

Legal Issues Surrounding Embryos and Gametes: What Family Law Practitioners Need to Know

by
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I. Introduction: Setting the Stage

One does not have to search far or wide to find the topic of cryopreserved embryos and gametes¹ covered in popular media. Movie stars are litigating control and use of reproductive tissue.² Ordinary people with stored sperm, eggs or embryos are going through divorces or the ending of a long-term romantic relationship and find they need to figure out what to do with their stored reproductive tissue.³ Single and professional woman seeking to

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¹ The term "gametes" is often used to refer collectively to sperm and eggs or is another term used for either sperm or eggs individually. In this article, the authors will use the term "gametes" when referring collectively to sperm and eggs, and the term "reproductive tissue" when referring to both gametes (eggs and sperm) and embryos.

² Nick Loeb, *Sofia Vergara's Ex-Fiancé: Our Frozen Embryos Have a Right to Live*, N. Y. TIMES, Apr. 29, 2015. Other celebrities who have indicated they have taken steps to freeze their eggs for purposes of delaying childbearing include singer-actress Rita Ora, television star Kaitlyn Bristowe, comedian Whitney Cummings, and actress Olivia Munn. *Egg-freezing Regrets: Half of Women Who Undergo the Procedure Have Some Remorse*, WASH. POST (May 18, 2018), https://www.washingtonpost.com/news/to-your-health/wp/2018/05/18/egg-freezing-regrets-half-of-women-who-undergo-the-procedure-have-some-remorse/?utm_term=.a01d308bb29e.

³ See Ariana Eunjung Cha, *Whoever Gets the Embryos? Whoever Wants to Make Them into Babies, New Law Says*, WASH. POST (July 17, 2018), <https://www.washingtonpost.com/national/health-science/who-gets-the-embryos-who->

56 *Journal of the American Academy of Matrimonial Lawyers*

advance their careers may look for ways to preserve their fertility viability and parentage options as long as possible.⁴ This includes egg freezing, typically through the relatively new and improved form of this technology, “vitrification.”⁵ The act of harvesting and freezing eggs can be used to delay childbearing without an immediate medical reason (sometimes referred to as “elective”

ever-wants-to-make-them-into-babies-new-law-says/2018/07/17/8476b840-7e0d-11e8-bb6b-c1cb691f1402_story.html?noredirect=on&utm_term=.d33abb14b695 (reporting on the divorce between Ruby Torres and John Joseph Terrell, where they disputed who could receive and use their cryopreserved embryos, which led to the passage of a new law in Arizona that went into effect July 1, 2018, providing that, notwithstanding any prior agreements, custody of disputed embryos must be given to the party who intends to help them “develop to birth”). See also Maura Dolan, *Divorced Couple Fighting in Court over Frozen Embryos*, L.A. TIMES (July 13, 2015); Tamar Lewin, *Chicago Court Gives Woman Frozen Embryos Despite Ex-Boyfriend’s Objections*, N. Y. TIMES (June 12, 2015), <https://www.nytimes.com/2015/06/13/us/chicago-court-awards-woman-embryos-over-ex-boyfriends-wishes.html>; Gillian Mohny, *Divorced Couple’s Embryo Feud Could Affect How Fertility Clinics Do Business*, ABC NEWS (July 14, 2015), <https://abcnews.go.com/Health/divorced-couples-embryo-feud-affect-fertility-clinics-business/story?id=32440739>.

⁴ Maura Dolan, *Former California Couple’s Case May Set Rules for Embryo Battles*, L.A. TIMES/ST. PAUL PIONEER PRESS, Sept. 27, 2015, at 14; Amy Eisinger, *Biological Clock Ticking? What You Need to Know About Freezing Your Eggs*, WASH. POST (July 27, 2015), https://www.washingtonpost.com/national/health-science/biological-clock-ticking-what-you-need-to-know-about-freezing-your-eggs/2015/07/27/40f0391e-2f0c-11e5-8f36-18d1d501920d_story.html?utm_term=.096f02490e78. But see European Society of Human Reproduction and Embryology, *Partnership Problems and Not Career Planning Mainly Explain Why Women Are Freezing Their Eggs*, SCI. DAILY (July 2, 2018), <https://www.sciencedaily.com/releases/2018/07/180702094046.htm> (stating that partnership problems (i.e., not having a stable partnership with men committed to marriage and parenting) and not career planning mainly explain why women are freezing their eggs, and urging fertility clinics to make patient-centered care of single woman a high priority).

⁵ Pam Belluck, *What Fertility Patients Should Know About Egg Freezing*, N.Y. TIMES (Mar. 13, 2018), <https://www.nytimes.com/2018/03/13/health/eggs-freezing-storage-safety.html> Vitrification, a faster freezing technique for eggs, reportedly has better thaw rates than “slow freezing,” which has been around for a long time and is apparently still being used by some clinics. Vitrification has made egg banking more widespread, decreasing the need for synchronized “fresh” cycles between donor and recipient, and has also encouraged more embryo freezing. Studies have shown that the survival and fertilization rates of thawed vitrified eggs are no different from those of fresh. European Society of Human Reproduction and Embryology, *supra* note 4.

