Property, Progeny, Body Part: Assisted Reproduction and the Transfer of Wealth

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Women are laborers producing the precious products ¹
"I think of them as possible future children " ²
"It's a bunch of cells, but it's not a fetus." ³
"I felt like there were eight umbilical cords flapping about." ⁴

INTRODUCTION

A recent study conducted by the American Society for Reproductive Medicine revealed that infertility affects approximately 5.3 million Americans,⁵ many of whom will turn to reproductive technologies in search of genetically related children. Between 1985 and 1991, in vitro fertilization resulted in 11,260 clinical pregnancies⁶ with 8230 live births between 1990 and 1994.⁷ In 1995, an estimated 500 to 700 babies were born through the technique in Canada alone.⁸ In 1996, the government of Great Britain planned to destroy 3300 frozen embryos unless their genetic contributors could be located and their intent ascertained.⁹ By 1997, an embryologist in Scotland successfully cloned

¹ Barbara Katz Rothman, Recreating Motherhood — Ideology and Technology in a Patriarchal Society 21 (1989).

² Madeleine Bunting, Frozen Dilemma: Parents Wrestle with Decisions over Fate of Stored Embryos, CALGARY HERALD, July 30, 1996, at All (quoting Chrissie, female genetic contributor to six frozen embryos in embryo implantation procedure).

⁵ Id. (quoting Nigel, Chrissie's husband and sperm contributor to frozen embryos).

⁴ Id. (quoting Linda, referring to remaining frozen embryos after she successfully gave birth to one that had been implanted).

⁵ See Tamar Nordenberg, Overcoming Infertility, 31 FDA CONSUMER 18, 18 (1997).

⁶ See Robert Blank & Janna C. Merrick, Human Reproduction, Emerging Technologies, and Conflicting Rights 89 (1995).

⁷ See Thom Weidlich, New Law Born from 'Reprotech' Courts Have to Deal with Post-Mortem Insemination, Battles over Test-Tube Eggs, NAT'L L.J., May 22, 1995, at A1.

⁸ See Mary Nemeth, Looking for Moral Anchors, MACLEAN'S, Aug. 19, 1996, at 18. The drastically increased frequency of multiple births over the last twenty years is largely ascribable to the development and use of such techniques. See Patricia Tennison, Growth Spurt in Family Tree Born of Their Own Needs, Two Arlington Heights Couples Started Multiplicity, a Support Group for Northwest Suburban Parents of Triplets, CHI. TRIB., Feb. 26, 1997, at 1. For example, according to a study by Dr. Barbara Luke of Rush-Presbyterian-St. Luke's Medical Center in Chicago, the frequency of triplets nationwide has increased from one out of 3323 in 1973 to one out of 1341 in 1990. See id. The numbers are even more startling in affluent suburban areas where the high costs of fertility-enhancing techniques are more easily met. See id.

⁹ See Death at Midnight, DAILY TEL. (London), July 31, 1996, at 17. Despite protests from groups as disparate as the Catholic Church and couples hoping to adopt, the government went forward with the destruction as planned. See Weekend Edition: The Ethics of Freezing Embryos (NPR radio broadcast, Aug. 3, 1996).

the first mammal from the cell of an adult sheep;¹⁰ within days, U.S. scientists declared that they had cloned a set of monkeys.¹¹ As long as such technological progress holds promise for solutions to some of life's most poignant problems and until society reevaluates its preoccupation with defining "family" in biological

Facing a moral rubicon in response to cloning, officials have swiftly reassured the public that no such experimentation is planned for human life. See id. In March of 1997, President Clinton imposed a moratorium on federal funding of human cloning research. See id. President Clinton ordered a federal bioethics panel to report on whether the United States should regulate human cloning or ban it under laws similar to those in Britain, Denmark, Germany, Belgium, the Netherlands and Spain. See Begley, supra note 10, at 52. Senator Christopher S. Bond, the author of a Senate bill, proposing to ban federal funding of human cloning research, urged passage of the legislation, saying: "I believe there are aspects of life that should be off-limits to science." Stolberg, supra note 10, at A18.

While the desire to halt such experimentation is apparently predominant, it is not unanimous, even in Congress. See id. As Senator Tom Harkin declared, "I don't think there are any appropriate limits to human knowledge . . . [n]one, whatsoever[.] To my friends Sen. Bond and President Clinton who are saying, 'Stop, we can't play God,' I say, 'Fine. Take your ranks alongside Pope Paul V, who in 1616 tried to stop Galileo. . . . What utter, utter nonsense to think that somehow we can hold up our hand and say, 'Stop.'" Id Another commentator stated that halting experimentation would be "a reactionary spasm of scientific know-nothingism [and] would be a tragedy of immense proportions. It would choke the human spirit of adventure" Don't Be Afraid of Genetic Research, Bus. Wk., Mar. 10, 1997, at 126.

The cynic would say that despite their protests to the contrary, scientists have already cloned humans. For example, recent reports asserted that a Belgian fertility center accidentally produced the world's first human clone four years ago. See World in Brief; Reports of Cloned Human Denied, ATLANTA J. & ATLANTA CONST., Mar. 10, 1997, at A4. The head of that clinic, Dr. Robert Schoysman, refuted the report, stating that he was "not equipped to do cloning" and that the child was born after an in vitro fertilized egg split into two embryos, creating twins. See id. Nevertheless, in 1993, embryologists at George Washington University took cells from seventeen two- to eight-cell human embryos, separated and grew them in a lab dish, and created a few thirty-two-cell embryos. See Begley, supra note 10, at 52.

See Sharon Begley, Little Lamb, Who Made Thee? NEWSWEEK, Mar. 10, 1997, at 52. Scientists inserted genetic material from cells scraped from the udder of an adult sheep into an unfertilized sheep egg stripped of its own DNA. See Sheryl Stolberg, Sheep Clone Researcher Calls for Caution: Ian Nilmut Tells Senate Panel He Welcomes Ban on Copying Humans, but He Urges Care in Imposing Limits on Promising Technology, L.A. TIMES, Mar. 13, 1997, at A18. Using methods similar to in vitro fertilization, the scientists then transferred the egg to a surrogate mother. See id.

See, e.g., Rick Weiss & John Schwartz, Monkeys Cloned for First Time; Oregon Scientists Created Primates from Embryos Not Adult Cells, WASH. POST, Mar. 2, 1997, at A4 (indicating that scientists cloned two monkeys from cells taken from embryos, using method similar to that used by Scotland scientists). Experts said the success "adds to a growing body of evidence that there are no insurmountable biological barriers to creating multiple copies of a human being." Id.

and genetic terms, neither assisted reproduction technologies nor the issues they precipitate are likely to abate.

The relatively recent¹² attempt to reconcile reproductive technologies with and within modern systems is particularly challenging, as the sociological context within which they function forces broad inter- and intra-disciplinary collisions. "Hard" science and technology confront equally important moral, ethical, political, sociological, psychological, and legal concerns. Although the rights and status of frozen gametes, embryos, fetuses, and the children who result from them must be carefully and conscientiously determined, they have been largely ignored by law, not-withstanding the direct relevance of such diverse fields as contracts, property, family, and constitutional law.¹³ To the extent that even indirect recognition of the issues at play has occurred, the resulting legal framework has been characterized as "inconsistent and illogical," "confusi[ng] and ambivalen[t]," and riddled with "a million questions." ¹⁶

Perhaps the most vexing question is how to characterize the cryogenically preserved or "frozen" embryos that result from many of these technologies. The issue finds expression in the disparate ways disciplines and individuals characterize them:

The case that ignited the legal issue within academic circles arose from a divorce dispute over seven frozen embryos. See Davis v. Davis, No. E-14496, 1989 WL 140495, at *1 (Tenn. Cir. Ct., Sept. 21, 1989), rev'd, No. 180, 1990 WL 130807 (Tenn. Ct. App., Sept. 13, 1990), aff d, 842 S.W.2d 588 (Tenn. 1992), reh'g in part by No. 34, 1992 WL 341632 (Tenn. 1992) (discussing custody of pre-embryo when parents disagree as to pre-embryo's future). After years of failed procreative attempts, Mary Sue and Junior Davis enrolled in an in vitro fertilization program through which nine ova were extracted from Ms. Davis, fertilized with Mr. Davis' sperm, and cryogenically preserved. See Davis, 842 S.W.2d at 591-92. The parties disputed the proper disposition upon divorce. See id. at 589. Ms. Davis sought "custody," while Mr. Davis urged their destruction. See id. at 590. The Tennessee Supreme Court ultimately granted control over them to Mr. Davis, holding that decisional authority rested with the genetic contributors, which is weighed in light of the relative interests of each party. See id. at 604.

¹³ See, e.g., Weidlich, supra note 7, at A1 (stating that law lags behind technology and lawmakers are reluctant to enter debate).

¹⁴ See Bonbrest v. Kotz, 65 F. Supp. 138 (D.D.C. 1946) (commenting on differing statuses of unborn children under tort law (child as part of its mother), criminal law, and property law (child as separate person)).

Weidlich, supra note 7, at Al (quoting Professor Janet L. Dolgin of Hofstra University School of Law).

¹⁶ Jim Yardley, Mom Fights for Social Security for Tot Conceived After Dad Died, SAN DIEGO UNION-TRIB., Jan. 26, 1995, at A13 (quoting University of Texas Law Professor and reproductive law expert John Robertson).

property, progeny, body part, organ, commodity, and person. Spirited Congressional testimony by then-Senator Albert Gore captures the controversy: "I disagree that there's just a sliding scale of continuum with property at one point along the spectrum and human beings at another. I think there's a sharp distinction between something that is property and something that is not" The person/property dilemma converges at the point of death where the question of how estate law determines the status of "products of conception" appears integral to defining the circumstances of their transferability and continued existence.

Human Embryo Transfer: Hearings Before the Subcomm. on Investigations and Oversight of the House Comm. on Science and Tech., 98th Cong. 232 (1984) [hereinafter Hearing] (statement of Sen. Albert Gore). It is interesting to note that Senator Gore did not cast the issue as between property versus person, but rather between property versus "non-property" without defining the term. See id.

¹⁸ Legal discourse grapples with the question of whether genetic material is property. See, e.g., Lori B. Andrews, My Body, My Property, 16 HASTINGS CTR. REP. 28 (1986) [hereinafter Andrews, My Body, My Property] (discussing body as property and accompanying market for body parts in research and donor setting); Lori B. Andrews, The Legal Status of the Embryo, 32 LOY. L. REV. 357 (1986) [hereinafter Andrews, The Legal Status of the Embryo] (addressing legal status of embryos in medically assisted reproduction); Colleen M. Browne & Brian J. Hynes, Note, The Legal Status of Frozen Embryos: Analysis & Proposed Guidelines for a Uniform Law, 17 J. LEGIS. 97, 117-22 (1990) (proposing protections for in vitro fertilization and frozen human embryos); Dan Fabricant, Note, International Law Revisited: Davis v. Davis and the Need for Coherent Policy on the Status of the Embryo, 6 CONN. J. INT'L L. 173, 194-207 (1990) (construing status and rights of embryos and criticizing Davis case in light of this status); John Dwight Ingram, In Vitro Fertilization: Problems and Solutions, 98 DICK. L. REV. 67, 69-74 (1993) (discussing life, person, and property statuses variously ascribed to frozen embryos); Robert P.S. Jansen, Sperm and Ova as Property, 11 J. MED. ETHICS 123, (1985) (discussing dominion over germ cells); Patricia A. Martin & Martin L. Lagod, The Human Preembryo, the Progenitors, and the State: Toward a Dynamic Theory of Status, Rights, and Research Policy, 5 HIGH TECH. L.J. 257, 267-78 (1990) (arguing that pre-embryo should not be defined as either property or person); Robert J. Muller, Davis v. Davis: The Applicability of Privacy and Property Rights to the Disposition of Frozen Preembryos in Intrafamilial Disputes, 24 U. TOL. L. REV. 763, 791-803 (1993) (discussing person-property dichotomy); Mark A. Peiper, Note, Frozen Embryos — Persons or Property?: Davis v. Davis, 23 CREIGHTON L. REV. 807, 816-26 (1990) (discussing embryo as property or person in context of criminal, tort, and inheritance law); Clifton Perry & L. Kristen Schneider, Cryopreserved Embryos: Who Shall Decide their Fate 13 J. LEGAL MED. 463, 475-97 (1992) (discussing state regulation of frozen embryos); John A. Robertson, In the Beginning: The Legal Status of Early Embryos, 76 VA. L. REV. 437, 438-41 (1990) (discussing sources of decisional authority over earliest stages of life and state's power to limit that authority); Laurence E. Sweeney, Note, "Chilling" the Procreational Choice: Frozen Embryos — Who Gets What When the Donor Couple Divorce, 25 NEW ENG. L. REV. 367, 371-75 (1990) (discussing frozen embryos as property).

Is a frozen embryo alive? Human? A human being? A "surviving" human being? Can it be property — an entity over which rights can be exercised — and, thus, the subject of testate or intestate succession? Can it be a person — an entity that has rights — and, thus, the recipient of property under either scheme? Fortunately, the person versus property model ordinarily works because most entities easily fall into one of these two categories with little disagreement over either the characterization or the result.¹⁹

Nevertheless, when asked in the context of reproductive technologies, the questions posed permit no easy answers because they proceed from a series of misplaced legal, ontological, and epistemological assumptions that there are rigid and correlative divides between person and property, life and non-life, and perhaps even life and death. Notwithstanding Senator Gore's impassioned entreaty, law, medicine, and even ethics constantly, though surreptitiously, traverse these boundaries. Exploring these questions presents a microcosm of larger issues: law and society's preoccupation with result-driven categories and terms as well as society's consternation when a traditional model is challenged for its often rigid components.

Part I of this Article reviews today's reproductive technologies and the opportunities they create for biological contributors. Part II focuses on the person/property dichotomy and how it affects a frozen embryo's legal status. Part II concludes that this dichotomy is illusory.

As Part III discusses, the infirmity of such a constricted and ideologically entrenched legal model is that its utility is weakened when advances in technology and other non-legal arenas leave it largely oversimplified and terminologically, if not conceptually, obsolete. First, individuals may choose to apply the label inconsistently. Second, if categories drive legal results, the labeling itself could effect unforeseen legal consequences, forcing a choice between sacrificing judiciousness for legal consistency or creating innumerable exceptions to and exemptions from

¹⁹ But see infra note 54 and accompanying text (discussing chattelization of persons).

²⁰ See infra notes 57-59 and accompanying text (suggesting that medical advances and moral relativism have rendered distinctions more apparent than real).

a given legal precept. The question then becomes whether to shift the old lines, redraw new ones, or, most radically, do away with the lines altogether.

It seems most honest to confront whether the labeling is necessary at all; if so, to what extent labeling the frozen embryo "person" does and should inhibit others' control over its ownership and disposition; and to what extent labeling it "property" does and should inhibit its ability to acquire legal rights, such as property ownership. More expressly, can rights in a person be owned, and can property own property? Parts IV and V argue that at least within the arena of testate and intestate succession as applied to reproductive technologies, the answer to both questions is "yes." Notwithstanding the sociological effect of this approach as discussed in Part IV, the law should permit the embryo to be both the subject and recipient of death time transfers. This view properly accommodates expanding definitions of family, respects the dignity and autonomy of all parties engaging in or created by assisted reproduction, and maximizes the protection of life.

I. REVIEWING THE TECHNOLOGIES

Assisted reproduction centers around the now commonplace techniques of artificial insemination and in vitro fertilization, both of which are advancing exponentially to outpace the ability of legislators, courts, or society to respond.²¹ Artificial

²¹ More experimental techniques include:

⁽¹⁾ Chimera: The result of joining: (a) genetic material of one species with that of another, including non-human genes into human embryo cells or human genes into non-human embryos; or (b) cells of different embryos. See MICHAEL D. BAYLES, REPRODUCTIVE ETHICS 121-122 (1984).

⁽²⁾ Cloning. Producing an organism genetically identical to the donor-parent by removing or destroying the nucleus of a fertilized egg and inserting a nucleus of a donor cell. See id. at 116-18. Potential motivations include: (a) creating genetic offspring; (b) reproducing persons with special talents; and (c) creating a breed of organ donors. See id. at 117-18. Cloning humans from adult tissue may be possible within the next ten years. See Humans Will Be Cloned — We Must Be Prepared, S.F. CHRON., Mar. 23, 1997, at 8; Tom Brazaitis, Amid the Cloning Debate, We'll Repeat Ourselves, Plain Dealer (Cleveland), Mar. 9, 1997, at 3E.

⁽³⁾ Ectogenesis: Developing extracorporeal embryo-fetus through artificial placenta or womb. See BAYLES, supra, at 125-27.

⁽⁴⁾ Egg Harvesting. Removing immature eggs from ovaries for extracorporeal maturation and possible fertilization. See Denise Grady, How to Coax New Life: Advances in Reproduc-

insemination severs procreation from coitus by introducing semen to the cervix via syringe.²² The process is respectively labeled "homologous," "heterologous," or "combined" depending on whether the contributed sperm belongs to the woman's husband, a third-party donor, or a combination of both.²³ Until the early 1970s, artificial insemination was effected through fresh semen, which posed numerous practical difficulties and medical risks.²⁴ Artificial insemination's incidence, ease, and safety has

tive Techniques Give Couples Hope for Children Once Considered Impossible to Conceive, TIME, Sept. 18, 1996, at 36.

