved to be extremely difficult to persuade informants, either surrogates or couples, to discuss these differences in a forthright manner." *HELENA RAGONE, SURROGATE MOTHERHOOD: CONCEPTION IN THE HEART* 91 (1994). Ragone suggests that reluctance may be part of a more general attempt on the part of participants in surrogacy programs to downplay aspects of surrogacy that may be perceived as problematic. *Id.*

101. See, e.g., Katha Pollitt, *When is a Mother Not a Mother? Surrogate Mother Case of Anna Johnson*, 251 THE NATION 825 (1990). Class differences probably do not distinguish intentional/gestational mothers from ovum donors in the majority of cases. Many anonymously donated ova are provided by women who are themselves undergoing infertility treatments. As a group such women are at least moderately well off. Moreover, the very issue of class differences between gestational/intentional mothers and ovum donors is usually masked for the parties because the identity of ovum donors, unlike that of gestational surrogates, is usually not revealed to the intending parents. Similarly, the ovum donor generally will not know the identity of the intending parents.

102. Women themselves undergoing infertility treatments are sometimes encouraged to donate ova in exchange for reduced in vitro fertilization fees. This practice has been widely reported at hospitals in Canada. Robin Harvey, *Hospital Cuts Fees for Human Egg Donors*, THE TORONTO STAR, Dec. 19, 1994,
In fact, the appellate court in *McDonald*, like the state supreme court in *Johnson*, found the intending mother to be the natural mother.\textsuperscript{103} Relying expressly on the decision of the California Supreme Court in *Johnson*, the *McDonald* court determined Olga to be the natural mother because she was the intentional mother. *McDonald* relied on a footnote in *Johnson* in which the court elaborated the implications of its decision that in cases of split biological maternity, the woman whose “acted-on intention” caused the child to be conceived and born should be named the child’s natural, and thus only, mother. The *Johnson* court explained: “Thus, under our analysis, in a true ‘egg donation’ situation, where a woman gestates and gives birth to a child formed from the egg of another woman with the intent to raise the child as her own, the birth mother is the natural mother under California law.”\textsuperscript{104} Relying on that characterization, the *McDonald* court concluded:

In the case at bar, we have a true ‘egg donation’ situation, and we find the reasoning of the Supreme Court of California on this issue to be persuasive. Accordingly, the Supreme Court, Queens County, correctly held that in the instant ‘egg donation’ case, the wife, who is the gestational mother, is the natural mother of the children, and is, under the circumstances, entitled to temporary custody of the children with visitation to the husband . . . .\textsuperscript{105}

2. The Symbols of Reproduction

Robert, in claiming parentage and asking for sole custody of the children, relied largely on his genetic connection to the babies and the absence of a comparable connection between Olga and the twins. He described himself as “the sole genetic parent among the parties” and Olga as a “genetic stranger” to his children.\textsuperscript{106} In large part, his arguments parallel the arguments asserted

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at A2; Ban on Sale of Human Sperm, Eggs Sought, THE TORONTO STAR, Dec. 14, 1994, at A7. Health Minister Diane Marleau has proposed legislation banning the practice. *Id.*

103. *McDonald*, 608 N.Y.S.2d at 480. Arguably, the conclusion of the California Supreme Court in *Johnson*, that the intentional mother was the “natural” mother, followed from parts of California's statutory provisions that regulate the identification of a child’s “natural” parents even though those provisions clearly were not formulated with gestational surrogacy in mind. In *McDonald*, however, the conclusion that Olga McDonald was the twins’ “natural” mother was not compelled by state statutory law. *Id.*

104. *Id.* (quoting *Johnson*, 851 P.2d 776, 782 n.10 (1993)).

105. *Id.* (citation and footnote omitted).

106. *McDonald* Appellant Brief, *supra* note 94, at 18-19. At the center of Robert’s arguments to the court was the “fraudulent conduct” allegedly committed by Olga and the fertility clinic in which she was treated and which performed the in vitro fertilization that led to the conception of the babies. *Id.* at 27; see Letter from Robert J. McDonald to Office of Professional Medical Conduct, New York State Dept. of Health (July 25, 1991) (on file with author). Robert declared, for instance, that the misrepresentations he claimed Olga made about the conception of the babies spoke to the nature of Olga’s character and should preclude Olga from serving as a custodial parent, especially since he, a “genetic” parent, was available and anxious to become the sole custodial parent. McDonald Appellant Brief, *supra* note 94, at 19-20, 27.
by the Calverts. However, unlike the Calverts, who presented themselves as a traditional married couple, Robert asked for custody as a divorcing man and single parent.

Olga's arguments to the court contrast with Robert's and with the arguments presented by all the parties in *Johnson* in that Olga focused on the social correlates of her maternity. Certainly, she described her biological contribution to the babies' creation, but for the most part she presented that contribution as evidence of her motherliness (a social matter) rather than as evidence of an inexorable claim to natural maternity. For a number of reasons, Olga, unlike Anna Johnson, was able to stress the maternal behavior she had exhibited and continued to exhibit toward the children. In contrast, Anna Johnson's ability to present herself as a good mother was curtailed by the very fact of her entrance into the agreement to gestate and then foregoing maternal claims to a baby. Moreover, Olga, although in the midst of divorce proceedings, was married to the father of the babies she had gestated and borne and thus had the advantage of having started her relationship to her twins in a traditional mother-father-children triad. In addition, Olga, unlike Anna, had retained custody after the children's births and had continued to serve as their custodial parent. Finally, Olga's claims to maternity, unlike those of Anna, opposed the claims of a father and not those of another mother. For all these reasons, Olga was able to construct her case by relying on a set of arguments that had not been available to Anna Johnson.

Olga explicitly distinguished *Johnson* from her own case. She submitted her brief prior to the California Supreme Court's ruling in *Johnson*, which, to Olga's benefit, relied on maternal intent to establish natural maternity. Refuting the relevance of the lower court rulings in *Johnson*, Olga declared that she could not be described as a "surrogate." She further asserted:

> In the instant case, there is no contest between the egg donor and the respondent [Olga] for custody, and therefore it is still a one (1) mother/one (1) father scenario. There is no need for this Court to be concerned about the psychological impact it might have on a child to be brought up with two (2) mothers.

> Conversely, it is the appellant who would like to deprive the children [of] the only mother that they have ever known. It is respectfully submitted that such deprivation would in fact have a devastating effect upon the children.

> This Court is not bound by the *Calvert* ruling and may find that there is much more significance to the individual who actually gives the children life. In the analysis of the instant

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Reproductive Transformations

In many cases, it is important to note that the child was born during a legal marriage and therefore is presumed to be the legitimate issue of both parents.108

Certainly, Olga referred to her gestational role as a significant aspect of her maternity. However, in describing that role, she stressed the pain and suffering that the production of ova and the subsequent pregnancy had brought her, rather than the physiological processes of maternal bonding on which Anna Johnson had focused. Olga portrayed the history of her pregnancy in detail. In so doing, she focused on her own endurance, and asserted that Robert had continually attempted to undermine the pregnancy's success. For instance, Olga claimed she responded to an early period of spotting in the pregnancy with devastation and grief. In contrast, she proclaimed that Robert expressed delight that "the experiment had failed."109 She further described Robert as having thought of the developing fetuses as "freaks, monsters and anomalies,"110 and to have urged termination of the pregnancy. Olga said that later stages of the pregnancy brought her continuing anxiety and illness. Each diagnostic sonogram, she reported, "was a veritable nightmare" for her.111 Later, beset with serious symptoms caused by the pregnancy, Olga chose to continue the pregnancy rather than risk a seriously premature birth. She described the significance and consequences of her decision to the court:

The respondent decided to sacrifice her own life and try to endure the complicated pregnancy a little longer so that the children could be born healthy and normal. The toxemia got so much worse that the respondent experienced swelling all over her body, had extensive nose bleeds and was totally unable to walk, and required a wheelchair to get around.112

At the birth Olga, treated with local rather than general anesthesia, was "aware of every incision, cut, contraction and the incredible pain, yet was only concerned about the welfare of the children. Out of that near death experience came two very healthy and beautiful girls . . . ."113

Olga's biological maternity, as she described it, involved almost unrelenting emotional and physical agony from conception through birth. For Olga, her constant sacrifice and courage during that period indicate the quality of her maternity. Thus, she claimed that her experiences and reactions during

108. Id. at 25-26.
109. Id. at 7.
110. Id. at 8.
111. Id. at 10.
112. Id. at 11.
113. Id. at 12 (citation omitted).
pregnancy, especially when compared with Robert's disdain, proved her the better parent.