- (5) Gamete Intrafallopian Transfer ("GIFT"): Transferring ova and sperm by catheter directly to the fallopian tubes for fertilization and, thus, eliminating the extracorporeal embryo. See id.; Oz Hopkins Koglin, New Technology Offers Several Variations on Theme, PORTLAND OREGONIAN, May 14, 1997, at B15.
- (6) Intracytoplasmic sperm injection ("ICSI"): Injecting a single sperm cell into an egg. This procedure is particularly useful in treating low sperm counts or sluggish motility. See Grady, supra, at 36; Reuters, 'To Be Born Female Is to Be Born High Risk,' Unicef Director Reports, CHI. TRIB., July 23, 1997, at 12.
- (7) Sex selection and genetic choice ("eugenics"): Determining and possibly manipulating genetic characteristics of an embryo or fetus. See Michael B. Holmes & Betty B. Hoskins, Prenatal and Preconception Sex Choice Technologies: A Path to Femicide?, in MAN-MADE WOMEN: How New Reproductive Technologies Affect Women 15, 17-20 (1985). With preimplantation genetic diagnosis, a few cells are removed from an extracorporeal embryo and tested for genetic disorders. See Grady, supra, at 36.
- (8) Stem Cell Transfer. Transplanting spermatogonia or sperm stem cells from a healthy animal to a sterile one, enabling the second to father offspring. Theoretically, there is an inexhaustible supply because unlike frozen sperm, stem cells can't be used up. See Grady, supra, at 36.
- (9) Twinning: Splitting an embryo to produce two humans (or organisms) from one. See June Coleman, Playing God or Playing Scientist: A Constitutional Analysis of State Laws Banning Embryological Procedures, 27 PAC. L.J. 1331, 1358 (1996).
- (10) Zygote Intrafallopian Transfer ("ZIFT"): Fertilizing the egg in vitro and then transferring the zygote into the woman's fallopian tubes. See Grady, supra, at 36.
- See Sue Teper & E. Malcolm Symonds, Artificial Insemination by Donor: Problems and Perspectives, in DEVELOPMENTS IN HUMAN REPRODUCTION AND THEIR EUGENIC, ETHICAL IMPLICATIONS 19, 21 (C.O. Carter ed., 1983) (noting that doctors normally use artificial insemination to prevent male infertility, azoospermia, severe oligospermia, or transfer of hereditary disease such as Huntington's Chorea and Rh iso-immunization).
- ²³ See id. at 20. (stating that heterologous artificial insemination is useful where there is known cervical hostility to husband's or partner's sperm). Artificial Insemination Combined ("AIC") is no longer reputable because it creates confusion about the child's genetic history. See id. at 22.

Homologous insemination presents few legal challenges because any resulting child is both the biological and social offspring of the genetic contributors. However, heterologous and combined insemination challenge traditional definitions of "parent," "child," and "family" by splitting the genetic and social aspects of the parental role, especially when linked with in vitro fertilization.

²⁴ See id. at 22 (stating that difficulties included provision of adequate lab facilities for

increased dramatically over the past twenty years largely due to cryopreservation technology whereby sperm is immersed and indefinitely preserved in liquid nitrogen.²⁵ By conservative estimate, women in the United States have conceived more than 500,000 children via artificial insemination.²⁶

When the impediments to conception are partially attributable to female infertility,²⁷ in vitro conception permits ova retrieval from the woman's ovaries, fertilization in glass, and restoration to the genetic mother's or a surrogate's²⁸ uterus via catheter.²⁹ Such embryo transfer can also follow artificial insemination through a technique that permits the fertilized egg to attach to the genetic mother's uterine wall, be subsequently flushed, and then be transferred to a gestational mother's womb.³⁰

The time, capital investment, risks, difficulty, and physical and emotional pain involved in successive single-egg retrieval and implantation stimulated development of hormone therapy to induce superovulation and permit multiple-egg removal from the woman's ovaries.⁵¹ While this capability has increased the

immediate semen testing, chance meetings between donors and recipients, and assurance of fresh and adequate supply of semen). Reports of acquired immuno-deficiency syndrome ("AIDS") virus transmission through the use of fresh semen led the American Fertility Society to amend its insemination guidelines in 1988. See American Fertility Society, Revised New Guidelines for the Use of Semen-Donor Insemination, 49 FERTILITY AND STERILITY 211 (1988) [hereinafter American Fertility Society]. The American Fertility Society recommended that all frozen semen specimens be quarantined for 180 days and the donor be retested before releasing the specimen. See id.

- ²⁵ See American Fertility Society, supra note 24, at 211.
- ²⁶ See Blank & Merrick, supra note 6, at 86.

²⁷ See R. G. Edwards, The Current Clinical and Ethical Situation of Human Conception in Vitro, in Developments in Human Reproduction and Their Eugenic, Ethical Implications 53, 74-76 (C.O. Carter ed., 1983) (identifying several examples of such impediments including tubal occlusion, idiopathic infertility, endometriosis, and luteal phase deficiencies).

Surrogacy can occur in two ways: a surrogate may merely provide her womb for gestating an already fertilized egg or provide both the egg and the womb for gestation. See Karen T. Rogers, Embryo Theft: The Misappropriation of Human Eggs at an Irvine Fertility Clinic Has Raised a Host of New Legal Concerns for Infertile Couples Using New Reproductive Technologies, 26 Sw. U. L. Rev. 1133, 1160 n.96 (1997). In the former situation, the surrogate is often referred to as the "host" or "birth" mother, whereas in the latter situation she is also the biological mother or genetic contributor. See id.

²⁹ Blank & Merrick, supra note 6, at 87.

³⁰ Under this method, a fertilized egg is removed by lavage just prior to implantation and transferred to the recipient's uterus. *See generally* Grady, *supra* note 21, at 36 (discussing in vitro fertilization process).

³¹ Implanting a non-frozen embryo often requires difficult coordination of the men-

chances for successful in vitro conception and implantation, ova do not freeze as well or for as long as sperm.⁵² In response to this problem, technology has turned to post-fertilization freezing, resulting in the frozen or "pre-embryo."

Although the existence of contraception and assisted reproduction appear to have made the segregation of intercourse and procreation complete, the newest developments introduce even more radical splintering of genetic and social parenthood. Male posthumous parentage has always been possible, and recent developments in reproductive technologies have made female posthumous parentage possible, if not likely. Frozen sperm, eggs, and embryos not only open the door to posthumous parentage equally to both parents, but permit posthumous conception as well. Existent technology suggests that scientists could soon create an embryo by joining sperm recovered from a decedent and an egg retrieved from a fetus, freezing the embryo, and then orchestrating its viability fifty years later within an artificial womb. 35 Not only would the resulting child and her biological contributors lack social and physical attachment, the contributors would have no social connection to each other and, in fact, could be viewed as but attenuated members of any society at all.

While the potential issues resulting from assisted reproduction have multiplied and matured as rapidly as the techniques themselves, the frozen embryo is the flash point for legal, medical, and ethical debate. First, most of the technologies result in its creation. More importantly, its suspended existence is iconic of diverse things to similar people: creation and religion alongside science and technology; progress alongside moral regression; hope for the future and regret for the past. The socio-legal ramifications of frozen embryo technology are intense and pose complex challenges requiring a current and coherent policy.

strual cycles of the donor and the recipient. See Edwards, supra note 27, at 99.

See Perry & Schneider, supra note 18, at 468 (stating that at -195 degrees centigrade, ova can be preserved approximately two years although effects on ova are largely unknown). But see Gina Kolata, Successful Births Reported with Frozen Human Eggs, N.Y. TIMES, Oct. 17, 1997, at A1 (reporting first successful pregnancy in this country using frozen egg and suggesting that technique shows increased promise).

³⁵ See Laura D. Heard, A Time to Be Heard, a Time to Die: Alternative Reproduction and Texas Probate Law, 17 St. MARY'S L.J. 927, 935 (1986) (noting opinions of some physicians that someday frozen embryos may be born more than one hundred years after conception).

II. PERSON VERSUS PROPERTY: THE RELEVANCE OF STATUS

American society is primarily driven by Western European influences that have instilled the need to demarcate and dominate an otherwise unmanageable universe. Law reinforces this construct by creating a series of general and more specific divisions between and among things and people.³⁴ For example, within estate law, the category of "heir" is comprised of surviving family members and, thus, comprehends three distinct dichotomies: blood is not water, life is not death, and persons are not property.

The organization, stability, and continuity fostered by such a categorical epistemology suggest its weakness. By applying fifteenth century thought to twenty-first century technology, the frozen embryo illustrates the challenge when models created under simpler circumstances confront newer and more complex situations. The resulting difficulty stems from the misperception that everything is susceptible to sorting under previously constructed terms and that, once sorted, an unchangeable classification exists that determines the applicable legal language and set of rules.

What is most striking and most significant in Vigelius's work . . . was his organization of the whole of the law, proceeding from general to specific — dividing it first into public and private law, subdividing public law into legislative, executive, and judicial activities, subdividing private law into the law of persons, the law of property, the law of inheritance, and the law of obligations (contracts, torts, and unjust enrichment), and then systematizing the specific rules of each branch. These remain to this day basic "topics" of Western legal science.

Harold J. Berman & Charles J. Reid, Jr., Roman Law in Europe & the Jus Commune: A Historical Overview with Emphasis on the New Legal Science of the Sixteenth Century, 20 SYRACUSE J. INT'L L. & COM. 1, 24 (1994). Law is replete with the fallout from this sort of categorization. For example, before the industrial revolution, a "lease" was perceived solely as an interest in land, with little regard allowed for its contractual elements. See CORNELIUS J. MOYNIHAN, INTRODUCTION TO THE LAW OF REAL PROPERTY 63-64 (1962). It was not until the mid-1960s, with the rise of the commercial leasehold, that law made space for the notion that such a transaction could embrace principles of more than one of its arenas. See ROBERT A. CUNNINGHAM ET AL., THE LAW OF PROPERTY 250-58 (1993).

³⁴ This view is illuminated in the work of Roman legal theorist Vigelius, upon whose theories much of modern jurisprudence revolves.

³⁵ For insightful commentary on this point, see Margaret Jane Radin, *Market-Inalienability*, 100 HARV. L. REV. 1849, 1896 (1987) (describing conceptual difficulties associated with alienating personhood).

A. Classifying the Frozen Embryo

The traditional approach suggests the improvidence of addressing ownership rights of or in frozen embryos without wrestling with the life versus property syllogism. So If the law deems frozen embryos "persons," their damage would constitute criminal or tort assault, their destruction would be homicide, and refusal to return them to their rightful "parents" would equal kidnapping. Were the genetic contributors to voluntarily destroy the embryos, such action would constitute abortion or removal of "life support" and would be regulated under constitutional principles. If the law deems frozen embryos "property," however, their damage or destruction would equal trespass or conversion, and failure to return them to their rightful owners would be unauthorized possession or theft. The law would permit voluntary destruction of the embryos by their proprietors as a traditional incident of ownership.

If a frozen embryo is a person, possessory issues would arise within adoption³⁸ or custody disputes to determine proper "parents," "guardians," or "conservators" in light of the "child's" best interests.³⁹ Additionally, its creation would not confer ownership status on any human. Under natural law principles, it would

The issue finds its genesis in the abortion debate, where the arguably intractable question regarding when life begins permeates every level of discourse. The difference in this context lies in the distinction between embryos in utero and those preserved ex utero. For arguments supporting the property characterization, see, e.g., Andrews, My Body, My Property, supra note 18, at 29 (discussing advantages to property approach to control of body parts); Robert P.S. Jansen, Sperm and Ova as Property, 11 J. MED. ETHICS 123, 124 (1985) (discussing sperm and ovum ownership after tissue donation or transplantation); American Fertility Society, Ethical Statement on In Vitro Fertilization, 41 FERTILITY & STERILITY 12 (1984) (stating that concepti are property of donors). But see LA. REV. STAT. ANN. § 130 (West 1996) (defining extracorporeal embryo as "juridical person" and phrasing in vitro fertilization patient rights in terms of parental rights). The statute arguably conflicts with Roe v. Wade, which explicitly stated that an unborn child is not a person within the meaning of the Fourteenth Amendment Due Process and Equal Protection Clauses. See Roe v. Wade, 410 U.S. 113, 158 (1973).

³⁷ See, e.g., Ellen Goodman, Missing Children: Embryo-Napping, BOSTON GLOBE, June 11, 1995, at 87 (opining on California lawsuit against fertility center accused of improperly using eggs and embryos).

See, e.g., Charles Bullard, Embryo Adoption Program Offers Hope — and a Thicket of Questions, DES MOINES REG., Sept. 1, 1996, at 1 (reporting on embryo adoption program implemented by university hospitals in Iowa).

³⁹ See Davis v. Davis, 842 S.W.2d 588, 603 (Tenn. 1992) (describing relationship between gamete providers and frozen embryos as one of "genetic parenthood").

exist in its own right, irrespective of the method facilitating its existence, much as human beings are perceived to own their bodies and body parts.⁴⁰

If the embryo is property, however, the legal owners lay their claim through a combination of labor and occupation theories — those who first expend capital or effort to produce the good have rights paramount to all others claiming an interest therein.41 Issues would focus not on the embryo but on others' status thereto — who has paramount rights relative to whom. The question involves possession and title issues such as bailments, equitable division of property, and concurrent ownership. The embryo's genetic contributors, the institution in which it was stored, or its intended recipients could assert control over the property and could own either or both legal and equitable title to the embryo depending on the theory of ownership proffered. The owner could then convey the property through donative transfer or sale regulated by basic gift, contract, and code principles.42 By contrast, if the embryo is a person, the attempted transfer would analogize to slavery or the chattelization of human life. In short, if a person, the embryo can own property. If property, the embryo can be owned.

Such overt formalism would produce rigid consequences for the frozen embryo in the context of estate law. If it is a living

⁴⁰ See Moore v. Regents of Univ. of Cal., 249 Cal. Rptr. 494, 503-06 (Ct. App. 1988), aff d in part, rev'd in part 793 P.2d 479 (1990) (discussing plaintiff's argument that his spleen cells and cell line derived from them are property).

⁴¹ See Davis, 842 S.W.2d at 597 (implicitly adopting theory that frozen embryos are property derived from labor to extent that agreements disposing of untransferred preembryos after death of one or more party should be presumed valid and enforceable as between providers of gametic material); see also John A. Robertson, Prior Agreements for Disposition of Frozen Embryos, 51 OHIO ST. L.J. 407, 409 (1990) (arguing that recognizing couple's broad dispositional authority over embryos is only first step to deriving rules for disposition of frozen embryos).

While the frozen embryo could thus be subject to implied warranties of fitness and use, state laws often characterize paid transfers as provisions of services rather than sale of goods to avoid product liability or implied warranty issues. See Brody v. Overlook Hosp., 332 A.2d 596, 597 (N.J. 1975) (holding that hospital that infused patient with hepatitis-tainted blood was not strictly liable for blood quality). But see Cunningham v. MacNeal Mem'l Hosp., 266 N.E.2d 897, 900-03 (Ill. 1970) (holding that blood transfusions are sales of property subject to implied warranties and strict liability principles); Mark S. Frankel, Artificial Insemination and Semen Cryobanking: Health and Safety Concerns and the Role of Professional Standards, Law and Public Policy, 3 LEGAL MED. Q. 93, 95-97 (1979) (reviewing judicial application of strict liability to semen cryobanks).

human being or person, no entity could own the frozen embryo and it would thus be impervious to testate or intestate transfer, both of which imply ownership at two levels: that of the testator/intestate and that of the beneficiary/heir. Instead, the decedent could express guardianship wishes qualified by the "child's" best interests, treating the frozen embryo like a minor.⁴³ The frozen embryo should, however, be capable of owning and, thus, acquiring property through death time transactions, with the only remaining question being how.⁴⁴

If it is property, the frozen embryo would not be a living human being and could be owned, thus becoming the subject of voluntary and involuntary transfers including donation, sale, bequest, or distribution. So viewed, the embryo would not seem capable of owning property and could be neither heir nor beneficiary.

The formalistic approach set forth above — characterizing the frozen embryo as either person or property for all times and for all purposes⁴⁵ — fails to account for the failings of each label. The following approaches could maintain the traditional categorical jurisprudence with varying degrees of strictness: characterizing the frozen embryo as both person and property depending on context;⁴⁶ characterizing the frozen embryo as both person and property depending on temporal development or circumstance; characterizing the frozen embryo as neither person nor property, but rather a hybrid, much like fixtures in property law;⁴⁷ or characterizing the frozen embryo as either person or property, but imbuing it with or subjecting it to rights that ordinarily do not flow from such characterization. While blessed with

⁴³ See generally Janet L. Dolgin, Suffer the Children: Nostalgia, Contradiction and the New Reproductive Technologies, 28 ARIZ. ST. L.J. 473 (1996) (discussing historical role of children within families and describing difficulty in identifying child's best interests).

⁴⁴ For a thoughtfully drafted statute on assisted reproduction and estates, see Emily McAllister, Defining the Parent-Child Relationship in an Age of Reproductive Technology: Implications for Inheritance, 29 REAL PROP. PROB. & TR. J. 55, 114-18 (1994).

⁴⁵ This seems to be the position embraced by Senator Albert Gore in his testimony before the technology subcommittee. See Hearing, supra note 17, at 232.

⁴⁶ For example, the embryo may be treated more like property during the life of its progenitors but as a "person" thereafter. See Davis v. Davis, No. E-14496, 1989 WL 140495, at *6 (Tenn. Cir. Ct. 1989).

⁴⁷ See Davis v. Davis, 842 S.W.2d 588, 596-97 (Tenn. 1992) (holding that pre-embryos occupy interim category between property and persons and entitling pre-embryos to special respect due to potential for human life).

deceptive simplicity, each approach masks key difficulties that suggest that labeling the frozen embryo is neither necessary, desirable, nor possible. Each approach assumes the primacy of the label to discussion and result, which is a dysfunctional perspective if one agrees that the label is ultimately irrelevant. Thus, effort spent choosing the correct label diverts time and attention from a meaningful response to the legal challenges posed by reproductive technologies.

B. The Red Herring: Rigid Rules Leading to Illusory Dichotomies

First, while legal principles often create illusory dichotomies by posing issues as susceptible to only one characterization and challenging the theorist to divine correctly, one may debate whether the only proper way to view frozen embryos is as either person or property. The frozen embryo could be both or it could be neither. To the extent that consensus labeling is even possible or proper, it is also elusive.

Ask a moralist, "When does life begin?" and he may give the stock answer, "At conception[,]" with or without those complications arising from the infection of Western and Christian thought by the Platonist dualism of body and soul. Ask a physiologist . . . and he will take you back into the independent life of sperm and ovum, gynogenesis and androgenesis, hydatidiform moles and the rest: he cannot specify a "beginning", only a continuous process on which we impose arbitrary marks. The question then becomes, "At what point in human development should we invest the organism with the attributes of humanity and with the protection due to it?" "

As the sparse case and statutory law on point reflects, law has failed to consistently characterize the implanted embryo,⁴⁹ much less the frozen one.⁵⁰

⁴⁸ G.R. Dunstan, *Social and Ethical Aspects, in Developments in Human Reproduction* AND THEIR EUGENIC, ETHICAL IMPLICATIONS 213, 220 (C.O. Carter ed., 1983) (emphasis added).