Alongside this characterization of her pregnancy and her maternity, Olga presented another type of argument about the biology of reproduction. She suggested that the new options for human reproduction made available by technological advances such as in vitro fertilization call for a far-reaching reevaluation of the social implications of biological maternity and paternity. “This Court must recognize,” Olga declared, “that such onerous terms, like ‘genetic stranger’, [sic] have no place in a world which has embraced new reproductive technology as a necessary means to assist individuals in their desires to procreate.”

This argument rests on the presumption that reproductive technology is good. Olga supported that presumption by arguing that reproductive technology provides a new set of solutions to an old and troubling problem—the problem of infertility. Using herself as an example, Olga asserted that she, “[l]ike many individuals . . . so desperately desired to either bear a child or have one borne for her, that she turned to the advances of medical technology to assist her in that important goal.”

Thus, Olga argued that reproductive technology should rightly be viewed as a means for relieving human suffering—suffering created by the absence of family—and that the requisite reinterpretation of human reproduction could therefore be justified by reference to the significance of family. Olga's strategy has been identified and analyzed by the English anthropologist Marilyn Strathern, who writes: “Arguments in favour of embracing the new reproductive technologies can point to them as techniques that will alleviate suffering and provide remedies for disability, and thus enable the family to take its proper and traditional form.” For Olga, a societal decision to adopt reproductive technology preserves traditional families by helping to create them. The likelihood that this decision may challenge society's most fundamental assumptions about the biological correlates of family is presented as essentially inconsequential. Thus, Olga suggests that parentage should not be exclusively premised on a genetic connection between parent and child.

In place of that familiar assumption, she offers a view of family epitomized by her own sacrificial role as the gestator of her twin daughters. Olga pled that the social implications of biological reproduction be reexamined while appealing that the essence of the traditional family—which she identified as love—be preserved. Thus, Olga described gestation as one stage in the “nourishment and care” that a good mother gives her children. Genetics does not produce that concern. In a remarkable twist on traditional definitions

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114. Id. at 16.
115. Id. at 17.
117. McDonald Respondent Brief, supra note 107, at 21-22.
of family, Olga characterized Robert’s concern with his genetic connection to the twins as evidence that he would be a bad father. She asserted:

It was not until the appellant learned of his paternity did [sic] he begin to illustrate a desire to be a parent to the twins. In effect, his love for the children was conditioned upon his genetic link to the children. Now he is asking this Court to award his [sic] custody based upon his genetics alone.¹¹⁸

For Olga, the invocation of family—even of traditional family—in this new context requires a shift in old assumptions. Those assumptions grounded traditional views of family in the inevitability of natural truth. Without such assumptions, the notion of enduring, committed relationships that traditionally describes and constitutes the family lacks a sustaining force.

Thus, in *McDonald*, as in *Johnson*, parties associate their opposing cases with tradition. Robert McDonald relied on his exclusive genetic connection to the children and suggested that, in comparison, Olga was a stranger seeking custody of his children.¹¹⁹ He ignored Olga’s gestational role in order to assert that only he and his children could constitute a traditional family, one in which the parent-child bond was grounded in natural truth.

Olga also premised her claim to maternity on tradition. She defined herself in terms of traditional portraits of a good mother—self-sacrificing, loving, unendingly committed to her children. She connected that self-portrait to her biological (gestational) role,¹²⁰ but she also proposed that the advent of reproductive technology necessitated new understandings of parent and child. In effect, she suggested that the social and biological dimensions of parenthood be disassociated, so that the social dimension might be preserved in its most traditional form. In this vision, for instance, “good mothers,” even if infertile, might be enabled to create families and to raise children who would benefit from their mothers’ loving care.

### IV. WHAT IS AN EMBRYO?—OR IS IT AN EMBRYO?

Disputes involving the disposition of frozen embryos resemble those involving children produced as a result of gestational surrogacy arrangements or ovum donation in that the invocation of biological facts furthers a larger debate about the nature and future of the family. Here too, arguments apparently about the biological facts of human reproduction serve as a pretext

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¹¹⁸. *Id.* at 21.
¹²⁰. Olga did assert, though without any commentary, that she had “a ‘blood relationship’ with the children during the pregnancy inasmuch as her blood provided the children with oxygen and nutrients which were vital to their development.” *McDonald Respondent Brief, supra* note 107, at 26.
for voicing and resolving controversies about the meaning and limits of personhood.

A. A New Time and Space for Human Reproduction: In Vitro Fertilization and Cryopreserved Embryos

In 1978, Louise Brown, the first baby conceived in vitro, was born in England.\footnote{Jennifer Gunning & Veronica English, Human In Vitro Fertilization: A Case Study in the Regulation of Medical Innovation 11 (1993). For more information about the problem of infertility and in vitro fertilization as a therapy, see Howard W. Jones & James Toner, The Infertile Couple, 329 New Eng. J. Med. 1710, 1714 (1993).} Six years later in Australia, another child conceived in vitro was born.\footnote{Judy Licht, Frozen in Time, WASH. POST, Nov. 26, 1991, at Z10.} In the Australian case, however, the embryo was cryopreserved (frozen) and only later thawed and implanted in the uterus of the woman from whose body the ovum had been extracted.\footnote{This Article uses the term embryo to refer to the earliest stages of embryonic development. As this section will discuss, much of the controversy about the moral and biological status of early embryos has been played out as a debate about definitions. Thus parties variously label the ovum, soon after fertilization, a "fertilized ovum," a blastocyst, a zygote, a pre-embryo or an embryo.} Thus, within an extraordinarily short period of time, both the spatial and temporal dimensions of human reproduction became subject to technological manipulation. For the first time in history, human reproduction could begin outside a woman's body and be suspended for long periods of time after conception and before further development of the embryo. In vitro fertilization and the cryopreservation of early embryos undermine the assumption that human reproduction is spatially contiguous and temporally continuous. The consequent disruption to traditional views of the family can be profound. In theory, cryopreservation allows a woman to become the mother of her own sister or aunt.\footnote{A woman, call her Sue, could become the mother of her own sibling if the gamete donors (Sue's parents) had an embryo cryopreserved and then, years later, that embryo was thawed and implanted in Sue's uterus. Sue could then gestate and give birth to the resulting baby. Had the embryo in question developed in vivo, without the interruption that cryopreservation allows, the embryo would have been born a generation earlier as its mother Sue's "sister" or "brother." Similarly, a woman could become mother to her aunt or uncle in a case in which the cryopreserved embryo was donated by her grandparents rather than by her parents. Obviously the use of the words "sister," "brother," and "aunt," as well as "mother," for her own sister or aunt.} Already, women

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123. There are various methods of freezing embryos. One that has been successful involves slow cooling in a cryoprotectant to a temperature of between 30 and 40 centigrade degrees below zero. Once frozen, the embryos may be stored in liquid nitrogen. Robert M.L. Winston & Alan H. Handyside, New Challenges in Human In Vitro Fertilization, 260 SCIENCE 932, 933 (1993).