⁴⁹ See, e.g., Davis, 842 S.W.2d at 602 (noting appellate court's opinion recognizing that persons born alive or capable of surviving ex utero have higher legal status than do fetuses in utero).

The Davis case is instructive. In tortured litigation resolving the fate of seven frozen embryos after the divorce of their genetic contributors, various Tennessee courts characterized them as persons, property, or something in between. See Davis v. Davis, No. E-14496, 1989 WL 140495, at *9 (Tenn. Cir. Ct. 1989), rev'd, No. 180, 1990 WL 130807 (Tenn. Ct.

Second, the dichotomous structure of formalism creates the perception that choosing between person and property is crucial. The legal conflation of the person/property and life/death binarisms reinforces this impression. Personhood is equated with life, which implicitly relegates non-life and death to property status. Conversely, death removes many elements associated with personhood. The decedent loses legal rights of personality such as the right to privacy⁵¹ and gains an expanded ability to transfer body parts as property.⁵² At the same time, others gain property-type rights in the decedent's body.⁵³

Nevertheless, history warns not only of the law's ability but its actual willingness to blur the lines it assisted in drawing by subjecting persons to property-type rules.⁵⁴ Further, technology,

App., Sept. 13, 1990), aff d, 842 S.W.2d 588 (Tenn. 1992), reh'g granted in part by No. 34, 1992 WL 341632 (Tenn. 1992) (holding that frozen embryos, whether labeled embryo or pre-embryo, are not property). On appeal, the court indirectly cast the embryos as property when it cited Tennessee's anatomical gift act and abortion statutes to state that "[j]ointly, the parties share an interest in the seven fertilized ova." Davis, No. 180, 1990 WL 130807, at *3. The Supreme Court of Tennessee rejected both classifications when it asserted that pre-embryos were "not, strictly speaking, either 'persons' or 'property,' but occup[ied] an interim category" Davis 842 S.W.2d at 597.

To the traditionalist, this incongruity might result from oversight, failure, or refusal to start at the proper starting point, the status issue, and work from there. The more intriguing assumption is that the incongruity reflects an overt or implicit rejection of monolithic formalism. Thus, those uneasy with transferring frozen embryos might find that, however subconsciously, they are equally uncomfortable with sanctioning their right to own property. Conversely, those comfortable with transferring property to the frozen embryo might balk at prohibiting their destruction.

- See, e.g., Robert C. Post, Rereading Warren and Brandeis: Privacy, Property, and Appropriation, 41 Case W. Res. L. Rev. 647, 664 (1991) (noting that common law right to privacy dies with person); see also Lisa Brown, Note, Dead but Not Forgotten: Proposals for Imposing Liability for Defamation of the Dead, 67 Tex. L. Rev. 1525, 1532 (1989) (analyzing common law rule that privacy rights die with person in context of defamation suits).
- ⁵² See, e.g., Roach v. Stern, 653 N.Y.S.2d 532, 532 (1996) (involving gift transfer of half of decedent's cremated body).
- Relatives of decedents are often recognized as having "property" or "quasi-property" rights in the decedent's body, including the right of possession to secure a proper burial and the right to contest an autopsy or exhumation. See, e.g., Green v. Southern Transp. Serv., Inc., 698 So.2d 699, 701 (La. App. 1997) (noting that public policy and Louisiana law recognize compensation for mental injury to certain survivors of damaged corpses); Ray v. Pennsylvania State Police, 654 A.2d 140, 142 (Pa. 1995) (Silvestri, J. dissenting) (noting line of cases that recognize quasi-property right in decedent's body to nearest relative including right to custody, burial, and to contest exhumation or autopsy).
- Interestingly, such occurrences tended to reinforce rather than erode the classifications. Society often effected such a maneuver by presenting the category over which dominion was asserted as sub- or non-human. This classification partially explains how society

social progress, and change often reveal new or existing corridors bridging seemingly rigid divides, aptly illustrated by the absence of a clear split between non-life, life, and death.⁵⁵ This bleeding of the lines has re-entrenched a reactionary belief that stricter lines are necessary.⁵⁶ At the same time, the incendiary fusion of morality and technology makes characterizing the frozen embryo much more difficult.

Third, relying on traditional categories without the benefit of individuated discussion encourages prepackaged doctrinal analysis without candidly confronting what policies should apply to reproductive technologies and their gametic components. This straightjackets lawmakers into taking a position that may drive unwanted or unforeseen results. For example, a ruling that a frozen embryo is property could make a fertility specialist who destroys it liable for conversion;⁵⁷ a holding that a frozen embryo is a person could permit the specialist's prosecution for negligent homicide.⁵⁸ Such linear analysis causes aberrant and

engendered and maintained the subordination and chattelization of racial, ethnic, and gender minorities. More modernly, abortion rhetoric's fixation on whether life does or does not begin at conception illustrates how society's comfort level with the issue is greatly affected by how the fetus is cast. See Naomi Wolf, Our Bodies, Our Souls: Rethinking Pro-Choice Rhetoric, THE NEW REPUBLIC, Oct. 16, 1995, at 26.

- For example, the legal concept of a "juridical person" gives personhood status to entities which would otherwise lack it. Additionally, within medicine, the temporal duration of personhood and even life constantly expands and contracts, sometimes even simultaneously. Technological and medical advances pull fetal viability stages closer to conception while pushing death farther away from respiratory and circulatory failure. At the same time, the Uniform Determination of Death Act of 1980 asserts that death occurs at the cessation of brain stem activity in accordance with the accepted medical standards of the community. See UNIF. DETERMINATION OF DEATH ACT § 1 (amended 1996). By contrast, the death with dignity movement suggests that to many, "constructive death" (i.e. life not worth living) can occur even sooner than that.
- This perception is evident in the attempted rhetorical fusion of surrogacy and slavery and, more recently, in the torrential response to cloning advances. See, e.g., Stolberg, supra note 10, at A18 (discussing bills introduced in House and Senate to ban federal funding of human cloning research); Begley, supra note 10, at 52 (discussing "serious ethical questions" of cloning); Brazaitis, supra note 21, at 3E (citing TIME/CNN survey finding that 93% of those surveyed disapproved of human cloning and 74% agreed with statement that "[i]t is against God's will to clone human beings.").
- ⁵⁷ Cf. Otto Friedrich, A Legal, Moral, Social Nightmare: Society Seeks to Define the Problems of the Birth Revolution, TIME, Sept. 10, 1984 at 54 (discussing unreported New York case, Del Zio v. Manhattan's Columbia Presbyterian Med. Center, No. 74-3558 (S.D.N.Y. Apr. 12, 1978), holding that frozen embryos are not property).
- ⁵⁸ This issue could be made even more complicated by the potential difficulty of determining a specific cause of the non-viability of a previously viable embryo.

inconsistent labeling and application, adding incoherence to an already confused field.⁵⁹

Classifying embryos as either persons or property but subjecting them to rights not usually associated with that characterization fails to rectify the semantic and structural flaws of the traditional approach. Doing so would lead to statements such as "frozen embryos as property are nevertheless able to own property," or "frozen embryos as persons are transferrable notwithstanding their personhood." This approach casts the right or limitation as a deviation from some norm, which would be unnecessary were the policy built from the start rather than cobbled together from preexisting property principles and exceptions.

Rejecting pure formalism extends three invitations to theorists exploring reproductive policy: destroy the distinction between person and property; critically reassess the underlying definitions of and assumptions that flow from each; or ignore the entire person/property distinction as impossible, undesirable, and unnecessary. The first suggestion may appear ridiculous, if not horrifying. However, honest evaluation of the person/property mystique reveals that ignoring it is less radical than it initially appears. The debate is an irrelevant obstacle to reasoned evaluation of social policy regarding reproductive technologies and their results, at least when assessing the implications of death time transfers of wealth.

For example, suppose that a wealthy married couple fertilizes and freezes two embryos and the couple then dies. A jurisdiction that characterizes a frozen embryo as either person or property for all times and for all purposes might rule that the frozen embryos are property. Thus, the embryos would be incapable of inheriting wealth, and the estate should be distributed to the living heirs of the decedents. Suppose also that a subsequent case presents similar facts, except that no other living heirs of the decedents exist. The court might then rule that rather than escheat, the wealth should be held in trust for the frozen embryos in the event of their subsequent implantation and live birth. This impliedly labels the embryos as surviving persons. What if instead of dying, the couple divorces? The jurisdiction might feel constrained by precedent to approach this situation as a custody dispute rather than one of property division. This hypothetical demonstrates the difficulties inherent in applying strict labels to frozen embryos.

C. What Real Difference Does the Label Make?

Assuming that a "right to life" begins at conception, ⁶⁰ neither frozen sperm nor eggs attain this right while frozen embryos do. But a right to life neither automatically equals life nor does it answer whether that life should have the legal right to own property. ⁶¹ Not all human life is accorded the status of a natural or even juridical person. ⁶² If property is entirely the work of law, the law can take it away. ⁶³

Assuming that neither life nor a right thereto begins at conception, a frozen embryo is not a person. That need not mean that it cannot own property because that right is not limited to human beings: corporations own assets and companies own products. Within the context at hand, the person/property and life/non-life questions need no response. If it is human, it does not necessarily follow that the frozen embryo can own property, and even if it is not human, there is no foregone conclusion that it cannot. Historically, just because an entity was labeled human did not necessarily mean that the law permitted it to own property or that others could not treat it as property. These semantic exercises fail to help address specific questions such as whether a frozen embryo should be able to inherit property.

Additionally, the traditional analysis erroneously focuses on the normative definition of property in creating the paradox. Legally, property is not a tangible thing but rather the series of

There does not seem to be much intrinsically valuable in an embryo being human. It will have a human karyotype and metabolism, but it does not possess any of the higher functions or senses of older fetuses, and could only make a biochemical response to other biochemical stimuli. An embryo is an embryo, not a fetus or a child. Another related defence offered by absolutists is the need to respect the individual genotype as established at fertilization, the basis of individuality. But this argument cannot be accepted either, because genotypes might be established long after fertilization, for example in twins, mosaics and chimaera.

⁶⁰ See BAYLES, supra note 21, at 54 (noting that most conservatives argue that fetus's life begins at moment of conception).

⁶¹ One ethicist writes:

See Edwards, supra note 27, at 103.

⁶² See Wolf, supra note 54, at 26.

⁶⁵ See JEREMY BENTHAM, THE THEORY OF LEGISLATION 111-13 (1931). Note that Bentham's formulation is particularly appropriate within the estate context, which characterizes the right to transfer and receive an estate as purely statutory. See id.

enforceable rights to use, possess, enjoy, exclude, dispose, and destroy that thing.⁶⁴ While ownership is usually thought to embody all of these rights, any one of them, standing alone, is property. Accordingly, the proper inquiry is not whether the embryo itself is a person or property but whether and to what extent any person should have any of the rights enumerated above with respect to it.

The law already accords some of these rights in related contexts. Persons have certain rights with respect to born children that could be loosely called proprietary even though society classifies them in different terms. Custody or visitation limits exclude others, to a degree, from the child. Crudely stated, placing the child for adoption or designating the child's legal guardian by will results from a parent's qualified right to "possess" and "transfer" the child. A parent even has the right to "destroy" a child to the extent that one deems an unborn embryo a living human being. To say that a parent has certain property-type rights in a child neither states nor endorses that the parent owns the child or that the child is the property of the parents. The issue is how far the rights go and under what circumstances, which depends on the context and extent of control sought.

Likewise, genetic contributors have the right to transfer their gametes, whether sperm, egg, or embryo, or they may enjoy and use them themselves. Fertility clinics may have contractual rights to possess the frozen embryos and to exclude others from defeating that relative right. Genetic contributors have the right to destroy the frozen embryos. That these rights are legal property rights does not mean that the embryo is property as well.

Irrespective of how the law characterizes frozen embryos, the key is to identify which and to what extent specific property rights should be exercised over them. Viewed in this context, it

⁶⁴ See generally Roscoe Pound, The Law of Property and Recent Juristic Thought, 25 A.B.A. J. 993, 996 (1939).

⁶⁵ See infra Part IV (discussing property-like nature of frozen embryo and its transfer and acquisition).

⁶⁶ See infra Part IV (discussing property-like nature of frozen embryo and respecting donors' desires for such embryo).

does not matter whether the law considers frozen embryos persons or property because ownership and owning need not be mutually exclusive terms.

III. THE PERSON-LIKE CONSTRUCTION: THE FROZEN EMBRYO AS OWNER

A. Property Can Transfer to Frozen Embryos Under Testate and Intestate Succession

1. Testate Succession

The ability to designate what property will be transferred and to whom is an organizing principle of estate law. While maximum testamentary freedom suggests that a frozen embryo, or a child born thereof, could benefit from a decedent's largesse, the legality of the transfer depends upon to whom a testator cannot, versus must, leave property. The frozen embryo falls into neither category and, thus, should be capable of acquiring property through devise if the decedent so chooses and no other legal impediment to the transfer exists.⁶⁷

a. To Whom Cannot a Testator Transfer Property?

Testate succession is statutorily created: "[T]he dead hand rules succession only by sufferance. Nothing in the Federal Constitution forbids the legislature of a state to limit, condition, or even abolish the power of testamentary disposition over property within its jurisdiction." Exercise of the coordinate power to

⁶⁷ See Fla. STAT. ANN. § 742.17(4) (West 1997) (stating that child conceived after testator's death may not state claim against probate estate unless child is explicitly provided for in will); UNIF. STATUS OF CHILDREN OF ASSISTED CONCEPTION ACT § 4 (comment) (1997) (permitting testators to provide for posthumously conceived and born children in their will).

⁶⁸ Irving Trust Co. v. Day, 314 U.S. 556, 562 (1942); see also Magoun v. Illinois Trust & Sav. Bank, 170 U.S. 283, 295 (1898) (holding that state has broad power to regulate property); Mager v. Grima, 49 U.S. (8 How.) 490, 493 (1850) (holding that every state has power to regulate manner and terms upon which real or personal property may be transferred by will); Hecht v. Superior Court, 20 Cal. Rptr. 2d 275, 280 (Ct. App. 1993) (holding that right of inheritance and testamentary disposition is entirely within control of state legislature); Decker v. American Univ., 20 N.W.2d 466, 470 (Iowa 1945) (stating that neither state nor Federal Constitution guarantees individual's right to control or dispose of property after death); Hall v. Vallandingham, 540 A.2d 1162, 1164 (Md. Ct. Spec. App. 1988) (stat-

limit classes of beneficiaries is infrequent and courts usually enforce testamentary dispositions unless they are contrary to public policy or positive law.⁶⁹ The issue hinges more on what entities may own property, irrespective of how it is gained.⁷⁰

Within these parameters, legislatures rarely place categorical limits on testamentary acquisition of property. A testator may leave property to any living human beneficiary, whether minor,⁷¹ ward,⁷² disabled or incapacitated,⁷⁵ criminal,⁷⁴ or

ing that right to receive property by devise or descent is privilege granted by state); In re Moore's Estate, 223 P.2d 393, 395 (Or. 1950) (asserting that right to take property by devise exists only by statute).

See Alper v. Alper, 65 A.2d 737, 741 (N.J. 1949) (stating that testamentary dispositions are enforced unless contrary to public policy or rule of positive law); In n Getman's Will, 291 N.Y.S.2d 395, 397 (N.Y. App. Div. 1968) (asserting that absent statutory or common law limitations, testators have right to devise and bequeath property to any person or corporation); In n Estate of Herz, 651 N.E.2d 1251, 1254 (N.Y. 1995) (stating that testators may dispose of property as they wish, so long as it is not contrary to public policy); In n Estate of Raney, 799 P.2d 986, 992 (Kan. 1990) (stating that persons with testamentary capacity have power to dispose of property as they wish without court interference).

Most testamentary restrictions are decedent-oriented, premised on protecting decedents from their own folly or undue pressure from others. Historically, mortmain statutes voided charitable bequests made "suspiciously" close to decedents' death. See, e.g., IDAHO CODE § 15-2-615 (1979) (repealed 1994) (requiring that charitable bequests be made 120 days before death of testator unless caused by accident); Fl.A. STAT. ch. 732.803 (1985) (repealed 1991) (requiring charitable bequests be made six months before death of testator). These restrictions focused more on ensuring that the beneficiary did not unduly influence the testator rather than on the identity of the beneficiary. Nevertheless, some legislatures attempted to impose testamentary restrictions for public policy reasons. For example, a recently overturned Louisiana law prevented unmarried cohabitants from making testamentary or inter vivos gifts to each other. See LA. CIV. CODE ANN. art. 1481 (West 1987) (repealed 1987). The repeal of the few remaining limitations on testamentary freedom reveals the legislative reluctance to limit such freedom.

- ⁷⁰ See, e.g., Johnstone v. Patterson, 418 P.2d 656, 659 (Okla. 1966) (noting that title may pass by last will and testament).
- See UNIF. PROBATE CODE § 5-103 (amended 1993) (defining "minor" as person under 21 years of age).
 - ⁷² See id. (defining "ward" as person for whom guardian has been appointed).
- ⁷³ See id. (defining "incapacitated person" as one who lacks understanding or capacity to make or communicate responsible decisions).
- ⁷⁴ See, e.g., In re Cirello's Estate, 271 N.Y.S.2d 841, 843 (Surr. Ct. 1966) (stating that convicted criminals do not lose capacity to take by will or inheritance); Board of Trustees of Police Pension & Retirement Sys. v. Weed, 719 P.2d 1276, 1278 (Okla. 1986) (asserting that prisoners may inherit property); In re Harrell, 470 P.2d 640, 658 (Cal. 1970) (en banc) (asserting that prisoners may inherit property). However, under section 2-803 of the Uniform Probate Code and state slayer statutes, certain persons convicted of or found criminally accountable for a decedent's death forfeit all rights to acquire property from that estate. See UNIF. PROBATE CODE § 2-803 (amended 1993); see also Ronald R. Volkmer, Slayer Statutes

alien.⁷⁵ In most jurisdictions, testators may also leave property to any living but non-human entity, whether flora or fauna, through trust.⁷⁶ Most notably, a testator may bequeath or devise property to a non-living, non-human entity, such as a government,⁷⁷ a corporation,⁷⁸ or a charity.⁷⁹ The person/property and life/non-life dichotomies, therefore, appear irrelevant to determining the legal capacity of a child born of a frozen embryo or, for that matter, the embryo itself to take property through testate succession. It nevertheless arises obliquely through the requirement that a beneficiary "survive" the

Applied in Different Situations, 23 EST. PLAN. 139, 139 (1996) (defining "slayer statutes" as prohibiting slayers from taking under decedent's will or by intestacy). For a thorough discussion of modern slayer statutes, see Jeffrey G. Sherman, Mercy Killing and the Right to Inherit, 61 U. CIN. L. REV. 803, 844-76 (1993).