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give birth to babies a number of years apart who might have been fraternal twins had not some or all of the embryos been frozen and stored for later use. ¹²⁷

The advent of in vitro fertilization and cryopreservation necessitates that the law settle controversies about the rights to and the rights of frozen embryos. Several types of disputes have arisen in the wake of these new reproductive technologies. One line of cases has involved disputes between gamete donors and the infertility clinics that helped to create and store their embryos.¹²⁸ Additionally, there have been disputes between two gamete donors who have had embryos frozen for future implantation, but later decided not to become parents together as a result of their deteriorating relationship. Davis v. Davis¹²⁹ is an example of this type of case.

Unlike gestational surrogacy cases, frozen embryo cases have a relatively long, impassioned, and self-conscious history, because of the controversy about the legality of, and limits upon, abortion. The abortion debate has been marked by unending and generally inconclusive appeals to the biological correlates of embryonic development.

Those appeals were given legal significance by the framework within which the Supreme Court analyzed the abortion issue in Roe v. Wade.¹³⁰ In Roe, the states of Texas and Georgia, whose abortion statutes were under constitutional attack, argued that the protection of fetal life constituted a "compelling state interest" that justified infringing on the privacy interests of pregnant women wanting to terminate their pregnancies. The Supreme Court, in response, expressly refused to "resolve the difficult question of when life begins,"¹³¹ but agreed that the privacy interests of a pregnant woman are not absolute. The Court concluded that the state's "interest in protecting the potentiality of human life" counterbalances the rights of a woman seeking an

could be subjected to vigorous debate.

¹²⁷ In 1993, a Virginia woman gave birth to her third child using eggs that were fertilized several years earlier. This was said to be the first time that three pregnancies resulted from three eggs that were all removed and fertilized at one time and then cryopreserved for future use. Baby Born from Frozen Eggs, WASH. TIMES, Sept. 13, 1993, at C11.

¹²⁸ York v. Jones, 717 F. Supp. 421 (E.D. Va. 1989). The case involved a dispute between The Howard and Georgeanna Jones Institute for Reproductive Medicine in Norfolk, Virginia, and a couple, Steven York and Risa Adler-York, who had been treated for infertility at the Institute. During the course of that treatment, the Yorks had one embryo cryopreserved for possible later implantation. However, before that implantation was attempted, the Yorks moved to Los Angeles, and therefore asked the Jones Institute to transfer their frozen embryo to a fertility clinic in that city. The Institute refused. A federal district court in Virginia, relying on the terms of the Cryopreservation Agreement between the Yorks and the Institute, concluded that the Agreement had created a bailor-bailee relationship between the Yorks and the clinic. The court found that the Jones Institute had "fully recognize[d] plaintiffs' property rights in the pre-zygote and . . . limited [its own] rights as bailee to exercise dominion and control over the pre-zygote." Id. at 427.


¹³⁰ 410 U.S. 113 (1973).

¹³¹ Id. at 159.
abortion at the point of fetal "viability." 132 The Court explained this conclusion:

With respect to the State's important and legitimate interest in potential life, the "compelling" point is at viability. This is so because the fetus then presumably has the capability of meaningful life outside the mother's womb. State regulation protective of fetal life after viability thus has both logical and biological justifications. 133

Thus, in the law regulating abortion after Roe, conclusions about the point at which life begins were displaced by more concrete, though changing, conclusions about the point of fetal viability. Roe promised to substitute theological debate, at least within the universe of legal discourse, with empirical observation. Roe thus appeared, at least momentarily, to justify its trimester approach to the regulation of abortion. However, after Roe, the biological facts of embryonic development remained as significant as ever to the law's regulation of abortion. 134 And within the larger society, Roe has intensified, rather than stilled, the controversy about when life begins. 135

Since Roe, a woman's right to abortion before viability has been premised on her privacy right to control her body. At both the beginning and the end of pregnancy, that rationale is threatened by technological advances that permit fetal development outside a woman's body. Roe, common sense, and most of Western theology and philosophy state clearly that, once born, a baby (even if still exhibiting what would previously have been fetal development) is a person and therefore cannot be killed. However, no comparable agreement exists about the existential or moral status of the embryo during the earliest stages of development. This disagreement is problematic because, through in vitro fertilization, embryos can be conceived outside a woman's body and can develop there for at least several days. Of course, those embryos are not viable (as the term was used in Roe) because they cannot develop into babies unless

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132. Id. at 162-63. The Court placed the point of viability at about 28 weeks, noting that in some cases viability could occur as early as 24 weeks. Id. at 160 & n.59 (relying on L. HELLMAN & J. Pritchard, WILLIAMS OBSTETRICS 493 (14th ed. 1971)). Since Roe, the point of fetal viability has been located a few weeks earlier than was the case at the time of the decision. Dissenting in Akron v. Akron Center for Reproductive Health, 462 U.S. 416 (1982) (declaring unconstitutional second trimester hospitalization requirement for abortions), Justice O'Connor asserted that the trimester framework on the basis of which the Court decided Roe was being called into question as a result of advances in medical technology. Id. at 458 (O'Connor, J., dissenting).

In Roe, the Court also concluded that the privacy right of a pregnant woman to abort a pregnancy is counterbalanced by the state's interest in protecting the woman's health "at approximately the end of the first trimester." 410 U.S. at 163.

133. Id.


implanted in a woman's uterus for gestation beyond the first few days of development. However, embryos produced through in vitro fertilization can survive outside the body and, if frozen, may be available years after their creation for implantation and gestation in a woman's uterus. Thus, they may lead eventually to the birth of a child.

This possibility has required the legal system once again to consider when life begins. Thousands of embryos are now being stored at fertility clinics in the United States. Some will be implanted in the woman from whose ovaries the ova were extracted; some will be implanted in other women, as gestational surrogates or intentional mothers; some will be used for research; and others eventually will be discarded. If, however, as some argue, early embryos are human life, the entire enterprise and, in particular, any decision to discard a frozen embryo becomes problematic. As a result of this controversy, in a number of recent cases involving the fate of frozen embryos, courts have been asked to decide the status and fate of cryopreserved embryos.

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136. See BONNICKSEN, supra note 125.
137. Gestational surrogate is used here to refer to a woman who gestates a child for another woman or couple; intentional mother is used to refer to a woman who intends to gestate and raise a child conceived with donated ova.
138. Between 1980 and the spring of 1993, embryo research in the United States was prohibited except in privately funded clinics. In June 1993, the federal government lifted the ban on the funding of embryo research, making it possible once again to obtain federal funding for such research. Boyce Rensberger, NIH Panel Looks at Ethics, Standards for Human Embryo Research, WASH. POST, Feb. 7, 1994, at A3.
139. Probably the most well-known and forceful advocate of the position that a human being exists at conception is the Catholic Church, which holds that:

[T]he fruit of human generation from the first moment of its existence, that is to say, from the moment the zygote has formed, demands the unconditional respect that is morally due to the human being in his bodily and spiritual totality. The human being is to be respected and treated as a person from the moment of conception and therefore from that same moment his rights as a person must be recognized, among which in the first place is the inviolable right of every innocent human being to life.

140. In addition to Davis v. Davis, 842 S.W.2d 588 (Tenn. 1992) (considered infra sub-section IV(B)), see, e.g., York v. Jones, 717 F. Supp. 421 (E.D. Va. 1989) (involving dispute between gamete donors and infertility clinic about possible transfer of frozen embryo to another clinic).

An Australian case, heralded in the media and elsewhere as the tale of "frozen embryo orphans" involved a wealthy California couple, Mario and Elsa Rios who went to Australia to receive in vitro fertilization treatments. Several embryos resulted from the treatment; two were frozen for later use. The Rioses were then killed in a plane crash. The case led to questions about the fate of the frozen embryos and their potential right to inherit an intestate share of the Rioses' large estate. See George P. Smith II, Australia's Frozen 'Orphan' Embryos: A Medical, Legal and Ethical Dilemma, 24 J. FAM. L. 27, 27-28 (1985-86).

A more recent case, with facts similar to those that were at issue in Davis, is developing in New York. The case involves a divorcing couple, contesting the fate of five frozen embryos created in the course of infertility treatments. Frozen Embryos' Fate Awaits L.I. Custody Battle, N.Y. TIMES, June 25, 1994, at A25.
B. Davis v. Davis: *Were the Embryos Children, Property, Or Something In Between?*

*Davis* arose as a divorce proceeding between Junior Lewis Davis and his wife Mary Sue Davis. Married to Junior in 1980, Mary Sue Davis suffered a series of ectopic pregnancies that resulted in the loss of her fallopian tubes. Then, in 1985, the couple entered an *in vitro* fertilization program at a Knoxville infertility clinic. The *in vitro* procedure was tried without success several times during the next few years. In 1988, on the advice of their infertility doctor, the couple decided to cryopreserve embryos for future use should Mary Sue not become pregnant. In December 1988, nine ova were retrieved. Two were implanted, but did not result in pregnancy. The remaining seven were cryopreserved and stored in the Knoxville clinic. Two months later, in February 1989, the Davises’ marriage failed.

The couple agreed about all the terms of their divorce except the disposition of the seven frozen embryos. At first, Mary Sue hoped to use the embryos to become pregnant herself. She later remarried (becoming Mary Sue Stowe) and requested that the embryos be donated to an infertile couple. Junior Davis opposed both uses, proposing instead that the embryos be stored indefinitely. Later, he asked that the embryos be destroyed.

1. The Decisions

In the course of litigation, three Tennessee courts heard the case. One held for Mary Sue and two for Junior. However, each of the three courts relied on a different view of the embryos’ existential status. To Judge Young of the trial court, the embryos were children. “The Court finds and concludes,” he asserted, “that the seven cryopreserved embryos are *human*.” For Judge Young, that conclusion delineated what he then described as the essential question in the case: “What then is the legal status to be accorded a human being existing as an embryo, *in vitro*, in a divorce case in the state of

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142. 842 S.W.2d at 591-92.
143. Brief for Appellee at 13, *Davis v. Davis*, 842 S.W.2d 588 (Tenn. 1992) [hereinafter *Davis Appellee Brief*]; Initial Brief for Appellant at 8, *Davis v. Davis*, 842 S.W.2d 588 (Tenn. 1992) [hereinafter *Davis Appellant Brief*].
144. *Id.* at 589. Indefinite storage was understood as “tantamount to destruction” since at the time it was believed that frozen embryos would likely not be viable after a couple of years. *Davis v. Davis*, No. E. 14496, 1989 Tenn. App. LEXIS 641, at *36. Dr. Charles A. Shivers, an embryologist at the Fertility Center of East Tennessee in Knoxville, who was responsible for the cryopreservation of the Davises’ seven embryos, testified at trial. He stated that although mice embryos had been successfully frozen for a decade, cryopreserved human embryos had not previously remained frozen and viable for more than approximately two years. *Id.* Appendix B at *70 (summarizing testimony of witnesses).
145. *Davis Appellant Brief*, *supra* note 143, at 8.
Tennessee? He answered, expressly asserting the court’s parens patriae power:

[It is to the manifest best interest of the children, in vitro, that they be made available for implantation to assure their opportunity for live birth; implantation is their sole and only hope for survival. The Court respectfully finds and concludes that it further serves the best interest of these children for Mrs. Davis to be permitted the opportunity to bring these children to term through implantation.]

The court further vested “temporary custody of the parties’ seven cryogenically preserved human embryos” in Mary Sue.

The Court of Appeals of Tennessee reversed. In the appellate court’s decision, the trial court’s focus on the moral and existential status of the embryos disappears and was replaced by a focus on outcome. “[T]he sole issue on appeal,” declared the appellate court, “is essentially who is entitled to control seven of Mary Sue’s ova fertilized by Junior’s sperm . . . .” The court concluded that the fertilized ova would be afforded a status somewhere between property and body organs available for transplant. Citing the Uniform Anatomical Gift Act, as passed in Tennessee, the court concluded that Mary Sue and Junior shared “an interest” in the cryopreserved embryos and, accordingly, vested “joint control” in both of them. The decisions went further toward defining the embryos’ status than toward determining their practical fate.

The state supreme court affirmed the holding of the appellate court, but distanced itself from any implication in that court’s opinion that the parties’ interest in the embryos was “in the nature of a property interest.” The court explained:

[Preembryos are not, strictly speaking, either “persons” or “property,” but occupy an interim category that entitles them to special respect because of their potential for human life. It follows that any interest that Mary Sue Davis and Junior Davis have in the preembryos in this case is not a true property interest. However, they do have an interest in the nature of

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147. Id. at *31.
148. Id. at *37.
149. Id.
151. Davis, 842 S.W.2d at 596 (citing The Uniform Anatomical Gift Act, TENN. CODE. ANN. § 68-30-101 (1992), which regulates the disposition of organs at death and the disposition of other body organs and tissues that lack the capacity for developing autonomous life.)
153. Davis v. Davis, 842 S.W.2d 588, 596 (Tenn. 1992).
ownership, to the extent that they have decision-making authority concerning disposition of the preembryos, within the scope of policy set by law.\textsuperscript{154}

In its conclusions and holding, however, the state supreme court evaded the question of how to respect cryopreserved embryos and turned instead to the interests and rights of the gamete donors. The court finally decided that, given the lack of either a current or prior agreement between the parties about the embryos, it became necessary to weigh the "relative interests of the parties in using or not using the preembryos . . . ."\textsuperscript{155} The court wrote:

> Ordinarily, the party wishing to avoid procreation should prevail, assuming that the other party has a reasonable possibility of achieving parenthood by means other than the use of the preembryos in question. If no other reasonable alternatives exist, then argument[s] in favor of using the preembryos to achieve pregnancy should be considered. However, if the party seeking control of the preembryos intends merely to donate them to another couple, the objecting party obviously has the greater interest and should prevail.\textsuperscript{156}

In the aftermath of the decision, the embryos were transmitted to Junior Davis by the Knoxville Infertility clinic, which had stored them for over four years. In June 1993, Davis announced that he had had the embryos destroyed.\textsuperscript{157}

2. The "Biological Facts"

Each of the three state courts that rendered opinions in \textit{Davis}, as well as the parties and \textit{amici curiae} who presented arguments to the courts, reviewed the biological facts of embryonic creation and development in order to justify the decision reached or desired. Thus, while the parties (along with \textit{amici curiae}) disagreed about the description, the definition, and the personhood of the embryos, they used the same medical facts surrounding \textit{in vitro} fertilization to support their respective claims.

This case differed from \textit{Johnson v. Calvert} in that the opposing parties in \textit{Davis} had each donated a gamete to produce the embryos. Thus, neither party could use the biological facts (as they are now generally understood)\textsuperscript{158} to

\begin{itemize}
\item \textsuperscript{154} \textit{Id.} at 597.
\item \textsuperscript{155} \textit{Id.} at 604.
\item \textsuperscript{156} \textit{Id.}
\item \textsuperscript{158} Dr. Jerome Lejeune, a French geneticist who testified for Mary Sue Davis at trial, did assert that the gamete provided by the male is not genetically comparable to that provided by the female. He
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demonstrate a greater or more natural relation to the embryos. Rather, the parties in Davis invoked biological facts to argue for different conceptions of what an "embryo" is, in hopes of defining the controversy such that the fate of the embryos would be decided as each party, respectively, desired.