⁷⁵ See UNIF. PROBATE CODE § 2-112 (amended 1993) (stating that testator may designate alien as heir).

⁷⁶ See, e.g., Carr v. Jones, 403 S.W.2d 181, 183 (Tex. Civ. App. 1966) (stating that testators could fund park through trust only if used for purely charitable purpose). Such dispositions could be considered charitable trusts for nature or environmental preservation. They might also fit within state legislation. For example, Uniform Probate Code section 2-907 (a) permits trusts for any lawful purpose, such as to animals, and allows enforcement of "honorary trusts." See UNIF. PROBATE CODE § 2-907(a) (amended 1993); Barbara W. Schwartz, Estate Planning for Animals, 113 Tr. & EST. 376, 377 (1974) (discussing difficulties and possible solutions for testators wishing to create trusts for animals). At least one court, however, voids such a request. See In ne Estate of Russell, 444 P.2d 353, 363 (Cal. 1968) (en banc) (holding that dog cannot be beneficiary of will).

⁷⁷ See 79 AM. JUR. 20 Wills § 175 (1975) (stating that absent constitutional or statutory restrictions, United States and local governmental entities may be beneficiaries under will); see also Mississippi Valley Trust Co. v. Ruhland, 222 S.W.2d 750, 752 (Mo. 1949) (holding that publicly funded state institution could inherit property); Note, Validity of State Restrictions on Testamentary Disposition to the United States, 59 YALE L.J. 793, 797 (1950) (describing various devices that testators may use to circumvent limitations to government bequests). For the express authority of the federal government to acquire property through devise, see 43 U.S.C. § 1181f-1 (1939) (authorizing Secretary of Treasury to accept certain real estate devised to United States) and 40 U.S.C. § 304 (1994) (authorizing General Services Administration to take custody of and dispose of lands that United States acquires by devise).

See In re Moore's Estate, 223 P.2d 393, 396 (Or. 1950) (stating that there are very few statutory restrictions prohibiting public corporations from taking real property by devise (citing JOHN R. ROOD, ROOD ON WILLS § 200, at 159 (2d ed. 1926))). The most common limitation is that the testamentary acquisition be authorized by the corporate charter or by statute. See R.P. Davis, Annotation, Power and Capacity of Bank to Take Devise or Bequest, 8 A.L.R. 2d 454, 455 (1949) (stating that whether incorporated bank may take by devise depends on statutory restrictions).

⁷⁹ See, e.g., UNIF. PROBATE CODE §§ 5-103(14), 1-201(35) (amended 1993) (defining "person" as individual or organization and further designating latter to include corporations incorporated for any legal or commercial purpose).

decedent,80 an unwieldy term when applied to frozen embryos. Because to survive connotes the opposite of "to predecease" or "to die before," it appears that life is a prerequisite to survival. Life suggests "existence" — the beneficiary both has been born and has not yet died. Whether deemed "live" or not, a frozen embryo fits somewhere in survivorship limbo: it has never been born but it has not yet died. While it is unclear whether courts would deem the frozen embryo or a subsequently born child a survivor, two points dispose of these difficulties. First, irrespective of the life/non-life status of the frozen embryo,81 its capacity for subsequent implantation and live birth should constitute survival and negate any characterization of death under the spirit of testate schemes. Second, the requirement that the beneficiary be born and identifiable at a particular time, such as the decedent's death, is elastic. The law accommodates both children in gestation and after-born children.82 As such, it seems that current legal doctrine permits a frozen embryo to take property, at least upon live birth.83

In any event, the bio-medical survival requirement is irrelevant to many testamentary dispositions, such as those to corporations.

See, e.g., UNIF. PROBATE CODE § 2-104 (amended 1993) (requiring that testate or intestate taker survive decedent's death by 120 hours). By contrast, some statutes only require that the devisee survive the testator for an instant. See, e.g., OKLA. STAT. ANN. tit. 58, § 1001 (West 1995) (treating beneficiary as having survived testator if there is "no sufficient evidence" to contrary).

Questions over a frozen embryo's "right to life" or characterization as a "human being" aside, it seems absurd to argue that a fertilized egg is not life when that status is accorded to microorganisms, bacteria, and rocks from Mars. See Paul Hoversten, Did Life Worm Its Way onto Mars?, USA TODAY, May 28, 1997, at A3 (discussing discovery of life on Mars).

See, e.g., DeCoste v. Superior Court, 470 P.2d 457, 457 (Ariz. 1970) (holding that after-born daughter was entitled to share in father's estate); Ebbs. v. Smith, 394 N.E.2d 1034, 1036 (Ohio 1979) (stating that testator's child in gestation is considered "in existence" for purposes of testate succession); In re Will of Hennes, 240 So. 2d 859, 860 (Fla. Dist. Ct. App. 1970) (holding that takers born after will execution and testator's death share equally with takers alive at will's execution); Dew v. Shockley, 243 S.E.2d 177, 181 (N.C. Ct. App. 1978) (holding that children not yet born or adopted at testator's death held contingent remainder, and vesting would occur upon birth or adoption). Additionally, many jurisdictions avoid imposing the strict 120-hour survival rule when doing so would result in the estate's escheat to the state. See, e.g., UNIF. PROBATE CODE § 2-104 (stating that section does not apply where property would escheat to state).

⁸³ See In re Will of Hennes, 240 So. 2d at 860 (permitting takers born after will execution to share in estate); Harding v. DeAngelis, 657 N.E.2d 758, 761 (Mass. App. Ct. 1995) (holding that unborn fetus cannot be heir).

The positivistic response that these entities remain juridical persons is both dissatisfying and easily manipulated. If a corporation can be a juridical person, so may a frozen embryo for purposes of testate succession. It is illogical to hold otherwise; surely public policy weighs in favor of upholding transfers to support life, even such tenuous strains as that embodied by a frozen zygote.

b. To Whom Must a Testator Transfer Property?

Anglo-American jurisprudence endorses relatively unbridled testamentary disposition. While title-based jurisdictions statutorily protect a surviving spouse's elective share,⁸⁴ no jurisdiction save Louisiana imposes the additional requirement that decedents leave property to their children.⁸⁵ Assuming arguendo that the legal system characterizes frozen embryos as children, any decadent could intentionally omit them from a class of beneficiaries.⁸⁶ However, their unintentional omission could trigger pro-

⁸⁴ See, e.g., UNIF. PROBATE CODE §§ 2-201 to 214 (amended 1993) (providing for surviving spouse's election to take up to 50% of augmented estate depending on length of marriage).

⁸⁵ See LA. CIV. CODE ANN. art. 1493 (West Supp. 1997) (establishing children as "forced heirs"); id. art. 1619 (West 1987) (allowing disinheritance only upon just cause). Maintenance, homestead, and support rights arguably constitute sub rosa forced provision for children irrespective of their treatment under the decedent's will. For example, the Uniform Probate Code family allowance provides for the decedent's spouse and children whom the decedent was obligated to support as well as for children whom the decedent actually supported. See UNIF. PROBATE CODE § 2-403 (amended 1993).

See, e.g., UNIF. PROBATE CODE § 2-802 (amended 1993) (providing exceptions to rule that children born after execution of will receive intestate, including testator intent to omit); Tex. Probate Code § 67 (West 1980) (explaining that after-born, pretermitted children receive intestate unless provided for by settlement); MASS. GEN. LAWS ch. 191, § 20 (West 1990) (noting that testator may omit children born before or after testator's death in will). Conversely, a decedent within Louisiana could be required to transfer property to a frozen embryo depending on its statutory definition as a "child," which seems to violate public policy as much as prohibiting such a transfer. This may explain why only Louisiana specifically excludes frozen embryos from the ambit of qualified property donees. See La. Rev. Stat. Ann. § 9:133 (West 1991) (discussing inheritance rights); La. CIV. Code Ann. art. 1494 (West Supp. 1997) (explaining that fertilized embryo is not capable of receiving donation inter vivos unless implanted in womb at time of gift or testator's death). Notably, the Louisiana civil code accords legal status to the frozen embryo for other purposes. For example, as a juridical person, it has the right to sue or be sued. See La. Rev. Stat. Ann. § 9:124 (West 1991) (describing legal status of human embryos).

tection under state pretermission statutes, although probably only upon live birth.⁸⁷

c. The Rule Against Perpetuities

The Rule Against Perpetuities ("Rule") stabilizes title and prevents excessive dead-hand control over property by invalidating any property interest capable of vesting more than twenty-one years (plus traditional gestational periods) after some life in being at its creation.⁸⁸ It applies to most assisted reproductive methods in ways that far exceed the contemplation of its crafters. When applying the rule in the context of new reproductive technologies, easy becomes difficult and far-fetched plausible.⁸⁹

Fittingly, reproductive technologies render the scenario that once provoked the most derision — the "Fertile Octogenarian" — quite possible. That hypothetical presumed "the impossible": that a woman well-past child-bearing age and even having undergone a hysterectomy could reproduce. As recent events in California illustrate, ova can be retrieved, stored, and later implanted in either the "octogenarian" or a surrogate, thus violating the Rule. See, e.g., Nanci Hellmich, Oldest New Mom is 63; California Birth Renews Debate on Age & Motherhood, USA TODAY, Apr. 24, 1997, at 1D (discussing 63-year-old woman who gave birth to healthy baby girl by using stored ova); Melita Marie Garza, After Lying to Get into an In-Vitro Fertilization Program, 63-Year-Old Has a Baby, CHI. TRIB., Apr. 24, 1997, at 11 (describing how 63-year-old woman had baby after in vitro fertilization).

⁸⁷ See, e.g., UNIF. PROBATE CODE § 2-302(a) (amended 1993) (providing that if testator had no children living at execution, unintentionally omitted after-born or adopted child receives share equal to intestate share unless omission appears intentional). Strikingly, the date of birth rather than the date of conception controls. Thus, a child five months in utero when the parent/testator executed his will qualified as after-born under a pretermitted heir statute. See DeCoste v. Superior Court, 470 P.2d 457, 459-60 (Ariz. 1970).

⁸⁸ See JOHN CHIPMAN GRAY, THE RULE AGAINST PERPETUITIES § 201, at 191 (4th ed. 1942). If property is transferred through will, the interest is created upon probate; if through inter vivos conveyance, the interest is created at transfer; if through trust, the interest is created upon its irrevocability. See PAUL G. HARKELL, PREFACE TO WILLS, TRUSTS AND ADMINISTRATION 29, 75, 80 (2d ed. 1994).

Thomas Atkinson's well-regarded treatise notes: "The recent perfection of a method of freezing spermatozoa so that children can be born years after the father's death might, in theory, have ramifications in the law of succession, but in practice this manner of procreation is not apt to become popular enough to give much concern." THOMAS ATKINSON, HANDBOOK ON THE LAW OF WILLS § 20, at 75 n.6 (2d ed. 1953). These remarks became obsolete within a decade and certainly do not resonate today. See generally W. Barton Leach, Perpetuities in the Atomic Age: The Sperm Bank and the Fertile Decedent, 48 A.B.A. J. 942, 944 (1962) (proposing to limit duration of sperm donor's life in being to period of reproductive capacity, including post-mortem sperm viability); Winthrop D. Thies, A Look to the Future: Property Rights and the Posthumously Conceived Child, 110 TR. & EST. 922, 922 (1971) (discussing inheritance ramifications of frozen sperm).

Assume that Testator devises property to A for life, remainder to A's unborn children. While A's life estate poses no problem, the contingent remainder in A's unborn children is initially subject to the Rule.⁹⁰ Half a century ago, courts would nevertheless consider the interest valid by assuming that any child of A would be born within A's life or approximately nine months thereafter. Reproductive technologies drastically realign those assumptions.

If male, A can store frozen sperm. Consequently, potential reproduction with A's gametes would not end upon his death. Rather, the indefinite length of sperm storage⁹¹ renders it possible to bear "children of A" indefinitely into the future, which violates the Rule. Twenty years ago, this difficulty could have been bypassed by drafting "to A for life, remainder to the children of A and B," assuming that B would be the natural mother. Irrespective of A's death survived by frozen sperm, any children of A and B would have been born within B's life. That maneuver will no longer solve the problem.

Having mastered the technology to freeze both ova and embryos as well as sperm, it is possible that the children of A and B could be born years after the death of both parties. 92 By conservative estimation, frozen ova can last a short time unharmed and frozen embryos can last two to ten years. 94 Con-

⁹⁰ The Rule generally applies to executory interests and contingent remainders. See GRAY, supra note 88, at 107-08. A remainder is contingent whenever its taker is unclear, as when the remainderman is presently unascertainable or even unborn or where a condition precedent to taking must be met. See id.

⁹¹ See Emil Steinberger & Keith D. Smith, Artificial Insemination with Fresh or Frozen Semen: A Comparative Study, 223 JAMA 778, 782-83 (1973) (finding that fresh and frozen semen resulted in comparable conception rates, but reserving conclusion on effectiveness of sperm stored long-term).

See, e.g., George P. Smith, II, Australia's Frozen 'Orphan' Embryos: A Medical, Legal and Ethical Dilemma, 24 J. FAM. L. 27, 28 (1985-86) (relating story of Mario and Elsa Rios who died in plane crash leaving two embryos frozen at Melbourne medical center). As neither Mario nor Elsa Rios had executed a will, intestacy law controlled. See id. at 28.

In the hypothetical situation posed, children of A and B could be born years after the death of both parties using a surrogate mother or upon mastering extra-corporeal gestation.

Scientists currently find oocyte freezing and thawing to be the most difficult of the reproductive technologies to complete successfully because egg chromosomes are less resilient than sperm. While egg freezing is unlikely to surpass embryo freezing in the near future, it may soon become as accepted as sperm cryopreservation. See U.S. CONGRESS, OFFICE OF TECHNOLOGY ASSESSMENT, INFERTILITY: MEDICAL AND SOCIAL CHOICES 299 (1988)

tinuous technological advances suggest much longer storage periods are possible, thus violating the Rule whenever frozen embryos could be part of a class gift.⁹⁵ While noteworthy, these transgressions do not necessarily require total prohibition of testamentary transfers to frozen embryos.

First, interests to frozen embryos may not violate the Rule at all. If the law deems frozen embryos "lives in being" themselves, and if they existed at the creation of the interest, the conveyance would never technically violate the Rule because any interest given to the embryo would always vest or fail within its own "life." Second, well-established doctrines already simplify the Rule and prevent its more onerous applications; ⁹⁶ extending them to

[hereinafter Infertility: Medical and Social Choices] (describing likely effect of technology on cryopreservation); Traci Watson, Storing up Eggs for a Rainy Day. Ova on Ice, U.S. News & World Rep., June 23, 1997, at 49 (discussing difficulty of freezing human eggs due to DNA warping by cold temperatures and damage caused by preservatives). Most researchers believe that egg freezing will become possible within the next ten to fifteen years. So far, medical literature reports fewer than ten births from frozen eggs. See Al-Hasani, S., Diedrich, et al., Cryopreservation of Human Oocytes, 2 Hum. Reprod. 695, 697 (1987) (describing different freezing methods and successful results); Alan Trounson, Preservation of Human Eggs and Embryos, 46 Fertility & Sterility 1, 4-6 (1986) (explaining results of embryo cryopreservation). But see Kolata, supra note 32, at A1 (noting increased demand for frozen embryos).

- Research suggests that embryos frozen and stored in liquid nitrogen remain viable for ten years or even longer. See INFERTILITY: MEDICAL AND SOCIAL CHOICES, supra note 93, at 298 (stating that cryopreserved animal embryos frozen at -196 degrees centigrade remain viable for ten years); Gail D. Stillman, In Vitro Fertilization & Cryopreservation, 67 MICH. B.J. 601, 605 (1988) (discussing inheritance problems that arise because fertilized eggs can be frozen and stored indefinitely); Trounson, supra note 93, at 10-11 (describing ethical reasons for limiting storage time).
- Recognizing this possibility, some statutes disregard the chance of posthumous birth when analyzing the validity of wills, trusts, or related instruments. See, e.g., UNIF. STATUTORY RULE AGAINST PERPETUITIES § 1(d) (amended 1990) (disregarding possibility that child will be born after individual's death when determining validity of nonvested property interest or power of appointment); CAL. PROB. CODE ANN. § 21208 (West Supp. 1997) (disregarding possibility that child will be born after individual's death when determining validity of power of appointment).
- For example, the cy pres doctrine reforms an otherwise invalid conveyance if the testator's intent can be preserved, and wait and see statutes sustain interests that actually vest within the perpetuities period or its statutory equivalent. See, e.g., Lawrence W. Waggoner, Uniform Statutory Rule Against Perpetuities, 21 REAL PROP. PROB. & TR. J. 569, 602 (1986) (discussing parameters of wait and see reform). Additionally, a testator can always circumvent the Rule by including a savings clause to ensure compliance. See id. at 574 (explaining savings clause and principle of wait and see). Nevertheless, such formalism should not be required before society gains a full appreciation of the legal ramifications of the technologies.

assisted reproduction requires little stretch. Finally, the Rule was designed when current technologies were beyond ken. The law risks stagnation and disrespect when it fails to keep pace with society. Even if traditional exceptions do not apply to assisted reproduction, society should devise other methods to accommodate and better protect the rights of the frozen embryo, either because it is life and, therefore, deserves societal protection or because the testator's view of it as life or a close equivalent thereto deserves individual and intent-based protection.