The briefs and the arguments presented to the courts in Davis suggest three broad views of the embryos' existential status. Each of the three views was adopted by one of the three courts that rendered decisions in the case. The trial court viewed the embryos as children, and therefore understood the case as a custody battle between two parents. The intermediate appellate court viewed the embryos as animate commodities, much as other courts have viewed genetically-engineered matter. The court therefore framed the case to resemble a property dispute between divorcing spouses. Finally, the state supreme court sought a middle course, one that avoided expressly viewing the embryos as either people or property. The court determined that the embryos, although not persons, were entitled to "special respect because of their potential for human life." This view allowed the court to bypass the interests of the embryos (which would be compelling if they were children), while allowing the court to distinguish its treatment of the embryos from the treatment it would afford inanimate commodities in another case.

In fact, the Tennessee Supreme Court focused on much more than respect for the embryos. The court appeared to invoke, almost equally, a world of contractual negotiations and a world concerned with the preservation of people's (in this case, the gamete donors') constitutional rights in the context of intimate familial relationships. The court encouraged the use of pre-fertilization contracts between gamete donors interested in together becoming the parents of a child, and suggested that the terms of such contracts be conclusive in future disputes. In cases that lack such contractual agreements, the court suggested focusing, as it did in Davis, on the interests

argued that certain sorts of genetic information are carried by sperm and other sorts of information are carried by ova. Transcript of Proceedings, Davis v. Davis, No. E-14496 (Tenn. Cir. Ct. Aug. 10, 1989), Vol. III, at 41 [hereinafter Davis Trial Transcript].

159. The biological facts, as generally presented by today's scientific community, prevent both sides from invoking those facts to demonstrate a greater right to the embryos. In fact, however, folk-culture often ignores the scientific view of gametic donation—which views the male and female gametes as similar apart from the X and Y chromosomes—in order to view the donation of the male as superior to that of the female. Helena Ragone notes the use of this folk-theory among surrogate mothers who hope to "devalue [their] own biological contribution and link to the child." HELENE RAGONE, SURROGATE MOTHERHOOD: CONCEPTION IN THE HEART 125 (1994). Ragone continues, "In this way, participants focus upon the folk theory of reproduction, which is made possible by the fact that even though in the realm of scientific knowledge, women are acknowledged to be co-creators, 'in Europe and America, the knowledge that women are...[co-creators has not been encompassed symbolically.'" Id. (quoting Carol Delaney, The Meaning of Paternity and the Virgin Birth Debate, 24 MAN 497, 509 (1986) (alteration in the original)).


161. Davis, 842 S.W.2d at 597.

162. See supra note 155 and accompanying text (quoting court's suggestions for handling this and future disputes involving cryopreserved embryos).
of the gamete donors. Thus, in the end, the state supreme court in *Davis* did not decide that it would consistently treat embryos as having a status intermediate between that of people and that of property. Rather, the court held that treatment of disputes over embryos should vary depending upon the existence of an agreement. Where an agreement exists, the court will treat the dispute more like one involving property. On the other hand, when there was no agreement between the gamete donors, the court will treat the dispute more like one involving family members. Thus, although the court premised its conclusions on the "special respect" owed embryos "because of their potential for human life," the decision in fact reflected concern for the gamete donors instead. More specifically, the decision did not respect the embryos, except to the extent that the embryos' interests were encompassed by the interests of the donors. Moreover, the donors were respected only insofar as the court, unable to rely on an agreement between them, focused on their procreational autonomy as protected by the Constitution.

In fact, none of the three courts' respective conclusions about the existential status of the embryos necessitated the holding that each court reached about the fate of the embryos. Their conclusions about the embryos' status did, however, establish the terms of the debate. For instance, a conclusion that the embryos are (or resemble) children establishes that the case should be handled as a custody dispute. Within that dispute, the court theoretically could have decided that the best interests of the embryonic children lay with perpetual storage, with donation to an infertile couple, or with some other use or disposition. Similarly, a conclusion that the embryos are, or resemble, property establishes that the case should be handled by reference to the parties' comparative claims to control the property at stake. That perspective does not, however, clearly dictate the proper use or disposition of the *Davis* embryos.

While the rhetoric in *Davis* does not necessitate a particular outcome, it serves a very important role in structuring the current debate about family. Clearly, *Davis* was about far more than the fate of seven embryos. Encompassing that controversy is a much more significant debate about the meaning and parameters, indeed the very nature, of the family and of the individuals who compose families. The case provided a concrete forum in which the larger debate could be conducted.

In carrying on that larger debate, the parties consistently invoked the biological facts of embryonic development. As in *Johnson*, each side claimed that the weight of scientific truth demonstrated the unique validity of its perspective and its proposed use for the disputed embryos. And, as in *Johnson*, the invocation of biological facts proved generally inconclusive. No conclusions about the status of the embryos could fairly be derived from the total testimony of the medical experts. Yet each court relied on some of that testimony to justify its view of the embryos and its conclusions about their fate.

163. *Davis*, 842 S.W.2d at 597.
Of the three courts that heard the case, the trial court most emphatically embraced biological facts to support its conclusions about the embryos' existential and moral status. That court relied heavily on the interpretations of Dr. Jerome Lejeune, a French geneticist who testified for Mary Sue Davis at trial. Dr. Lejeune was known in the scientific world for his discovery of the chromosome responsible for Down's Syndrome. He had been appointed in 1974 by the Pope as a member of the Pontifical Academy of Sciences and had worked actively to have abortion declared illegal. Dr. Lejeune premised his arguments for Mary Sue Davis on the position that \textit{in vitro} fertilization does not differ fundamentally from fertilization within a woman's body. After describing the process of fertilization within a woman's body, Dr. Lejeune asserted:

\begin{quote}
It is not at all the inseminator who makes fertilization, he just puts on the right medium, a ripe ovum, active sperm, and it is the sperm who make the fertilization. Man would be unable to make a fertilization. It has to be done directly by the cells. And it's because they were normally floating in the fluid that this extracorporeal technique is at all possible.
\end{quote}

Now, the reproduction process is a very impressive phenomenon in the sense that what is reproduced is never the matter, but it is information.

In this statement, Dr. Lejeune attempted to support two arguments. First, he wanted to establish that embryos produced through \textit{in vitro} fertilization are no different from embryos produced through sexual intercourse. Second, he set the scientific stage for concluding that the embryos, cryopreserved at the four-to-eight-cell stage, represent unique human beings, just as they would had they been conceived and allowed to develop in a woman's body. Dr. Lejeune argued that because each embryo contains all the information necessary to produce a unique human being even before the eight-cell stage, each is a human being. "[S]cience," he asserted, "has a very simple conception of man; as soon as he has been conceived, a man is a man."

When Charles Clifford, Junior Davis' attorney, asked whether a zygote\textsuperscript{167} deserves "the same respect as an adult human being,"\textsuperscript{168} Dr. Lejeune responded:

\begin{footnotesize}
\begin{itemize}
\item \textsuperscript{164} \textit{Professor Jerome Lejeune (obituary)}, THE TIMES (London), Apr. 7, 1994.
\item Dr. Lejeune stated at trial that he was also a member of the American Academy of Arts and Sciences, the Royal Society of Medicine in London, the Royal Society of Science in Stockholm, the Science Academy in Italy, the Académie des Sciences Morales et Politiques of the Institut de France in Paris, and the Academy of Medicine in France. Davis Trial Transcript, \textit{supra} note 158, at 11.
\item \textit{Davis} Trial Transcript, \textit{supra} note 158, at 23.
\item \textit{Id.} at 48.
\item The term "zygote" generally refers to the fertilized ovum immediately after fertilization occurs. \textit{Davis}, 1989 Tenn. App. LEXIS 641, at *65 (summarizing testimony of Dr. Ray King, director of the Fertility Center of East Tennessee where the Davises' embryos were stored).
\item \textit{Davis} Trial Transcript, \textit{supra} note 158, at 78.
\end{itemize}
\end{footnotesize}
I'm not telling you that because I'm not in [the] position of knowing that. I'm telling you, he is a human being, and then it is a Justice who will tell whether this human being has the same rights as the others. . . . But as a geneticist you ask me whether this human being is a human, and I would tell you that because he is a being and being human, he is a human being.\textsuperscript{169}

After discussing the implications of cryopreserving cells,\textsuperscript{170} Dr. Lejeune suggested that alternatives to \textit{in vitro} fertilization and the cryopreservation of any resulting embryos were on the horizon. He further suggested that these alternatives offered biologically and socially superior results to those produced through present methods. "[L]ove," he declared, "is the contrary [sic] of chilly. Love is warmth . . . . [T]he best we can do for early human beings is to have them in their normal shelter, not in the fridge."\textsuperscript{171}

Dr. Lejeune was one of five experts who testified at trial.\textsuperscript{172} He alone testified that, as a scientific matter, human life begins at conception; yet the trial court relied on Dr. Lejeune's testimony for just that conclusion, which it proclaimed in a list of 12 "findings of fact and conclusions of law resulting in judgment."\textsuperscript{173} Reviewing Dr. Lejeune's scientific testimony and comparing it with that of other expert witnesses,\textsuperscript{174} the court concluded that nothing in the testimony of the other experts effectively disputed Dr. Lejeune's assertion that the cells of an early embryo are differentiated. In describing the early embryo's cells as "differentiated," Dr. Lejeune supported the contention that the early embryo is unique, autonomous and human—thus, "an early human being."

Whatever the validity of Dr. Lejeune's controversial conclusions about the biology of early embryos, they hardly compel the conclusion that 4-cell embryos are human beings. However, Dr. Lejeune's testimony and the court's characterization of that testimony dramatically illustrate how the facts of nature are used to justify social and moral conclusions. The court justified its holding by referring to Dr. Lejeune's explanation of the biological facts of embryonic development, even though it acknowledged that Dr. Lejeune's conclusions about the differentiation of cells in early embryos were "highly technical,

\textsuperscript{169} Id. at 79.
\textsuperscript{170} Id. at 26-30.
\textsuperscript{171} Id. at 51.
\textsuperscript{172} Eight witnesses testified. Five were certified as experts. Davis v. Davis, No. E-14496, 1989 Tenn. App. LEXIS 641, at *10.
\textsuperscript{173} Id. at *1-2.
\textsuperscript{174} The other experts who testified at trial were: Professor John A. Robertson, Baker and Botts Professor of Law at the University of Texas at Austin, Texas; Dr. Irving Ray King, medical doctor and director of the Fertility Center of East Tennessee in Knoxville; Dr. Charles A. Shivers, Head of the Department of Zoology at the University of Tennessee in Knoxville; and Deborah Cooper McCarter, RN, primary patient coordinator at Dr. King's IVF Clinic. The court summarized the testimony of these, and other witnesses in Appendix B to its opinion. Id. at *61-72.
Reproductive Transformations

incapable of observation by the Court and require[d] the Court to either accept or reject the scientist's conclusion."

At least two broadly dissimilar strategies can be employed in response to Dr. Lejeune's testimony and to the trial court's conclusions based on that testimony. First, an alternative description and/or interpretation of the biological facts might be presented to dispute the details, or the implications, of Dr. Lejeune's testimony. Second, the biological facts might be by-passed, and the terms of discourse shifted to another domain entirely. Junior Davis and the two higher courts, each of which disagreed with the trial court's analysis, employed each of these strategies at one time or another.

Junior Davis offered an alternative description of the seven cryopreserved embryos. "As just two or eight cell tiny lumps of complex protein," he argued, "the embryos have no real value to either party." Moreover, he offered competing theories for interpreting the social significance of embryonic development. Junior differentiated a fetus from an embryo and stressed that the early embryo lacks a nervous system. Quoting the work of Professor John Robertson, one of Junior's experts at trial, Junior declared:

Even if one takes a very cautious position on when a nervous system begins, the earliest possible time of arguable relevance is the formation of the primitive streak, the precursor to the nervous system. Yet this first structure of the embryo proper does not develop until implantation has occurred, some ten to fourteen days after fertilization.

In a similar vein, the state court of appeals, with almost no elaboration, simply replaced the trial court's interpretation of the relevant biological facts with its own:

There are significant scientific distinctions between fertilized ova that have not been implanted and an embryo in the mother's womb. The fertilized ova at issue are between 4 and 8 cells. Genetically each cell is identical... It is important to remember when these ova were fertilized through mechanical manipulation, their development was limited to the 8 cell stage.

The Tennessee Supreme Court expressly dismissed Dr. Lejeune's scientific testimony. While acknowledging Lejeune as "an internationally recognized

175. Id. at *24-25.
176. Davis Appellee Brief, supra note 143, at 18.
177. Id. at 7 (citing John A. Robertson, Embryos, Families, and Procreative Liberty: The Legal Structure of the New Reproduction, 59 S. CAL. L. REV. 939, 974 (1986)).
geneticist," the court noted that his "background fails to reflect any degree of expertise in obstetrics or gynecology (specifically in the field of infertility) or in medical ethics." 179 Moreover, "his testimony revealed a profound confusion between science and religion." 180 The court described in detail the testimonies of Dr. Ray King and other experts, all of which controverted Dr. Lejeune's testimony about the stages through which a fertilized ovum proceeds during gestation. 181 At the heart of this alternative depiction of embryonic development is the "biologic difference between a preembryo and an embryo." 182 Finally, the court concluded its description of the embryo's development with its own disclaimer about the relevance of the distinction it had just described between the preembryo and the embryo. "Admittedly, this distinction," the court acknowledged, "is not dispositive in the case before us." 183

3. The "Facts of Family"

The biological facts can be debated and revised. However, there are alternative responses to a disconcerting characterization of the biological facts for one party as presented by another party or a court. For instance, when faced with an unsettling presentation of the biological facts, it is possible to shift the level of discourse so that the biological facts become background to a discussion about social, cultural, psychological or theological matters. Junior Davis did precisely this. In arguing his case to the courts, he largely bypassed the biological facts of embryonic development and presented his case in social, rather than biological, terms. Unsurprisingly, in almost all of his arguments before the courts, Junior Davis focused upon family and highlighted his desire to preserve a traditional view of familial relationships.

Junior Davis referred to his genetic connection to the embryos in order to support his constitutional right not to become a father. In this manner, he defined the controversy as essentially unrelated to the facts of embryonic development. For instance, in concluding his brief to the Tennessee Supreme Court, he expressly stated that the dispute was not about embryos, but about "whether or not the parties will become parents." 184 This shift in focus made relevant a variety of social and legal arguments and analogies that would have been irrelevant had the case been about the existential status of the embryos,

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179. Davis v. Davis, 842 S.W.2d 588, 593 (Tenn. 1992)
180. Id.
181. Id. at 593-94.
182. Id. at 594. Dr. King's testimony, as summarized by the court, characterized the pre-embryonic stage as continuing until cellular differentiation begins, about fourteen days after fertilization. Id.
183. Id.
184. Davis Appellee Brief, supra note 143, at 18.
demonstrable only through reference to the biological facts of embryonic development. If, as Junior argued, the central question in the case involved the definition and regulation of family, then Junior did not need to focus exclusively on disputing the trial court's understanding of the biological facts of embryonic development. Instead, he could turn—as he did—to a variety of laws and legal interpretations about the family that did not require any consideration of the facts of embryonic development, or any further consideration of the biological underpinnings traditionally thought to limit and define family relations. He could, for example, rely on numerous constitutional decisions rendered in the last three decades that define a right to family privacy or autonomy. Those cases protect the right of individuals to establish familial and other intimate relationships without state interference. Junior's definition of the case similarly allowed him to invoke various statutory rules and regulations whose implications for the social and moral dimensions of family relationships favored his case.