2. Intestate Succession

Legislatures design statutes of descent and distribution to parallel the distribution most decedents would choose via will and to fairly and efficiently control the devolution of intestate estates. Because most decedents wish to provide for their closest relatives, intestacy goals concomitantly embrace the societal goal of providing economic security for family members, who are usually affected the most by the decedent's death.⁹⁷

By necessity, intestacy statutes embody broad and imprecise approximations of traditional donative wishes and, thus, are illequipped to deal with the frozen embryo. Until recently, all that the public consciousness and, for that matter, medical science knew of conception was that it occurred in the womb; little consideration was given to the status of the pre-implantation embryo or the protection due it. The increasing application of reproductive technologies to the procreative process will provide answers to two pivotal questions: whether intestates want their frozen embryos or children born of them to inherit and whether legislators will accommodate that intent through statutes of descent and distribution. Until then, the ability of frozen embryos to inherit remains unclear, but at least possible, under current schemes.

Given intestacy's legislative goals and resulting presumptions, most schemes share organizing principles. First, a surviving spouse is the preferred taker to the estate, 99 normally sharing

⁹⁷ Bentham asserts that intestate succession should provide for the rising generation, prevent disappointment, and equalize fortune. See BENTHAM, supra note 63, at 177-86.

⁹⁸ See Dunstan, supra note 48, at 221.

⁹⁹ See, e.g., UNIF. PROBATE CODE § 2-102 (amended 1993) (giving bulk of estate to

with the decedent's issue and sometimes parents or siblings. Second, if there is no surviving spouse, the decedent's surviving children or more remote issue take to the exclusion of all others, either directly or through representation.¹⁰⁰ Third, if there is neither a surviving spouse nor issue, the estate passes to the decedent's ancestors or collateral heirs; if there are none, the property escheats to the state.¹⁰¹ Finally, persons born after the decedent's death are ineligible beneficiaries except for heirs in gestation at the time of the decedent's death who are subsequently born alive.¹⁰²

This deceptively simple scheme masks numerous value choices affecting the heirship status of frozen embryos and children born of them. The backdrop to these difficult questions is the proper definitions of child, parent, issue, and descendant and more disquieting inquiries into the meaning of conception, gestation, survival, death, and life. Even attempted definitions are tautological and provide little guidance.

The term "issue" normally means the decedent's descendants of any generation, whether biological or adopted.¹⁰³ Terms relevant to descendance include "parent" and "child," ¹⁰⁴ both of which are often generically defined to include natural and adoptive relationships but to exclude step, foster, and grandparent relationships.¹⁰⁵

spouse irrespective of surviving parents, descendants, or decedent's other kin).

¹⁰⁰ See id. §§ 2-103, -106

¹⁰¹ See id. § 2-105.

See infra notes 107-15 and accompanying text (discussing parameters of posthumous birth). There is a rebuttable presumption that conception occurs ten lunar months prior to birth. This relatively limited time period is thought to ensure that the time elapsed before final distribution of the estate will not be unduly burdensome. See Equitable Trust Co. v. McComb, 168 A. 203, 205 (Del. Ch. 1933) (setting forth court's method for determining gestation); In re Niles' Will, 99 N.Y.S.2d 238, 243 (N.Y. 1950) (delineating time frame of human gestation as 280 days). Section 4 of the Uniform Probate Code extends the presumptive period to 300 days. See UNIF. PROBATE CODE § 4 (amended 1993).

See UNIF. PROBATE CODE § 1-201(21) (amended 1993) (defining "issue"). While an adopted individual is the child of the adopting parents, adoption by the spouse of either natural parent preserves the relationship between the child and that natural parent as well as the child's right to inherit from or through the other natural parent. See UNIF. PROBATE CODE § 2-114 (amended 1993) (delineating impact of adoptions on intestate succession).

Parties may establish the parent/child relationship under the Uniform Parentage Act or appropriate state common or statutory law. See UNIF. PARENTAGE ACT § 1 (1987).

¹⁰⁵ See, e.g., UNIF. PROBATE CODE § 1-201(5), (33) (amended 1993) (defining "child" and "parent"). Marital status is irrelevant to terms of descendance. See id. § 2-114.

The frozen embryo does not fit into this model. The questions remain: Who or what is the parent: the genetic contributor, the intended gestational mother, the social parent, the fertility specialist, ¹⁰⁶ the storage facility, or the intended embryo recipient? Who or what is the child: the sperm, ova, fertilized egg, frozen embryo, or implanted embryo?

Heirs as well as beneficiaries must survive the decedent, posing difficulties identical to those encountered in the testate context. However, relevant to this requirement is intestacy law's recognition of posthumously born relatives of the decedent, which renders the specific state statute critical to determining whether the frozen embryo is capable of heirship immediately or upon implantation and birth. Three conventional schemes exist.

First, relatives conceived or begotten before the decedent's death but born thereafter inherit as if born during the decedent's life.¹⁰⁷ A child born of a frozen embryo could

The geneticist's, embryologist's, or scientist's perception of embryo "parenthood" or "ownership" is not improbable. For example, discussing a failed in vitro attempt, Edwards explains, "This [implantation] was a wonderful stimulus to us We knew that our embryos were capable of implanting, that they could attach themselves to the wall of the uterus and were capable of sustained fetal growth." See Edwards, supra note 227, at 69 (demonstrating scientists' possessory view of embryo).

¹⁰⁷ See, e.g., Alaska Stat. § 13.12.104 (Michie 1996) (stating that child must live at least 120 hours); ARK. CODE ANN. § 28-9-210 (Michie 1987) (using term "conceived"); CAL. PROB. CODE § 6407 (West 1991) (using term "conceived"); COLO. REV. STAT. § 15-11-108 (1997) (stating that child must live for 120 hours and using term "conceived"); D.C. CODE ANN. § 19-314 (1997) (allowing same inheritance for child born after death as before death); FLA. STAT. ANN. § 732.106 (West 1995) (using term "conceived"); IND. CODE § 29-1-2-6 (1979) (using term "begotten" instead of "conceived"); IOWA CODE § 633.220 (1992) (requiring that heirs must be begotten before, but may be born after, parents' death); ME. REV. STAT. ANN. tit. 18-A, § 2-108' (West 1981) (using term "conceived"); MD. CODE ANN., EST. & TRUSTS § 3-107 (1991) (using term "conceived"); NEB. REV. STAT. § 30-2308 (1995) (using term "conceived"); N.J. STAT. ANN. § 3B:5-8 (West 1983) (using term "conceived"); OHIO REV. CODE ANN. § 2105.14 (Banks-Baldwin 1994) (using term "begotten" instead of "conceived"); Or. REV. STAT. § 112.075 (1995) (using term "conceived"); S.C. CODE ANN. § 62-2-108 (Law Co-op. 1987) (limiting qualifying heirs to issue of decedent); TENN. CODE ANN. § 31-2-108 (1984) (using term "conceived"); UTAH CODE ANN. § 75-2-108 (1993) (using term "conception"); VA. CODE ANN. § 64.1-8.1 (Michie 1995) (using terms "conceived" and "conception"); Id. § 20-156 (applying provision to child of assisted conception); WIS. STAT. § 852.03(4) (1991) (including persons born after death of decedent and conceived before death in definition of heirs); WYO. STAT. ANN. § 2-4-103 (Michie 1980) (using term "conceived"). By contrast, a Rhode Island statute states that a person must be in being and able to take at the time of the intestate's death unless the takers are the intestate's children. See R.I. GEN. LAWS § 33-1-4 (1995). Whether the term requires mere existence or classification as a human being is unclear; whether a frozen embryo meets either category,

inherit because conception occurs upon fertilization. The embryo itself could not acquire property.

Second, posthumous children inherit as if born during the decedent's lifetime. 108 A child born of a frozen embryo could inherit as posthumous. The embryo itself could inherit if considered a child, which is unclear but unlikely from most statutory or common law definitions.

Third, children in gestation are treated as if living at decedent's death or upon surviving 120 hours after birth. A frozen embryo clearly does not fit within this category, which requires birth. However, whether a child born of a frozen embryo can inherit turns on the definition of "gestation" and its application to frozen embryos. The acute differences between the term's normative and medical meanings render its definition critical to the application of the doctrine.

particularly the latter, is debatable. See Davis v. Davis, 842 S.W.2d 588, 597 (Tenn. 1992) (concluding that pre-embryos are neither persons nor property).

See, e.g., HAW. REV. STAT. § 532-9 (1993) (stating that posthumous children inherit as if born during father's lifetime); IDAHO CODE § 55-108 (1994) (stating that posthumous children are entitled to take as if living at death of parent); 755 ILL. COMP. STAT. ANN. 5/2-3 (West 1992) (stating that posthumous children are entitled to take as if living at death of parent); KAN. STAT. ANN. § 59-501 (1994) (defining child to include children born after parents' death); MASS. GEN. LAWS ANN. ch. 190, § 8 (West 1990) (stating that posthumous children are considered living at time of their parents' death); Mo. REV. STAT. § 474.050 (1992) (stating that posthumous children shall inherit as if born in lifetime of intestate); NEV. REV. STAT. § 134.140 (1995) (stating that posthumous child is considered living at parents' death); OKLA. STAT. tit. 84, § 228 (1990) (stating that at time of parents' death, posthumous-born child is considered living); WASH. REV. CODE § 11.02.005(3) (1987) (stating that posthumous children are considered living when parents die).

See, e.g., UNIF. PROBATE CODE § 2-108 (amended 1993) (stating that relatives conceived before decedent's death but born thereafter inherit as if born during life of decedent); see also ARIZ. REV. STAT. ANN. § 14-2108 (West 1994) (stating that child in gestation is living at that time if child lives at least 120 hours after its birth); MONT. CODE ANN. § 72-2-118 (1995) (treating fetus in gestation as living if it lives 120 hours or more after birth); N.M. STAT. ANN. § 45-2-108 (Michie 1995) (defining fetus in gestation as living if it lives 120 hours or more after birth); N.D. CENT. CODE § 30.1-04-08 (1996) (treating fetus as living if it lives 120 hours or more after birth); S.D. CODIFIED LAWS § 29A-2-108 (Michie Supp. 1996) (stating that individual is living if alive more than 120 hours).

If "in gestation" means in utero or en ventre sa mere, 110 a frozen embryo could not fit within heirship status unless implanted and, thus, no longer frozen at the decedent's death. But medically, gestation embraces the ongoing stages of embryonic development: cleavage, organogenesis, and fetal growth. A fertilized egg that has been cultured to about fourteen days and frozen passes cleavage into organogenesis and is, therefore, in gestation, thus fitting within the technical parameters of the UPC, state, and common laws of inheritability if or when it is subsequently born alive. 112

Only two schemes anticipate and explicitly address these issues. A Louisiana probate statute states that "children in the mother's womb are considered as if they were already born," 113 thereby excluding frozen embryos. More explicitly, the civil code bars inheritance rights of an in vitro ovum unless it develops into an unborn child, and then it can only inherit from the gestational/social parents. 114 The USCACA provides that a genetic contributor who dies pre-conception or implantation is not a parent of the resulting child 115 and that the parent/child

See CAL. PROB. CODE § 21208 (comment) (West 1997) (stating that child in gestation who is later born alive is regarded as alive at commencement of gestation); N.C. GEN. STAT. § 41-15 (comment) (1996) (stating that child in gestation who is later born alive is regarded as alive at commencement of gestation). For example, the comment to section 2-901 of the Uniform Probate Code equates gestation with en ventre sa mere, defined by Black's Law Dictionary as "in its mother's womb." See UNIF. PROBATE CODE § 2-901 (comment) (amended 1993); BLACK'S LAW DICTIONARY 534 (6th ed. 1996).

See D.A.T. New, In Vitro Culture of Embryo and Fetus, in DEVELOPMENTS IN HUMAN REPRODUCTION AND THEIR EUGENIC, ETHICAL IMPLICATIONS 163-64 (C.O. Carter ed., 1983). In cleavage, which lasts about a week, the fertilized egg repeatedly divides to form a blastocyst. See id. "Organogenesis" describes the seven-week period following implantation of the blastocyst in the uterine wall during which main organ systems are laid down and a small fetus and placenta form. See id. For the following seven months, fetal growth occurs which leads to full organ development and species differentiation. See id.

See W. VA. CODE § 42-1-3f (1997) (stating that fetus is treated as living if it survives 120 hours or more after birth). West Virginia appears to follow pattern three, which provides that an individual in gestation at a particular time is treated as living if it lives 120 hours or more after birth. See id. However, section 42-1-8 qualifies this provision by stating that a child in the womb and born after the death of the intestate can take as if it were living at the time of death. See id. § 42-1-8. This language would clearly exclude frozen, unimplanted embryos.

¹¹³ La. Civ. CODE ANN. art. 26 (West 1993).

¹¹⁴ See LA. REV. STAT. ANN. § 9:133 (West 1996).

¹¹⁵ See UNIF. STATUS OF CHILDREN OF ASSISTED CONCEPTION ACT § 4 (1988) (stating that individual who dies before implantation of embryo is not parent of resulting child).

relationship proscribed by the USCACA controls for purposes of intestate succession and all donative transfers.¹¹⁶

A derivation of this issue recently gained prominence within the context of the Social Security Act. Under the Act, dependent surviving children of a deceased fully insured wage earner are entitled to benefits irrespective of legitimacy or posthumous birth.¹¹⁷ Whether an applicant is a surviving child often turns on the intestacy statutes of the applicable state.

Pursuant to the Social Security Act, Nancy Hart claimed and was initially denied social security benefits on behalf of her child, Judith, who was conceived through artificial insemination. What makes the Hart case unique is not the method of conception but rather its timing. Judith was conceived and born three months after the death of her biological father, Edward, who had stored a single vial of sperm in the hope that his wife would be able to bear his child either before or after his death. In what Hart described as a "miracle," insemination proved successful.

Relying on a Louisiana law under which posthumously conceived children are not recognized as their father's heirs, the U.S. Department of Health and Human Services originally denied Hart's claim.¹²² After she sued the Social Security Administration, an administrative law judge ruled that Edward was Judith's legitimate father, entitling her to Social Security

¹¹⁶ See id. § 10.

See 42 U.S.C. §§ 402(d)(1)(C), 416(h)(3)(C)(ii) (1994); Chester ex rel. Chester v. Secretary of Health and Human Servs., 808 F.2d 473, 477 (6th Cir. 1987) (per curiam) (holding that absent father must provide contribution to support expectant mother in order for posthumous illegitimate child to be eligible for survivor's benefits). See generally Catherine R. Lazuran, Annotation, Posthumous Illegitimate Child as "Child" Entitled to Survivor's Benefits Under § 216 of the Social Security Act (42 U.S.C.S. §416), 36 A.L.R. FED. 166 (1996) (discussing federal cases where courts considered which circumstances entitled posthumous illegitimate child to survivor's benefits).

¹¹⁸ See Weidlich, supra note 7, at A1; Joseph Wharton, 'Miracle' Baby Denied Benefits, 82 A.B.A. J. 38, 38 (Feb. 1996).

See Weidlich, supra note 7, at A1; Wharton, supra note 118, at 38.

¹²⁰ See Mark Curriden, No Benefits for 'Miracle' Baby, 81 A.B.A. J. 18 (Mar. 1995).

See Weidlich, supra note 7, at A1; Wharton, supra note 118, at 38.

See Weidlich, supra note 7, at A1; Wharton, supra note 118, at 38. See Jim Yardley, Mom Fights for Social Security for Tot Conceived After Dad Died, SAN DIEGO UNION-TRIB., Jan. 26, 1995, at A13. A similar case in Arizona awarded social security survivor benefits for post-humously conceived twins. Unlike Louisiana law, Arizona law does not rule out posthumous conception. See id.

benefits.¹²³ Subsequently, a Social Security Appeals Council ruling overturned that decision stating that an individual cannot acknowledge paternity of a child who is not yet in existence.¹²⁴ Prior to the appeal hearing,¹²⁵ the Social Security Administration reversed its position and decided to award the survivor's benefits to Judith to avoid a test-case on the constitutional and legal issues raised.¹²⁶ Social Security Commissioner Shirley Chater later stated, "This case raises significant policy issues that were not contemplated when the Social Security Act was passed many years ago[.] Resolving these significant policy issues should involve the executive and legislative branches, rather than the courts." ¹²⁷

Technically, a child's eligibility for survivor's benefits under the Social Security Act does not answer whether a frozen embryo or child born thereof qualifies as a child or even heir under intestacy schemes.¹²⁸ Nevertheless, the issues parallel and at times intersect. Judith would have faced similar difficulties had she been conceived, frozen, and subsequently implanted after the death of either parent. Applying the principles debated in the Hart case suggests that, at least to the extent that a frozen embryo results in a live birth, it is entitled to take in intestacy.¹²⁹ Nevertheless, because most intestacy schemes offer little express guidance over the heirship capacity of the frozen embryo, determining their status rests on public policy and the presumed intent of the decedent.¹³⁰

See Mark Curriden, A Dad for Judith Hart, 81 A.B.A. J. 30, 30 (Aug. 1995).

¹²⁴ See Wharton, supra note 118, at 38.

¹²⁵ See Benefits Awarded to In Vitro Child, 18 NAT'L L.J., Mar. 25, 1996, at A8.

See Joseph Wharton, Social Security Case Settled, 82 A.B.A. J. 40, 40 (May 1996).

^{127 7.4}

As Commissioner Chater stated, "The controversy regarding Judith Hart's eligibility for Social Security survivor benefits is not about whether she is the biological daughter of Edward Hart, but more a question about her dependency on her deceased father. Such dependency is the crux of a child's eligibility for monthly Social Security survivor benefits." Spencer Rich, Benefits Rules Lag as Science Advances, WASH. POST, Aug. 10, 1995, at A25.

A parallel suit exists in Louisiana, which was on hold pending the administrative proceedings, asking to have Judith named her father's legal heir. See Girl Conceived After Dad's Death Loses Ruling: Social Security Doesn't Have to Pay Benefits to Child, Federal Council Says, Dallas Morning News, Dec. 1, 1995, at A35.

¹⁵⁰ The Uniform Parentage Act ("UPA") and USCACA provide a starting point for some of the questions posed. They focus on identifying the family relationships created after the frozen embryo is implanted and born rather than whether and to what extent the labels

apply in intestate or testate scenarios. See, e.g., UNIF. PARENTAGE ACT §§ 5-6 (amended 1987) (discussing matter of determining parental rights after artificial insemination); UNIF. STATUS OF CHILDREN OF ASSISTED CONCEPTION ACT §§ 2-5 (1988) (discussing maternity rights following artificial insemination).

As of 1996, 17 states have adopted part or all of the UPA. See Ala. Code §§ 26-17-1 to -22 (1992 & Supp. 1996); Cal. Fam. Code §§ 7600-7730 (West 1994 & Supp. 1997); Colo. Rev. Stat. Ann. §§ 19-4-101 to -129 (West 1989 & Supp. 1996); Del. Code Ann. tit. 13, §§ 801-819 (1975 & Supp. 1996); Haw. Rev. Stat. §§ 584.1-.26 (1993); 750 Ill. Comp. Stat. 45/1-26 (West 1993 & Supp. 1997); Kan. Stat. Ann. §§ 38.1110-.1138 (1993 & Supp. 1996); Minn. Stat. Ann. §§ 257.51-.75 (West 1992 & Supp. 1997); Mo. Ann. Stat. §§ 210.817-.852 (West 1996 & Supp. 1997); Mont. Code Ann. §§ 40-6-100 to -6-135 (1995); Nev. Rev. Stat. §§ 126.011-.371 (1995); N.J. Stat. Ann. §§ 9:17-38 to :17-59 (West 1993); N.M. Stat. Ann. §§ 40-11-1 to -11-23 (Michie 1994 & Supp. 1997); N.D. Cent. Code §§ 14-17-01 to -26 (1991 & Supp. 1995); Ohio Rev. Code Ann. §§ 3111.01-.19 (Anderson 1994 & Supp. 1997); R.I. Gen. Laws §§ 15.8.1-.8.27 (1996); Wash. Rev. Code Ann. §§ 26.26.010-.905 (West 1997); Wyo. Stat. Ann. §§ 14-2-101 to -2-120 (Michie 1994). Only two states, North Dakota and Virginia, have adopted parts of the USCACA. See N.D. Cent. Code § 14-18-04 (1991); Va. Code Ann. § 20-158 (Michie 1995 & Supp. 1997).

Under the USCACA, one who gives birth to a child through assisted conception is the mother; her husband is presumed to be the father, unless he commences an action to deny consent. Unif. Status of Children of Assisted Conception Act §§ 2, 3 (1988). The UPA and state legislation generally provide that a child born of artificial insemination to a married woman is her and her husband's natural and legitimate child, upon the husband's consent. See Unif. Parentage Act § 5 (1987); see also Ala. Code § 26-17-21 (1992) (declining to treat sperm donor as natural father); ALASKA STAT. § 25.20.045 (Michie 1996) (stating that child born to married woman is considered child of both spouses); ARK. CODE ANN. § 28-9-209(c) (Michie 1987) (stating that husband's consent is often presumed); CAL. FAM. CODE § 7613 (West 1994) (requiring spouse's written consent for husband to be determined natural father); CONN. GEN. STAT. ANN. § 45a-262 (West 1993) (indicating that words of inheritance apply to children born through A.I.D.); Fla. STAT. ANN. § 742.11(1) (West 1997); GA. CODE ANN. § 19-7-21 (1994) (requiring both spouses to consent in writing for irrebuttable presumption to apply); 750 ILL. COMP. STAT. 40/3 (West Supp. 1997) (requiring certified signature of spouse for husband to be considered natural father); KAN. STAT. ANN. § 23-129 (1995) (stating that child is natural child of husband consenting to insemination); MD. CODE ANN., EST. & TRUSTS § 1-206(b) (1995) (stating that law presumes consent of husband and that child conceived by artificial insemination is legitimate for all purposes); MICH. COMP. LAWS § 333.2824(6) (1997) (stating that father who consents to insemination is legitimate parent); MINN. STAT. ANN. § 257.56 (West 1992) (stating that spouse may consent to determination that husband is natural father); MO. REV. STAT. § 210.824(1) (1996) (requiring physicians to certify signatures and date of written consent); MONT. CODE ANN. § 40-6-106 (1995) (stating that law treats husband who consents to insemination as natural father); NEV. REV. STAT. § 126.061 (1995) (requiring husband's consent and physician's certification); N.M. STAT. ANN. § 40-11-6 (Michie 1997) (stating that husband is treated as natural father if he consents in writing); N.C. GEN. STAT. § 49A-1 (1994) (conditioning child's inheritance rights on husband and wife's written consent); N.D. CENT. CODE § 14-18-03 (1997) (requiring father to instigate action within two years of child's birth to deny consent); OHIO REV. CODE ANN. § 3111.37(A) (Banks-Baldwin 1997) (stating that child is legal child of husband who consented to insemination); OKLA. STAT. ANN. tit. 10, § 554 (West 1997) (providing that child born through insemination is natural child of both parents); OR. REV. STAT. § 109.239(1) (1995) (cutting off inheritance rights

B. Property Should Transfer to Frozen Embryos Under Testate and Intestate Succession

Referring to the role of inheritance, sociologist Paul Tappan has admonished that modern inheritance rules and the fluidity of contemporary estates

represented large-scale and quite rapid evolution of an economy, a family organization, and an inheritance system. It is little wonder that the transitions have been marked by lags and inconsistencies, by failures to provide uniformly well for the diversity of social needs In a dynamic legal and social system continuous change is an essential trait in the law. Imperfect adjustments of law to society are only natural. An effective system of law is one . . . modified by the people as intelligently as possible to meet apparent and important social needs The law is both an important part of society and an agency for deliberate and planful social change to meet the evolving necessities of our social institutions. ¹⁵¹

Legislators and policy makers can best resolve the propriety of permitting death time transfers to frozen embryos by weighing the economic and societal costs and benefits within each context.

1. Testate Succession

Testators should be able to leave their property to any person or entity desired, including frozen embryos and the children born of them. Statutory and common law schemes acknowledge that the testator's intent is paramount.¹⁵² Although not

and obligations of donor who is not husband of mother); TENN. CODE ANN. § 68-3-306 (1996) (requiring husband's consent for child to be considered legitimate); TEX. FAM. CODE ANN. § 151.101 (West 1996) (stating that donor is not considered father unless he is married to mother); VA. CODE ANN. § 20-158 (Michie Supp. 1997) (cutting off donor's rights and declaring husband to be father); WASH. REV. CODE § 26.26.050 (1997) (requiring physician's certification and husband's consent); WIS. STAT. § 891.40 (1997) (assuming legitimacy upon physician's certification and husband's consent); WYO. STAT. ANN. § 14-2-103 (Michie 1994) (stating that physician's failure to certify consent does not affect father-child relationship).

Except where surrogacy is acknowledged and permitted, a gamete donor is not a legal parent of the child whether or not payment is made. UNIF. STATUS OF CHILDREN OF ASSISTED CONCEPTION ACT § 5 (Alternative A) (1988).

Paul W. Tappan, *The Sociology of Inheritance, in SOCIAL MEANING OF LEGAL CONCEPT* 54, 72-73 (Edmond N. Cahn ed., 1948).

¹⁵² See UNIF. PROBATE CODE § 1-102(b)(2) (amended 1993) (stating that primary pur-

constitutionally protected,¹⁵⁵ free disposition of property is nevertheless a substantial right over which legislators and courts must exercise careful restraint¹⁵⁴ while keeping in mind the equally important individual and societal functions it serves.

Because society often measures its members through their conduct and their wealth, testamentary disposition contributes to self-esteem and self-definition. Allowing decedents to will property away effects peace of mind by permitting selflessness and generosity, both of which decedents value highly as death approaches. Testamentary disposition also fosters and stabilizes intra-familial relationships and responsibilities, reinforcing the predominant social and organizational structure. Finally, allowing death time transfers encourages respect for law by codifying what most Anglo-Americans deem a "natural right." 186

Relatively free disposition of property serves equally important societal interests. Accommodating testators' wishes achieves utility and preserves economic, social, and industrial order. One impetus behind property acquisition is to provide for successive generations. Limiting the death time disposition of property might deter its accumulation, resulting in decreased capital investment and economic instability, particularly upon the death of a primary provider.

pose of Uniform Probate Code is to discover and effectuate decedent's intent in distribution of property).

¹⁵³ See Irving Trust Co. v. Day, 314 U.S. 556, 562 (1942) (finding that U.S. Constitution does not forbid state from limiting, conditioning, or abolishing power of testamentary disposition over property within its jurisdiction).

See Hodel v. Irving, 481 U.S. 704, 715 (1987) (recognizing that right to pass on valuable property to heirs is important). Writing for the majority, Justice O'Connor stated, "In one form or another, the right to pass on property — to one's family in particular — has been part of the Anglo-American legal system since feudal times Even the United States concedes that total abrogation of the right to pass property is unprecedented and likely unconstitutional." Id. at 716.

See generally BENTHAM, supra note 63, at 177-86 (discussing disposition of property by succession and testament).

¹³⁶ See BLACK'S LAW DICTIONARY 1475 (6th ed. 1990) (stating that testamentary freedom is "the highest right a man can have to anything.")

¹³⁷ See generally Tappan, supra note 131, at 54-73 (discussing role of inheritance law in connection with functioning social and economic framework with family as part of that system).

See Carol S. Bruch, The Hague Convention on the Law Applicable to Succession to the Estates of Deceased Persons, 56-SPG LAW & CONTEMP. PROBS. 309, 312 (1993) (explaining that American law favors survivors in community property).

Accordingly, allowing the transfer of property to frozen embryos or subsequent children is desirable. It reinforces responsibility by allowing decedents to provide for entities they played a significant role in creating. Further, it encourages an expansive view of family, which is an economically attractive result for society because individuals feel a heightened moral and financial obligation toward family members. Allowing testamentary transfers to frozen embryos respects autonomy and choice beyond the free-floating right to donate property and select donees. It is one arena that permits individuals, not the law, to determine who constitutes family, particularly children, and provide for those persons.

Abortion rights notwithstanding, most Anglo-American institutions are decidedly pro-natalist, exalting conception, child-birth, and child-rearing as the foundational goals of human existence. 199 Children are blessings; impotent or infertile adults cursed. For many, this presumed ideal is either not feasible or outright impossible without medical intervention. Allowing testate succession to frozen embryos respects attempts to create children when traditional methods do not or cannot work. It also avoids further stigmatization and demoralization of either the would-be parent or the product of their efforts as would result were society to prohibit such transfers. As Kathryn Kolbert, vice president of the Center for Reproductive Law and Policy, notes, "We want to recognize that the law can catch up with medical science and that the law is responsive and flexible enough to recognize that families are formed in a variety of ways."140

Testate succession effects social benefits and costs as well. Prohibiting attempts by genetic contributors to provide for their potential children would immediately shift to society the burden of their continued storage. This practice could lead to a policy of embryo experimentation or destruction to offset or avoid maintenance costs. The impact is visceral upon recalling that

¹⁵⁹ See generally Paula Arbams, The Tradition of Reproduction, 37 ARIZ. L. REV. 453, 453-63 (1995) (describing pro-natalist traditions of Western civilizations from Ancient Greece to modern America).

¹⁴⁰ Jim Yardley, Mom Fights for Social Security for Tot Conceived After Dad Died, SAN DIEGO UNION-TRIB., Jan. 26, 1995, at A13.

frozen embryos often become children, the class of citizens most deserving of legal protection. Even if society does absorb such costs, it seems unnecessary and cruel to prohibit a growing class of children from benefitting from their biological relatives' estates.

Decedents can potentially limit the problem if they replace bequests to frozen embryos with those to surviving partners who would presumably provide for the genetic material or children born thereof. Whether true or not, this premise overlooks two key principals. First, because the concept is borrowed from intestacy, the generalizations demanded in that context are uniquely inappropriate where the decedent's intent is clear. Second, differing motivations impel procreative behavior. By focusing on the medico-sociological rather than social function of procreation — on "begetting" over "rearing" — it is quite possible that a genetic contributor would want a frozen embryo to flourish irrespective of (1) his or her own continued existence, (2) the continued existence of any other genetic contributor or intended recipient, or (3) even any survivor's wishes to continue seeking implantation and birth. 141 Again, allowing testate transfers to such entities permits testators to take maximum responsibility for their use of reproductive technologies.¹⁴²

Allowing testate transfers to frozen embryos carries potential negative repercussions, the strongest of which is its adverse effect on expeditious estate administration. Consider a decedent who leaves a spouse, one born child, one child in utero, two frozen embryos, and a will directing the equal division of his estate between his spouse and all children, including those in gestation or cryopreservation at my death but born alive

See BAYLES, supra note 21, at 23-24 (stating that during Vietnam war, combat soldiers' semen was routinely frozen and sent home for spousal insemination). Some couples during the Vietnam War were physically separated during conception, gestation, and birth; in one case, conception occurred posthumously. See id. The parties involved must have recognized the possibility that the biological father might not live to the child's birth. Reminiscent of feudal customs, this practice demonstrates individual and societal endorsement of reproduction as a continuation of the bloodline.

I reject the contention that no limits may or should be placed on parties' creation of a host of frozen embryos, but merely argue that such limits should not be indirectly imposed by refusing the right of existing embryos to acquire property.

¹⁴³ See supra notes 113-16 and accompanying text (noting paucity of intestacy statutes anticipating transfers to frozen embryos).

thereafter." Ignoring the child in gestation and the frozen embryos, the estate could be divided immediately into halves. The fact that the child in utero lengthens disposition for approximately nine months, while perhaps inconvenient, is not disproportionately so when measured against the decedent's intent. But, undoubtedly, including frozen embryos in estates severely hampers immediate and efficient distribution as years or even lifetimes could pass before their implantation. Those already born clearly need the property more than a frozen collection of cells. Additionally, permitting embryos to own property could facilitate greed, making a wealthy embryo an attractive candidate for adoption and implantation after the death of its genetic contributors. Prospective social parents could "shop" for frozen embryos that either had or stood to inherit substantial sums. 145

While valid, these concerns are neither insurmountable nor unique to the frozen embryo context. Wealthy orphans are more likely to be adopted than poor ones, and a decedent's family may always be disappointed by unforeseen dispositions or even total disinheritance under the will. While allowing frozen embryos to inherit upon live birth admittedly thwarts the goal of expedience in estate administration, thoughtful legislation and construction of wills could reasonably accommodate the apparently conflicting goals of preserving the testator's wishes while timely distributing the estate.¹⁴⁶

This situation can be avoided if the property is immediately distributed to the frozen embryo. One approach would be to treat the transfer as a vested present interest subject to divestment. The frozen embryo could acquire the property via beneficiary status under a trust. The principal would be applied toward its storage and implantation and would be either indefeasibly vested upon live birth or divested upon death in utero. This would also avoid the difficulty of treating the interest as a springing executory interest or contingent remainder subject to the Rule Against Perpetuities.

One way to confront this potential problem would be to require live birth before acquisition of any bequest or devise, or even to require the frozen embryo to be born of a designated person before its inheritance. These approaches would simultaneously ensure a greater commitment on the part of social parents while avoiding the potentially drastic consequences of designating heirs of a decedent frozen embryo.

¹⁴⁶ See generally McAllister, supra note 44, at 100-18 and accompanying text (analyzing existing parentage laws and suggesting new model parentage statute).

2. Intestate Succession

In intestacy, removing the element of donative freedom affords public policy a much greater hand in determining whether a frozen embryo or subsequently born child should acquire property as an heir. By limiting potential heirs to spouses or blood relatives, intestacy schemes institutionalize traditional conceptions of family and status. As Professor Michael Bayles notes, society builds its moral principles upon the historical assumption of natural reproduction.¹⁴⁷ Introducing assisted reproduction into the equation invites new consideration about what is "natural" in relation to family and property distribution. "The changes brought by medical science have altered this assumption. Thus, it is necessary to rethink our views about the morality of human reproduction. New possibilities exist and moral principles must develop to deal with them." 148 If intestacy statutes truly seek to blend probable donative intent with community values, frozen embryos should only receive property if empirical studies reflect that most genetic contributors either would directly desire that transfer¹⁴⁹ or would indirectly desire the transfer by viewing the genetic material as a "child." Stated differently, does one consider oneself a parent upon conception, birth, or some point in between?150

The answer lies less with society or law than with the genetic contributor. Therefore, if contributors are going to assume the parent/child mantle vis-á-vis a frozen embryo, they should do so expressly in a will rather than passively through intestacy. Nevertheless, the difficulty of conception for those engaged in the expensive, 151 time-consuming, invasive, and often traumatic

¹⁴⁷ See BAYLES, supra note 21, at 1.

¹⁴⁸ Id

Such information could be derived from studying the dispositive schemes of persons having fertilized frozen embryos in storage.

See, e.g., Anne Marie O'Neill & Linda Satter, Under the Influence Drunk While Pregnant, a Woman Is Charged with Trying to Kill Her Baby, PEOPLE, Sept. 9, 1996, at 52 (describing tragic case of woman charged with attempting to kill her unborn child by drinking alcohol throughout pregnancy).