If, after all, the essential issue in Davis was not whether the embryos were human, but the constitutional and statutory rights of the gamete donors (the potential parents), then evidence about the specifics of embryonic development was peripheral. Accordingly, Junior argued:

Tennessee specifically recognizes the high importance of family or genetic relationships in conferring rights and benefits and allocating burdens among citizens. In many areas of the law, the mere fact of biological kinship alone is sufficient to confer a right or impose a duty. In such areas the State acknowledges the most ancient and fundamental rights and duties springing from human kinship and will not intrude, even if more modern concepts of fairness or equity might dictate otherwise.

At this point, Junior was able to invoke a series of statutes regulating the relations between family members, such as those controlling intestate inheritance, those imposing an obligation on a biological parent to support his or her child, and those regulating the donation of a deceased person's body organs by family members. In relying on these statutory rules, Junior suggested first, that whatever the existential status of the embryos, he could be obliged to support any child produced from them, and second, that such a development should not occur without his consent.

185. These cases include, among many others, Griswold v. Connecticut, 381 U.S. 479 (1965) (invalidating a state birth control law on the basis of constitutional right to marital privacy); Eisenstadt v. Baird, 405 U.S. 438 (1972) (relying on constitutionally protected privacy right to invalidate state statute prohibiting distribution of birth control to unmarried adults); and Roe v. Wade, 410 U.S. 113 (1973) (granting women limited right to abort pregnancies on the basis of constitutional privacy right).
186. Davis Appellee Brief, supra note 143, at 9.
187. Id. at 10.
188. Id. at 9-11.
For example, Junior analogized rules regulating the donation of body organs to the regulation of the fate of the *Davis* embryos. Under Tennessee law, the organs of a deceased person, absent a statement left by the deceased, may be donated if the decedent's next of kin agree. If more than one person is next-of-kin to the decedent (e.g., children or siblings), agreement must be unanimous among all members of the group before donation can occur. Junior suggested that similarly, in the case of frozen embryos, a decision to donate (though apparently not to discard) the embryos should be affected only upon agreement of both gamete donors.\(^8\) Somewhat more implicitly, Junior used the organ donation statute to invoke the importance of family and to connect himself, and his position, to the notion of family. Tennessee rules regulating organ donation by a dead person, he asserted, illustrated "the high degree of respect and deference due human kinship."\(^9\) In this way, Junior transformed the debate from one about the humanity of the embryos into one about the parameters of family. As a result, he was able to associate his position with the "ancient wellspring of kinship."\(^10\) Ironically, Junior's invocation of family, and of the "ancient wellspring of kinship," aimed to protect his right to remain free of family. He alluded to family and tradition in order to safeguard his right to autonomous choice.\(^11\)

The Tennessee Supreme Court, after considering and evaluating the extensive testimony about biological facts and the consequent status of the embryos, similarly shifted the level of discourse. First, the court switched from the biological to the legal dimensions of the case, in order to draw conclusions about the status of the embryos. Later, the court turned away entirely from the question of the embryos' status or rights, and considered instead the competing constitutional rights of the two gamete donors.

After considering the "scientific testimony" presented to the trial court about the facts of embryonic development and concluding that the testimony failed to compel any particular judicial response,\(^12\) the court turned to an examination of the state's treatment of fetuses in the womb.\(^13\) Reviewing the United States Supreme Court decision in *Roe v. Wade*,\(^14\) which asserts that fetuses are not "persons" under the law, the court concluded that the embryos in *Davis* should certainly not be treated as legal persons. The court

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189. *Id.* at 11, citing T.C.A. 68-30-101 (Tennessee's Anatomical Gift Act) and stating: "Each party's interest in the disposition of the embryos springs from the same ancient wellspring of kinship involved in the policy of organ donation set out above. No disposition should be made of their embryos unless they both agree."

190. *Davis Appellee Brief, supra* note 143, at 10.

191. *Id.* at 11.

192. See Dolgin, *supra* note 11, at 1554-56 (analyzing replacement in constitutional jurisprudence of concern for preservation of family with concern for protection of individual involved in intimate relationships).


194. *Id.* at 594.

still had to decide, however, what to do with the Davises' embryos. The legal conclusion that embryos are not persons offered little more assistance than had the parties' and experts' interpretations of the biological facts.

In order to reach and justify a concrete decision, the court shifted the focus of its analysis even further from the existential status of the embryos. After deciding that the embryos were neither persons (on the basis of some combination of the biological facts and the law) nor property (on the apparent basis of the court's own sense of things—including perhaps the very fact that the embryos' biology could be, and had been, extensively considered), the court focused on the rights of the gamete donors rather than on the rights of (or "respect" owed) the embryos. In this regard, the court relied on Junior Davis' view that the case was not about the embryos or where to store the embryos, but rather "whether the parties will become parents."

After reviewing federal and state assurances of a "right to privacy," the court declared:

Obviously, the drafters of the Tennessee Constitution of 1796 could not have anticipated the need to construe the liberty clauses of that document in terms of the choices flowing from in vitro fertilization procedures. But there can be little doubt that they foresaw the need to protect individuals from unwarranted governmental intrusion into matters such as the one now before us, involving intimate questions of personal and family concern.

The court then addressed two equal rights deriving from the "right to procreational autonomy" that it identified as being at stake in Davis—the "right to procreate" and the "right to avoid procreation"—and undertook to weigh "the relative interests" of Junior and Mary Sue in regard to the embryos.

Thus, the court all but abandoned its concern with the existential status of the embryos. The court's holding effectively disregarded its own determination that the existential status of the embryos demanded they be given "special respect" because of their potential for life and instead favored the status and rights of the gamete donors. By asserting that the case was essentially about the contours of the family, albeit a disintegrating family, the court apparently satisfied its condition that the law respect the embryos, and therefore felt free to focus on the interests of the gamete donors. In effect, the decision presumes that the gamete donors, as family or potential family to the

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196. 842 S.W.2d at 598.
197. Id. at 600.
198. Id. at 601.
199. Id. at 603-04.
200. Id. at 596-97.
embryos, would demonstrate the requisite respect for the embryos in any
decision about the embryos' use or disposition.

Essentially, the court was able to rely on the possibility of separating
biological from social fact. As Marilyn Strathern has asserted:

Arguments in favour of embracing the new reproductive
technologies can point to them as techniques that will alleviate
suffering and provide remedies for disability, and thus enable
the family to take its proper and traditional form. The domains
of biological and social fact are not, in this view, to be
confused. Medical intervention is strictly intervention in the
biological process. And while it may alter the disposition of
kin, that is, alter expectations about who becomes related, the
traditional family as a social unit is not necessarily
challenged.\footnote{\textit{Strathern}, supra note 19, at 6.}

The possibility of separating the biological and social facts of family allows
parties and courts to premise their arguments on the significance of preserving
traditional families even in cases in which the biological facts are unknown,
ambiguous—as in \textit{Davis}—or in apparent conflict with the view, pervasive in
Western cultures, that specific biological relationships anchor family
relationships. The Supreme Court in \textit{Davis}, unlike the trial court, was unable
or unwilling to ground its decision on the certainty of inexorable natural fact.
Instead the court shifted the level of discourse and focused on a domain of
social interaction, that of the family. That domain has long held a special, even
sacred, place in Western culture and has been understood through reference
to biological facts that have more generally been assumed than delineated and
described. Thus, again, the respect the court declared that the law owed the
embryos on the basis of their existential status was satisfied by according
respect to the two people who might have become the embryos' parents.