See, e.g., Davis v. Davis, 842 S.W.2d 588, 591-92 (Tenn. 1992) (stating that couple spent three years and \$35,000.00 dollars in effort to bear child); Grady, supra note 21, at 36 (estimating cost of successful in vitro fertilization and implantation between \$23,400 and \$31,200).

procedures of artificial insemination and related technologies¹⁵² could easily lead to their perception of the frozen embryo as a child, a pre-child, or a child to be. For example, one woman described her protracted attempts at reproduction as physically and emotionally devastating and, perhaps most tellingly, characterized the embryos as "the beginning of life," casting herself as "the[ir] Mother" and them as "her children." 153 The response of another couple who learned that a clinic had implanted three of their frozen embryos in another woman is equally enlightening. "It was the loss of three of our children, children that had yet to be born. We felt betrayed." 154 Office staff members characterized the doctors' actions as "giving away babies." 155 Intestacy law could presume in favor of heirship in certain circumstances, such as when both genetic contributors die under conditions suggesting that they would like their frozen embryos to be born despite their absence.156

IV. THE "PROPERTY-LIKE" CONSTRUCTION: FROZEN EMBRYO AS OWNED

Allowing genetic contributors to transfer frozen embryos at death creates an apparent conflict under a traditional approach. If society accepts the person-like construction whereby the

¹⁵² See, e.g., McAllister, supra note 44, at 59 (asserting that, on average, it takes seven insemination attempts over 4.4 menstrual cycles to establish pregnancy). About 40% of patients who undergo artificial insemination ultimately bear a child. See id. Artificial insemination is not overly costly. However, as of 1988, in vitro fertilization ("IVF") treatment cost approximately \$6,700. See id. at 60. Only 60 to 80% of mature eggs acquire fertilization by IVF, and most fertilized eggs fail to establish pregnancy. See id. at 61. Thus, while embryo cryopreservation and subsequent implantation have resulted in successful births for the past 14 years or so, as of 1990, only an estimated total of 60 children had been born from the method. See id. at 63.

The trauma involved is heightened when emotional costs are considered, particularly where the embryos are being fertilized and frozen because a donor has a life-threatening illnesses such as cancer. See, e.g., Grady, supra note 21, at 36.

¹⁵³ See Davis v. Davis, No. E-14496, 1989 WL 140495, *25 (Tenn. Cir. Ct. Sept. 21, 1989), rev'd, No. 180, 1990 WL 130807 (Tenn. Ct. App., Sept. 13, 1990), aff d, 842 S.W.2d 588 (Tenn. 1992), reh'g granted in part by No. 34, 1992 WL 341632 (Tenn. 1992).

¹⁵⁴ Cynthia Sanz, A Fertility Nightmare, PEOPLE, July 24, 1995, at 36.

¹⁵⁵ See id. at 39.

Such might be the case where, for example, the couple had been undergoing invasive and expensive therapy and had created frozen embryos with the hope of securing a bone marrow match for a born, living child.

frozen embryo has the capacity to own property, then its transfer or acquisition seems foreclosed.¹⁵⁷ Nevertheless, full disposition of the frozen embryo, including transfer at death, is desirable as it neither impedes nor impairs a greater social concern.

The treatment of organs and tissue is highly analogous to that of embryos and other reproductive material. The language employed when discussing organ and tissue exchange communicates its perception as transferable. For example, society encourages the donation of organs; repositories "bank" sperm, plasma, and blood. The procedure of directly transferring gametes into the fallopian tube is aptly named GIFT. Casual as this terminology may be, it at least suggests a property-like assessment of genetic material that the law appears to support.

A. Genetic Material and Inter-Vivos Transfers

Neither federal nor state statutory law restricts the lifetime transfer of gametes. The National Organ Transplant Act limits its prohibition on commercial transactions affecting interstate commerce to "the human kidney, liver, heart, lung, pancreas, bone marrow, cornea, eye, bone and skin." Federal regulation criminalizes only those gamete transfers by persons who knowingly donate or sell gametes after HIV infection. 163

¹⁵⁷ See supra Part II (discussing person/property construct).

See Phyllis Coleman, "Brother Can You Spare a Liver?" Five Ways to Increase Organ Donation, 31 VAL. U. L. REV 1, 3 (1996) (stating that majority of Americans support organ donation).

See Thomas Maier, Multiple Offspring Raise Concerns Some Sperm Donors Father 20 Kids, PLAIN DEALER (Cleveland), May 6, 1997, at 8E (noting that there are more than one hundred sperm banks in United States); Sheila Toomey, Blood Feud: Red Cross to Tap Anchorage Veins, ANCHORAGE DAILY NEWS, Aug. 17, 1997, at Al (describing blood and plasma bands as billion-dollar industry).

¹⁶⁰ See Infertility: Medical and Social Choices, supra note 93, at 260.

See generally id. at 239-64 (summarizing legal issues raised by use of artificial insemination, in vitro fertilization, embryo transfer, and gamete intrafallopian transfer).

¹⁶² National Organ Transplant Act of 1984, Pub. L. No. 98-507, 98 Stat. 2339, 2346 (1984) (codified as amended at 42 U.S.C. § 274e (1994)). Nevertheless, passage of the Act suggests Congress's willingness and ability to restrict the transfer of gametes and frozen embryos.

¹⁶³ See 18 U.S.C.A. § 1122(a) (West Supp. 1997) (penalizing whoever tests positive for HIV and knowingly donates or sells or knowingly attempts to donate or sell blood, semen, tissues, organs, or other bodily fluids).

1. Transfers of Semen

Most enactments of the Uniform Anatomical Gift Act ("UAGA") permit any willing gamete provider to transfer semen or other replenishing tissues such as blood or plasma with or without consideration. Because many anonymous sperm donors relinquish all rights to any child born of their gametes, men may donate their sperm even where the transfer will result in posthumous insemination and birth. The UAGA position has a similar application to non-anonymous transfers, which is illuminated by *Hall v. Fertility Institute of New Orleans*. 165

In Hall, following a cancer diagnosis, Barry Hall deposited fifteen vials of sperm with a fertility institute and subsequently executed a formal Act of Donation by which he sought to convey his interest in the vials to his girlfriend, St. John. After Hall's death, his executor requested the semen's transfer to Hall's son or its destruction, noting the son's "extreme emotional upset, embarrassment and anger... at the prospect of post-humous creation of blood relatives." The executor also ar-

See, e.g., CAL. PENAL CODE § 367f (West 1997) (prohibiting sale of kidney, liver, heart, lung, pancreas, or any other human organ or nonrenewable or nonregenerative tissue except plasma and sperm); Ky. Rev. Stat. Ann. § 311.165(5)(a)-(b) (Michie 1995) (defining "transplantation organ" to exclude fetus, fetal part, or other tissues, any product of birth or conception, and bodily fluids including sperm, ovum, ovaries, fetus or placenta). See generally Infertility: Medical and Social Choices, supra note 93, at 259 (stating that most states allow sale of blood, semen, plasma, or other replenishing tissues in nonvital amounts); U.S. Congress, Office of Technology Assessment, New Developments in Biotechnology: Ownership of Human Tissues and Cells (1987) [hereinafter New Developments] (analyzing economic, legal, and ethical rights of human sources of tissues and cells). In contrast to the United States, France permits semen procurement only from married fathers with spousal consent and for no consideration, thus curbing commercial exploitation of genetic potential. See Dunstan, supra note 48, at 215-16.

While research revealed no statute specifically prohibiting semen donation or sale, Professor Lori B. Andrews has argued that prohibitions on organ sales in some states are conceivably broad enough to cover the sale of semen. See INFERTILITY: MEDICAL AND SOCIAL CHOICES, supra note 93, at 259 (referring to April 1987 personal communication with Andrews).

⁶⁴⁷ So. 2d 1348 (La. Ct. App. 1994). See also Hecht v. Superior Court, 20 Cal. Rptr. 275 (Ct. App. 1993) (discussing similar issues in death time context).

¹⁶⁶ See Hall, 647 So. 2d at 1349-50.

¹⁶⁷ Id. at 1350.

gued that the transfer of sperm opposed public policy and morals.¹⁶⁸ St. John intervened, alleging that she owned the semen through Hall's donation.¹⁶⁹

Although it affirmed a decision prohibiting St. John's immediate possession of the sperm, the Fourth Circuit specifically rejected the executor's argument that a gift of frozen sperm contravened public policy.¹⁷⁰ The court also rejected the argument that the sperm's posthumous use would oppose public morals.¹⁷¹ It held that if the facts at trial show that at the time of the gift the decedent was competent and not under undue influence, the frozen semen was St. John's property, and she had full rights to its disposition.¹⁷² Thus, the court found that the relevant inquiry was Hall's intent and not society's moral regard for the disposition of sperm.

2. Transfers of Ova

Although less common than sperm donation, every jurisdiction that permits surrogacy contracts impliedly allows egg donation.¹⁷⁸ Additionally, state statutes regulating gamete donors' parental rights implicitly permit contributors to donate ova as well as sperm.¹⁷⁴

Unlike their treatment of sperm, however, society and the law are more hostile toward ova sale.¹⁷⁵ Society may base this distinction on medical grounds. Unlike sperm, ova are neither

¹⁶⁸ See id.

¹⁶⁹ See id.

¹⁷⁰ See id. at 1351.

¹⁷¹ See id.

¹⁷² See id.

¹⁷⁵ Egg donation arguably occurs with every surrogacy contract even if the gestational mother is also the genetic contributor because whether surrogacy follows GIFT, ZIFT, lavage, or AID, either the egg is introduced from an external source, however temporarily, or the surrogate's egg (and eventually the fetus) is returned to the intended social parent.

See, e.g., CAL. BUS. & PROF. CODE § 2260 (West Supp. 1997) (requiring written donative consent from gametic provider before using sperm or ova for any purpose other than reimplantation in patient or spouse); FLA. STAT. ANN. § 742.11(2) (West 1997) (stating that there is irrebuttable presumption that children conceived from donated eggs or pre-embryos who are born within wedlock are children of husband and wife); id. § 742.14 (stating that donor of any egg, sperm, or pre-embryo shall relinquish all parental rights and obligations regarding donation or resulting children).

¹⁷⁵ See, e.g., La. Rev. Stat. Ann. § 9:122 (West 1991) (prohibiting sale of human ovum, fertilized human ovum, or human embryo).

regenerative nor renewable. Women release one ovum each menstrual cycle, compared to the thousands of sperm present in each ejaculation. Nevertheless, approximately 400,000 eggs survive puberty. Therefore, like sperm, ova are never truly functionally extinct until menopause renders them nonviable. The legal and social difference between sperm and ova more likely hinges on indefinable distinctions between the maternal and paternal roles of the parents. More directly, the difference lies in how society views eggs and sperm. An egg is viewed as more of a life because it only requires fertilization; it could "hatch" on its own. Therefore, its "mother" should not sell it. 177

3. Transfers of Frozen Embryos

Genetic contributors can donate or even destroy embryos during their life.¹⁷⁸ Barring an express statutory provision, nothing suggests that the legal system would treat an extracorporeal or frozen embryo uniquely.¹⁷⁹ While fetal research statutes prohibit embryo sale or gift, legislatures have limited the statutes' applicability to assisted reproduction either because the statutes only apply to aborted embryos or fetuses¹⁸⁰

¹⁷⁶ See Grady, supra note 21, at 36. In fact, the cells of a five-month fetus can produce approximately seven million eggs. Id.

The difference could be political and gender-based, relying on the argument that the sale of the sperm "commodity" is acceptable because it overcomes male sterility, offers proof of the donor's virility, and benefits men. The interesting case would challenge whether a woman, such as Deborah Hecht, could sell sperm upon acquiring it.

This is implied under surrogacy, abortion, and adoption principles. However, absent a private adoption context, the adoption donors are not permitted to select the donees.

Research revealed very few statutes specifically addressing extracorporeal embryos, all of which impliedly permit their donation. See CAL. BUS. & PROF. CODE § 2260 (West Supp. 1997) (allowing removal of ova and sperm for donation upon written consent); KY. REV. STAT. ANN. § 199.590 (Michie 1995) (prohibiting acts and practices in adoption of children, but not clearly prohibiting surplus embryo transfer). See also FLA. STAT. ANN. § 63:212 (West 1996) (stating that gamete donors may not discard embryo, but must donate or preserve it for later use). LA. REV. STAT. ANN. § 9:122 (West 1991) (providing that human ovum fertilized in vitro may be used solely for human in utero implantation and shall not be sold or used for research); Surrogate Parenting Assocs., Inc. v. Kentucky ex rel. Armstrong, 704 S.W.2d 209, 211 (Ky. 1986) (holding that corporation's involvement in surrogate parenting procedure should not be construed as participation in unlawful buying and selling of babies). But see FLA. STAT. ANN. § 873.05 (West 1996) (prohibiting advertising or sale of human embryos).

See, e.g., ARIZ. REV. STAT. ANN. § 36-2302(A) (West 1993) (prohibiting knowing use of any aborted human fetus or embryo for medical experimentation or investigation, ex-

or because they exempt therapeutic, remedial, or diagnostic transfers.¹⁸¹ Arguably, even absent specific enabling legislation, most courts would uphold embryo donations similar to gamete donations and adoption.

Embryo sale presents a different issue.¹⁸² Some state statutes prohibit the sale of fetuses or embryos, although with language sufficiently ambiguous to render the statutes' application to frozen embryos unclear.¹⁸³ Only Louisiana, which has the most extensive statutory regulation of gametes, expressly forbids the sale of an in vitro fertilized egg or embryo.¹⁸⁴

cept as strictly necessary to diagnose disease or condition in mother); MASS. GEN. LAWS ANN. ch. 112, § 12J (West 1996) (prohibiting experimentation on live human fetuses, except for diagnostic or remedial purposes, and providing that experimentation may not be performed upon dead fetus unless mother consents, except in case of routine pathological study); N.D. CENT. CODE § 14-02.2-02(2) (1991) (prohibiting use or transfer of any aborted fetus or fetal organs or tissue for research, experimentation, study, or transplantation except for diagnostic or remedial procedures, to preserve life or health of fetus or mother, or for pathological study); Ohio Rev. Code Ann. § 2919.14 (Banks-Baldwin 1997) (prohibiting experimentation on or sale of any aborted product of human conception).

As they are fertilized and frozen in vitro, frozen embryos will never have been implanted to begin with and, thus, cannot be said to have been "aborted." The only reproductive method to which these statutes could conceivably apply is lavage, where an implanted embryo is flushed from the mother's uterine wall for subsequent implantation in a gestational mother.

¹⁸¹ See, e.g., R.I. GEN. LAWS § 11-54-1(a) (1994) (prohibiting use or transfer of any live human fetus, embryo, or neonate, whether in utero or extracorporeal for scientific, laboratory research, or other kind of experimentation).

These statutes will not apply if the transfer of the embryo is considered remedial (life preserving) or therapeutic. Presumably, transferring an embryo for its implantation and eventual birth would fit within the exceptions, especially to the extent that the procedure was to treat infertility in the donee and is, thus, therapeutic. Some statutes specifically so provide. See, e.g., 720 ILL. COMP. STAT. ANN 510/6-7 (West 1993) (prohibiting sale of or experimentation upon human fetus unless such experimentation is therapeutic to fetus or for purpose of in vitro fertilization).

- ¹⁸² See BAYLES, supra note 21, at 25 (noting that payment of fee to uterine mother is probably most controversial aspect of surrogate motherhood).
- See, e.g., ARK. CODE. ANN. § 20-17-802(c) (Michie Supp. 1985) (prohibiting buying, selling, or giving away any fetus born dead as result of abortion); FLA. STAT. ANN. § 873.05(1) (West 1994) (prohibiting advertising or sale of any human embryo); OHIO REV. CODE ANN. § 2919.14 (Banks-Baldwin 1997) (prohibiting experimentation on or sale of aborted fetuses); OKLA. STAT. ANN. tit. 63, § 1-735 (West 1997) (prohibiting experimentation on human fetal tissue); UTAH CODE ANN. § 76-7-311 (1995) (prohibiting sale or purchase of human fetal tissue).
- See LA. REV. STAT. ANN. § 9:122 (West 1991) (stating that human ovum fertilized in vitro may only be used for human in utero transplantation). If gamete donors allow another couple to adopt the embryo, then inheritance rights attach to the birthing or adopting parents at birth. LA. REV. STAT. ANN. § 9:133.

B. Genetic Material and Death Time Transfers

Testate or intestate transferability of gametes is not a necessary corollary to inter vivos transferability. Even if society considers the gamete property, death shifts the balance between private and public interests towards the state. Subsequently, all death time transfers are creatures of statute.

This shift is immediate in intestate succession where the decedent's waiver of donative rights allows the state to exercise substituted intent through statutes. Since neither the decedent nor the state need bear the economic consequences, even testate succession law is less concerned with protecting a donor from folly than would-be beneficiaries from disappointment. As owners shift to testators or to intestate decedents, they gradually lose their relatively unbridled property rights. While the law could thus permit lifetime but restrict death time transfers of frozen embryos without severe structural inconsistency, no explicit provisions have done so.

The UAGA regulates postdeath transfers of human organs or body parts. ¹⁸⁶ Unlike many of its state counterparts, the UAGA does not directly exempt semen, ova, or frozen embryos from its provisions. ¹⁸⁷ The states' testate and intestate transfer regimes nevertheless appear immune from the UAGA's reach. First, the UAGA prohibits the sale or purchase of human organs or body parts, not their donation. ¹⁸⁸ Second, the UAGA only regulates such activity when genetic contributors plan posthumous remov-

lifetime, she may normally use, transfer, or even destroy that item as long as no laws are broken nor others' rights impaired. However, should the owner's will direct the painting's destruction, its value to society might override the wishes of its now deceased owner to prevent at death what might have been possible during life. See, e.g., Eyerman v. Mercantile Trust Co., N.A., 524 S.W.2d 210, 217 (Mo. Ct. App. 1975) (invalidating will provision directing that testator's house be destroyed because house was important landmark and enforcement of provision would reduce testator's estate value and depreciate adjoining property); In 70 Barnes Foundation, 684 A.2d 123, 136 (Pa. Super. Ct. 1996) (holding that deviation from trust provision to maintain private art collection was permitted where opening gallery to public benefitted public and was consistent with trust purposes).

¹⁸⁶ See Unif. Anatomical Gift Act § 1 (amended 1994).

See id. § 1(1) (defining "anatomical gift" as donation of all or part of human body to take effect upon or after death). The Act defines "part" as an organ, tissue, eye, bone, artery, blood, fluid, or other portion of a human body. See id. § 1(7).

¹⁸⁸ See id. § 10 (prohibiting sale or purchase of bodies or parts, but not mentioning donation of bodies or parts).

al.¹⁸⁹ To the extent that the genetic material is already extracorporeal, which must be the case with frozen embryos, the UAGA does not apply.¹⁹⁰

The status of genetic material transfers remains unclear. Testate and intestate succession dispose of the decedent's estate. While all statutes generally cast the estate as "property owned by decedent at death," no statute specifies whether sperm, ova, or frozen embryos remaining after death are considered property subject to distribution. Two cases clearly support the contention that an estate may transfer frozen sperm pursuant to intestate succession.