In fact, the court's opinion allowed for, and even encouraged, explicit
contractual regulation of cryopreserved embryos in future cases. In the absence
of any agreements between the Davises, the court ultimately effected a
disposition that relied, more than anything, on its own sense of the harm Junior
would suffer by having children produced from the embryos, as compared to
the relative benefit to Mary Sue if the embryos were to survive to become
children.

In the end, the court was able to "respect" and to avert the biological
reality of embryonic development and of four-cell cryopreserved embryos. It
was able to connect the extensive testimony provided by experts at trial to its
characterization of the embryos as deserving of "respect." The court
accomplished this without considering the concrete implications of respecting
embryos and without directly actualizing the presumption of respect at all. Moreover, the court was able to preserve traditional views of the family by premising its decision on the parties' familial status, while simultaneously defying tradition almost entirely by suggesting that contract law, rather than family law, could best deal with cryopreserved embryos.

Thus, the opinion of the supreme court ultimately can be read both to connect biological truth to the social order and to disassociate the two almost completely. Further, the opinion can be read to herald, or at least to encourage, a radically new view of intimate (family) relationships, and yet to focus chiefly on safeguarding old-fashioned rights and responsibilities connected to the family. It can be read in these often contradictory ways in large part because the court appeared to ground its decision in a reasoned assessment of what Judge Daughtrey, writing for the state supreme court in Davis, called the "scientific testimony" (the biological facts), while acknowledging quite forthrightly that those facts failed to direct the court to a clear holding in the case. In a sense, the biological facts offered solace where they failed to offer guidance. They allowed the court to invoke tradition and the sacred order of old-fashioned families, while permitting it to suggest that, to resolve disputes such as those in Davis, contract law might be better than family law.

In short, the Davis case, taken as a whole, shows the continuing interest of the law and of society in predicating family relationships on biological truths, as well as some of the options available when those truths are difficult to decipher or do not provide clear direction for resolving controversies occasioned by reproductive technology. Even if the assumed connections between family relationships and biological facts can be rent asunder by reproductive technology, or already have been to whatever degree, it remains possible to invoke tradition as if it has remained intact.

CONCLUSION

Over the last 150 years, the American family has changed dramatically. Only within the past three decades, however, has that change been recognized expressly by society and reflected in the law. Increasingly since the 1960's, legislators and courts have recognized families as collections of autonomous individuals, rather than as holistic social units composed of relationships grounded in notions of inexorable, biological truth.
Even at mid-century, family law almost uniformly reflected an ideology of family predicated on unchallenged assumptions about the force and meaning of biological connections. Exceptions were rare and, where possible, were assimilated to the model of the traditional, holistic family, defined through biological bonds. Then, with startling rapidity, views of family—including those that informed legislative and judicial responses—changed basically and dramatically in the second half of the twentieth century.

This change has been accelerated by the explosive development of reproductive technology. This technology poses a significant threat to old-fashioned notions of family, which in turn reflects a more pervasive set of challenges to the traditional family and starkly illustrates the character and depth of the changes now affecting it. By disrupting central and rarely examined assumptions about the biological correlates of family, reproductive technology endangers the ideological framework within which family has long been understood. In consequence, reproductive technology and the family it produces may encourage the ideological transformation of the American family. At the very least, it compels re-examination of the assumptions undergirding the meaning of family.

At present, reproductive technology confronts a legal system still committed in significant part to old-fashioned conceptions of family with families that often cannot be assimilated into those conceptions. As a consequence of reproductive technology, the implications for society of the biological facts of reproduction cannot be taken for granted, and such facts no longer allow family to be defined and regulated in a straightforward fashion. In cases occasioned by reproductive technology, biological truths may be invoked to identify a child’s “real” parents, but opposing parties often present the same biological facts to demonstrate contrary conclusions. Sometimes, the recognition that biological facts no longer securely anchor the society’s understanding of family and family relations presents a new challenge to the biological facts themselves. Sometimes, the biological facts may be elided by an appeal to tradition that focuses on the social facts of family. And sometimes a new view of family emerges clearly, a view that values autonomy more than connection, and therefore suggests that family relationships are grounded not in natural law, but in individual choice.

Disputes occasioned by reproductive technology force courts to reconsider—and, thus, often to reinvent—assumptions that undergird notions of mother, father, child, and family. Courts have been attracted to definitions of family that acknowledge choice and individuality, but also to traditional conceptions of family in which relations are anchored in certain truth. As a result, courts have attempted to preserve familiar understandings of family

203. Adoption, for instance, was unavailable under the common law and was not given legal status in the United States until the mid-nineteenth century. Stephen B. Presser, The Historical Background of the American Law of Adoption, 11 J. Fam. L. 443, 443 (1971).
while also including within the definition of family forms of relationship familiar not to the home but to the market.

In this attempt, courts have resorted to mechanisms, but thus far, perforce, without success. Thus, for instance, in Johnson and in McDonald state courts distinguished between two biological mothers in determining a child's legal mother by relying on parental intent.\(^{204}\) On the one hand, the notion of intent is reflective of a universe of choice and negotiated realities—of the marketplace; but the courts in these cases also made intent seem substitutable for blood or genes in traditional understandings of family. Each court presumed to define the family at issue in terms that appeared to encompass the world of the market and the world of the traditional home.

But the use of intent as mediator has not resolved, perhaps because it cannot resolve, the differences between two very different worlds. Intent is linked essentially to a world of autonomous individuality and choice, not to a world of fixed relations predicated on biological truth. Moreover, intent cannot accomplish the task assigned it because intentions shift and are always complex.

Other courts have employed other mechanisms to mediate the conflicts which reproductive technology forces upon the traditional family.\(^{205}\) But none of these mechanisms has provided a satisfactory framework for imagining (or regulating) the changing family. Indeed, judicial reliance on notions such as intent depends on, and elaborates, existing confusions. Were the law to allow families—and the parent-child connection, in particular—to be unequivocally defined through contractual negotiations, the ambiguities would be resolved. However, no court has allowed that.\(^{206}\)

The law may move more fully to rely on notions of contract in determining the scope and meaning of family. It may oppose the erosion of the distinction between home and market by regulating strictly, or prohibiting absolutely, the creation of families through reproductive technology. Or some intermediary, or entirely novel, option may emerge. Whatever happens, the disputes currently occasioned by reproductive technology, and those certain to appear, reflect an ongoing debate between ancient and contemporary conceptions of the family in particular and, in general, between radically

\(^{204}\) Judicial reliance on the notion of “intent” in defining families produced through reproductive technology is analyzed in depth in Dolgin, supra note 37.

\(^{205}\) For instance, several courts have relied on the traditional notion of the “best interests” of the child to select parents in cases occasioned by reproductive technology. See, e.g., Johnson v. Calvert, 851 P.2d 776 (Cal. 1993) (Kennard, J., dissenting); In re Baby M., 537 A.2d 1227 (N.J. 1988). That notion, however, must itself be predicated on some notion of family and thus provides only the illusion of escaping from the contradictions between families defined through the terms of the marketplace and families defined through the inevitabilities of blood or genes.

\(^{206}\) Even the trial court in Baby M, In re Baby “M”, 525 A.2d 1128 (N.J. Super. Ct. Ch. Div. 1987), aff’d in part and rev’d in part, 537 A.2d 1227 (N.J. 1988), which seemed to rely on a surrogacy contract in terminating the parental rights of a surrogate mother, disclaimed such reliance in stating at the very start of its opinion that all matters discussed in the opinion beyond the best interests of Baby M, herself, were mere “commentary.” Id. at 1132.
different, and perhaps irreconcilable, conceptions of society—a debate that, for obvious reasons must be closely and very carefully watched.