In Parpalaix v. CECOS, 191 the plaintiff successfully sued a sperm storage facility to recover her late husband's sperm by asserting her ownership status as the decedent's heir. The court declined to overtly label the sperm property and, thus, the object of a bailment contract or a donated organ. The court reasoned, however, that the circumstances surrounding the sperm deposit conferred sufficient conservation and restitution obligations to mandate its release to the widow irrespective of possible posthumous conception and birth. 192

See id. § 10(a) (prohibiting sale or purchase of bodies or parts for transplantation or therapy if part removal is intended to occur after decedent's death).

¹⁹⁰ See supra note 187 and accompanying text (defining "anatomical gift").

¹⁹¹ See E. Donald Shapiro & Benedene Sonnenblick, The Widow the Sperm: The Law of Post-Mortem Insemination, 1 J.L. & HEALTH 229, 229 (1986-87) (discussing Parpalaix v. Cecos). Although Parpalaix is obviously not binding precedent, its reasoning and holding were favorably cited in Hecht v. Superior Court. See Hecht v. Superior Court, 20 Cal. Rptr. 2d 275, 287 (Ct. App. 1993).

absent a deposit of frozen sperm because it is possible to recover sperm from a decedent within 24 hours of death. For example, in 1994, Anthony Baez died while in police custody. See Maggie Gallagher, New York Forum about Sperm: The Ultimate Deadbeat Dads, NEWSDAY, Feb. 1 1995, at A28. At the request of his widow and after the consent of city officials, Baez's sperm was flushed and frozen to allow future procreation by his wife. See id. Although some suggest that without clear evidence of permission such action violates the reproductive freedom of the deceased, it is unclear that the right to privacy under which such claims are traditionally made survives one's death. See id. (discussing issues of reproductive choice in Roe v. Wade in terms of rights of deceased). The issue of whether a spouse has a legal right to her deceased husband's sperm, variously cast as protecting a "right to procreate," a "medical miracle," and a "moral monstrosity," has not yet been litigated but the profusion of instances in which the request has been made suggests that eventuality. See id. (explaining that California court decisions note that sperm banks routinely turn down requests from widows).

Slightly different facts produced a similar holding in *Hecht v. Superior Court.*¹⁹³ In October 1991, William Kane deposited fifteen vials of sperm and gave his partner, Deborah Hecht, total decisional and dispositional control over them during Kane's life and after his death. He manifested this intent through a "Specimen Storage Agreement," a will bequeathing all "right, title, and interest [in the sperm]" to Ms. Hecht, and a letter from Kane to his children.¹⁹⁴ Kane committed suicide later that month.¹⁹⁵

Disputing Hecht's ownership of the frozen sperm, Kane's children requested its destruction or distribution to them. They wanted to guard the family unit by preventing the birth of children who would never know their biological father and who would be raised in a nontraditional family. Hecht responded that neither the state nor the children held any property interest in the sperm as she was either its lifetime donee or its recipient via will. 197

The California Supreme Court ruled in favor of Hecht.¹⁹⁸ In so doing, it rejected the argument that the death time disposition or posthumous use of sperm contravened public policy.¹⁹⁹ The court stated that the law provided the decedent with a property right in his sperm which he could pass, albeit in qualified form, to Hecht:

[A]t the time of his death, decedent had an interest, in the nature of ownership, to the extent that he had decision mak-

Id.

¹⁹³ See Hecht, 20 Cal. Rptr. 2d at 275. Although Kane died in October 1991, his estate has been tied up in litigation through January 1997. See, e.g., id.; Kane v. Hecht, 44 Cal. Rptr. 2d 578 (Ct. App. 1995); Hecht v. Kane, 59 Cal. Rptr. 2d 222 (Ct. App. 1996).

Naming Hecht the residuary taker of the estate, the will specified Kane's wish that she be able to bear his posthumous child if she so chose. See Hecht, 20 Cal. Rptr. 2d. at 277. The letter stated:

[[]I]t may be that Deborah will decide — as I hope she will — to have a child by me after my death. I've been assiduously generating frozen sperm samples for that eventuality. If she does, then this letter is for my posthumous offspring, as well, with the thought that I have loved you in my dreams, even though I never got to see you born.

¹⁹⁵ See id.

¹⁹⁶ See id. at 279.

¹⁹⁷ See id.

¹⁹⁸ See id. at 291.

¹⁹⁹ See id. at 284.

ing authority as to the sperm within the scope of policy set by law. Thus, decedent had an interest in his sperm which falls within the broad definition of property in Probate Code section 62, as "anything that may be the subject of ownership and includes both real and personal property and any interest therein." 200

The court implicitly found that Kane's sperm was property, at least for purposes of the distribution of his estate.²⁰¹

Determining whether genetic material fits within a decedent's estate demands further consideration of its nature and the circumstances of its existence. Irrespective of an intent for use by or donation to a specific individual, donors can retrieve and store sperm and ova unilaterally; whereas a frozen embryo contains the gametes of more than one person. If subjected to death time distribution, the frozen embryo, and perhaps sperm and ova in storage for intended joint use, should be treated more like joint property than property that is solely owned, with the contributor or intended recipient and spouse as "cotenants."

Reasoning by analogy to joint tenancy with rights of survivorship, the frozen embryo could bypass the estate to be wholly owned by the surviving "joint tenant." ²⁰² This prohibits the decedent from willing it away from the survivor or requiring its destruction. Further, public policy limits the rights of a decedent to destroy property through will. ²⁰³ Finally, courts should give the rights of the decedent little weight because, once dead, the decedent would no longer feel anguish about the child's wellbeing. ²⁰⁴

Analogizing ownership of embryos to tenancy in common, some portion of the genetic material would remain with the surviving cotenant, and the other portion would pass through

²⁰⁰ See id. at 281 (citing Davis v. Davis, 842 S.W.2d 588, 597 (Tenn. 1992)).

⁰¹ See id.

This theory is implicitly adopted whenever control over the genetic material automatically transfers to a surviving spouse. See FLA. STAT. ANN. § 742.17(3) (West 1997) (providing that sperm, eggs, or pre-embryos remain under control of surviving spouse absent contrary written agreement).

See, e.g., Eyerman v. Mercantile Trust Co., 524 S.W.2d 210, 214 (Mo. Ct. App. 1975) (holding that testator's attempt to confer power to executor to destroy testator's property was void as against public policy).

But see Davis v. Davis, 842 S.W.2d 588, 604 (Tenn. 1992) (protecting right of party who did not want embryos used).

the decedent's estate.²⁰⁵ Additionally, the law could deem genetic material abandoned if it is not disposed of during life or in a specific will provision, causing its reversion to the state or a storage institution upon its contributor's death intestate.

Because of their similarity to genetic material as well as the multiple parties having interests in them, frozen embryos can and should be transferrable through testate or intestate succession. While statutory authority neither clearly allows nor prohibits such a result, all analogies point toward permitting the disposition. First, the law already recognizes embryo donation, albeit during life.206 While the law largely prohibits embryo sale,207 bequests are donative and intestacy involves no consideration. Second, the death time transfer of sperm has been recognized notwithstanding posthumous birth, single-parent rearing, and lack of knowledge of the biological father. 208 Although frozen embryos have reached a higher stage of development than frozen sperm, the analogy is strong. The analogy is even more necessary within this context because if frozen embryos are not transferred, they will likely be destroyed. Unlike destroying frozen sperm, destroying frozen embryos is, arguably, abortion. Dispositional control over frozen embryos should be transferrable.

Potential negative repercussions do exist. The psychological effects of posthumous birth are largely unknown; the child might internalize a view of the process and, thus, see himself as unnatural. Additionally, allowing embryos to pass through will could increase the number of orphans, both embryonic²⁰⁹ and,

Interesting results could ensue in intestacy where, at least theoretically, the gametes could be split among the decedent's spouse, issue, ancestors, and perhaps even collateral relatives, unless the intestacy scheme specifies gametes as marital property and directs their transfer to a surviving spouse. If the genetic material is sperm, even half of that saved might be successfully used for its intended purpose, particularly with the development of micromanaged or intracytoplasmic sperm injection.

²⁰⁶ See supra notes 178-81 and accompanying text (asserting that many courts would apply standards developed for gamete donations to embryo donations).

²⁰⁷ See supra notes 175-80 and accompanying text (noting society's traditional hostility toward sale of human ova and embryos).

²⁰⁸ See Hecht v. Superior Court, 20 Cal. Rptr. 2d 275, 280-81 (Ct. App. 1993) (allowing probate court to transfer sperm without specific instructions from donor); Hall v. Fertility Inst. of New Orleans, 647 So. 2d 1348, 1350-51 (La. Ct. App. 1994) (explaining that if transfer of sperm is found invalid, it could do irreparable harm).

Because the law does not, and within this context, could not, force an intended

more poignantly, those already born, particularly "special-needs children." ²¹⁰ Coupled with an existing preference for young and even embryonic adoptees, eugenics or testing can surpass most adopters' desires by ensuring that preselected genetic traits exist.

The question distills to whether it is better to be born under potentially adverse psychological or sociological circumstances or not to be born at all. Permitting the testate transfer of frozen embryos provides them an opportunity for birth and life. In so doing, such transfers respect both the wishes of the decedent and the dignity and integrity of the embryo.²¹¹ While recognizing its augmented role in death time transfers, the law largely intervenes only to prevent destruction of resources, not the continuation of life.²¹² Prohibiting the transfer shifts to society the burden of determining what to do with frozen embryos when such decisions should rest with their genetic contributors.

V. Property Owning Property; Persons Owning Life

Reproductive technologies are flourishing. Contemporary definitions of family encourage these technologies while society's mores uneasily embrace them. Because we believe that persons own property, allowing genetic material to own property could be seen as devaluing life. We need not determine, however, that genetic material constitutes life. The law can respect the decedent's vision of genetic material rights without maintaining the rigid dichotomy between persons and property.

beneficiary to accept a bequest or devise, "orphan" embryos could exist with little or no hope for survival. However, this situation would exist in any event where transfers by will are prohibited. Additionally, allowing the transfer does not equate to taking wholesale advantage of it because many would not want born life for their embryos to occur after their death. Finally, most frozen embryo recipients would have already agreed to accept them. Should they be disclaimed, the law could always allow their use by someone else or for some other permitted purpose.

See Troy D. Farmer, Note, Protecting the Rights of Hard to Place Children in Adoptions, 72 IND. L.J. 1165, 1166 (1997) (noting exceptional difficulties associated with placing special-needs children in adoptive homes).

Note that this policy does not apply to intestate transfers where a specific testamentary intent does not exist.

See supra note 69 and accompanying text (noting that courts only refuse to enforce testamentary dispositions when they are contrary to public policy).

A. Causes and Effects of Reproductive Technologies

Reproductive technologies address serious procreative issues: infertility and sterility, inability to carry or bear a child, desire for single parenthood, and transferability of genetic disease. The technologies' mere existence, not to mention an astonishing infusion of research and capital to their advancement, underscores the cultural centrality of creating the biological family — conception, childbearing, and child-rearing — to a proactive populace disinclined to defer to some divine will.²¹⁵

Society seems unwilling to embrace the primacy of child-rearing to creating a family because that view focuses on the parties' social relations rather than their physical or biological ties.²¹⁴ As one ethicist writes,

[R]ecent legislation [allowing adopted children access to natural parents' identity] may complicate relationships within the social family. This legislation [] is a reminder of the importance which our society places on blood parenthood, and will almost certainly complicate discussions about the secrecy involved in AID parenthood.²¹⁵

Under this view, adoption represents an imperfect response to infertility, whereas the frozen embryo embodies its ultimate solution short of perfection. The individual or couple establishes some physical connection, genetic or gestational, to the child, fulfilling the conception or childbearing components of traditional family creation. The biological tie reinforces the traditional relationship if not the traditional method. This intense preoccupation with biological connectedness suggests an historical and ongoing quest for genetic immortality. Where neither

See Bayles, supra note 21, at 12 (observing that medical science has enabled women to beget genetic offspring, gestate and deliver fetus, raise children, or any combination thereof).

The primacy of biological connection to family is evidenced and reinforced by law, such as the preference given family within adoption, guardianship, and conservatorship proceedings and the exclusion of all non-blood relatives (except for spouses and adoptive kin) in intestacy schemes. See supra notes 97-102 and accompanying text (describing general characteristics of intestate succession statutes). Even the term "disinheritance" is telling in its supposition that descendants' inheritance is the norm.

²¹⁵ Teper & Symonds, supra note 22, at 41.

partner can produce the necessary gametes, the most likely motivation for choosing technology over adoption is to experience gestation or childbirth directly or indirectly.²¹⁶

Reproductive technologies embody paradoxical desires and results by simultaneously enlarging and restricting family status. Language is no longer limited to a lone parent/child diad, but instead includes biological, gestational, and social parents. The use of this language illustrates new connections between people and, thus, new dimensions to family, similar to the status achieved by foster, step, and adoptive parents. Nevertheless, the substitution of these newer techniques for adoption reintrenches three old and potentially destructive myths, all of which severely cramp extended definitions of family: blood is thicker (and better) than water; sterility or infertility are problems to be overcome; and, accordingly, that pregnancy, labor, childbirth, and motherhood are the essence and, in fact, apex of female existence.217 Until law and society reconfigure their definition of family to value and include the many other relationships with family aspects, the thirst for a biological link will continue and the technologies will flourish.

B. Allowing Transfers to and of Frozen Embryos

Society's uneasy embrace of reproductive technologies wavers with factors such as the marital status and sexual orientation of the participants, the level of medical intervention involved, and the commercial element involved.²¹⁸ Perhaps the most visceral

The mother can experience gestation and childbirth directly when she is infertile through in vitro fertilization and implantation. Mothers can experience gestation and childbirth indirectly through surrogacy.

Other motivations could include a desire for a younger (unborn) and healthier child than is commonly available through traditional adoption routes.

In the rare instance where a couple could otherwise successfully bear a healthy child without substantial medical intervention, assisted reproduction enables the avoidance of conception and childbirth in creating family. This completes the fragmentation of intercourse and reproduction by fully severing means from ends and vice-versa.

See Renate Duelli Klein, What's 'New' About the 'New' Reproductive Technologies?, in Man-Made Women: How New Reproductive Technologies Affect Women 64, 64-66 (1985). In the West, motherhood is still regarded as women's true and noblest vocation. See id. at 66.

²¹⁸ See Jalna Hanner, Transforming Consciousness: Women and the New Reproductive Technologies, in MAN MADE WOMEN: HOW NEW REPRODUCTIVE TECHNOLOGIES AFFECT

but latent concern with permitting either transfers to or of frozen embryos is discomfort with what each transaction implies and promotes. Persons own; property is owned. Permitting genetic material to own property seems to presuppose its status as a person; permitting its transfer casts it as property. One may see either approach as devaluing life, whether by commodifying its unborn members or allowing mere property to also own property at the expense of already born individuals.

Whatever the scenario, the death of either or both genetic contributors at pre-conception, implantation, or birth gives even its most ardent supporters significant pause because of the increased threat posed to existing person and property compartments. This is particularly so where the embryo is simultaneously treated as both person and property, which impliedly would occur whenever transfers both to and of it are possible. While society is willing to splinter intercourse from procreation because their essential difference is preserved, postdeath realization of life challenges carefully constructed dichotomies.

Death of the genetic contributor upends the partitions between the person and property distinction regarding frozen embryos. The likelihood that decedent donors would simultaneously transfer property to and designate takers of frozen embryos increases. At least in intestacy, such a result is possible irrespective of the decedent's wishes depending upon how the jurisdiction treats frozen embryos. Allowing frozen embryos to be both the subject and the recipient of death time transfers seems to blur the person/property line and affront traditional categorical sensibilities. Perhaps it is time to reassess the rigid dichotomies between life/death and person/property to recall that what is owned may have rights and accept that at least some rights in life may be owned.

Ultimately, estate law need not determine that genetic material constitutes life, family, child, or, for that matter, property. Rather, the law should merely respect the decedent's vision of the genetic material. Because the perceived need for solutions to infertility is so prevalent and because the technologies already

WOMEN 88, 94 (1985) (noting that British government recommends that new reproductive technologies be made available only to heterosexual couples who are involved in steady relationship).

exist, the law should do its best to accommodate that vision by permitting transfers both of and to frozen embryos, even if simultaneously. Doing so affirms both the autonomy of the genetic contributors and the life to which they have contributed.

CONCLUSION

[S]ociety finds it impossible to withdraw access to a technology once it is available, regardless of its negative consequences. We therefore need to consider policy now for foreshadowed technology.²¹⁹

Permitting transfers to and of frozen embryos and the potential children they represent obliquely fosters an unnatural and somewhat Faustian practice and result. To the extent that society fears and wishes to obstruct or even reverse the flow of reproductive technology, permitting death time transfers to and of frozen embryos bears the unappreciated consequence of legitimizing the process and result.²²⁰

Estate law is not the proper forum in which to determine either the availability or ethical parameters of medical and technological advances. These questions are largely beyond resolution as the proverbial genie is already out of the bottle. Mindblowing technologies irrefutably exist; the issue shifts from their desirability to whether the law will respond to the changes they precipitate and, if so, how it will respond. Such a response should avoid the empty determinism of a person/property rhetoric and instead confront the costs and benefits of regulation within a given context.

If society is going to allow the creation of frozen embryos, it must prepare to deal with them respectfully and remain open to the changes they represent. This is necessary even if it entails reconsidering, reconfiguring, or even abrogating safe and easy distinctions between previously inviolate divides. Modifying the law to recognize particular property rights in and by frozen

Robyn Rowland, Motherhood, Patriarchal Power, Alienation and the Issue of 'Choice' in Sex Preselection, in Man-Made Women: How New Reproductive Technologies Affect Women 75 (1985).

See Weidlich, supra note 7, at A1 (May 22, 1995) (stating that many legislators are reluctant to introduce surrogacy laws because regulation suggests that they approve of such contracts).

embryos accomplishes these goals notwithstanding its challenge to the person/property and life/death constructs around which our world view revolves.