or “social” egg freezing) or for pressing medical reasons such as for certain forms of infertility or a cancer diagnosis.⁶ “Oncofertility” is an emerging medical field, addressing the fertility-related and fertility preservation needs of cancer patients.⁷ Some businesses are adding costs associated with retrieval and storage of eggs as an employee benefit and, in connection with oncofertility issues, a few states are beginning to regulate the coverage of retrieval and use of such stored reproductive tissue in medical insurance policies.⁸ Embryos are being tested and manipulated in newer and more complex ways, both to eliminate genetic diseases for the resulting children and to improve the odds of conceiving and giving birth to children not otherwise possible without these medical advances.⁹ Families grieving the death of a loved-one who left reproductive tissue behind consider if and how to use that tissue to potentially keep that person’s genetic

⁶ Ariana Eunjung Cha, “Egg-Freezing Regrets: Half of Women Who Undergo the Procedure Have Some Remorse,” WASH. POST (May 18, 2018), https://www.washingtonpost.com/news/to-your-health/wp/2018/05/18/egg-freezing-regrets-half-of-women-who-undergo-the-procedure-have-some-remorse/?utm_term=.a01d308bb29e. For a sobering look at what can go wrong with frozen eggs, despite careful planning for future use and family building, see this story of four women whose plans for family building through egg freezing failed to materialize, see Ariana Eunjung Cha, *She Championed the Idea that Freezing Your Eggs Would Free Your Career. But Things Didn’t Quite Work Out*, WASH. POST (Jan. 27, 2018), <http://wapo.st/2nm2ieK>.

⁷ For extensive information on this emerging and fast-growing, inter-disciplinary field, see *The Oncofertility Consortium*, <http://oncofertility.northwestern.edu/about-oncofertility-consortium> (last visited Aug. 31, 2018).

⁸ See American Society for Reproductive Medicine, *Delaware Joins States Requiring Coverage of IVF and Fertility Preservation*, 20 ASRM BULL. (July 3, 2018). “This new Delaware law that applies to individuals who suffer from a disease or condition that results in the inability to procreate or to carry pregnancy to live birth allows for six completed egg retrievals per lifetime, with unlimited embryo transfers in accordance with ASRM guidelines.” In August, 2018, Illinois added such coverage.

⁹ David Sable, *Why the Future of Precision Medicine Runs Through the IVF Lab*, FORBES, (Apr. 22, 2018), <https://www.forbes.com/sites/davidsable/2018/04/22/why-the-future-of-precision-medicine-runs-through-the-ivf-lab/#554a21db5cf3>. This author rather provocatively asserts that in vitro fertilization (IVF) and preimplantation genetic diagnosis (PGI) should not be used primarily to address infertility issues, but to combat and reduce the numbers of genetic birth defects, all of which would be much more cost effective and treatment effective than pouring huge amounts of resources into the pharmaceutical industry to treat these conditions after the child is born.

58 *Journal of the American Academy of Matrimonial Lawyers*

presence alive in some form.¹⁰ Liability for mishandling, damaging, or losing these reproductive tissues continues to arise in ever changing ways and under continually evolving legal theories. In a recent case, the New York Court of Appeals ruled that a wrongful birth claim accrued upon an infant's birth when an IVF clinic fails to perform adequate genetic screening of an egg donor.¹¹ Freezer malfunctions at two U.S. fertility clinics at the end of March of 2018 led to the loss of thousands of eggs and embryos stored by patients who had hopes of using them for future pregnancies and future children; dozens of lawsuits were filed in the aftermath, with one participating couple seeking a court order declaring that life begins at conception and that embryos should be given legal standing as persons.¹²

¹⁰ An example of such a situation involved a Queensland, Australia woman who won the right to use her dead boyfriend's sperm to have children after a judge ruled she was confident any baby would be "loved, cared for, and supported." The woman and the deceased man had been in a relationship for about three years when he killed himself in August of 2016. The pair were planning to get married and have children. After his death, and with the support of his family, she sought and obtained an urgent court order to remove his sperm. She paid for its storage while seeking judicial approval to use it for her own reproduction. The court held that the way the sperm was removed made it classed as property and that the woman was entitled to possess it and ultimately to use it for reproductive purposes. *Australian Woman Wins Right to Use Dead Boyfriend's Sperm*, GUARDIAN (June 20, 2018), <https://www.theguardian.com/australia-news/2018/jun/20/queensland-woman-allowed-to-use-dead-boyfriends-sperm>.

¹¹ *B.F. v. Reproductive Med. Associates of N.Y., LLP*, 97 N.E.3d 398 (N.Y. 2018).

¹² Nicole Wetsman, *Will Fertility Clinic Disaster Redefine Personhood?*, DAILY BEAST (Apr. 13, 2018), <https://www.thedailybeast.com/will-fertility-clinic-disaster-redefine-personhood>. For a fascinating article describing the emotional and legal issues involved in egg donation and preservation, the use of frozen embryos by a gestational carrier and her husband, and intended same-sex parents who had a child and then lost the chance to have additional children and siblings for their child following the freezer malfunction that occurred in San Francisco at nearly the same time as the malfunction in Ohio, see Jessica Ravitz, *Two Dads, an Egg Donor and a Surrogate: How a Freezer Failure Changed Everything*, CNN.COM (June 28, 2018), <https://www.cnn.com/2018/06/28/health/embryos-egg-donor-surrogate/index.html>. Another similar situation involved a couple who had their dreams of having a child dashed when a California clinic "lost" their two embryos when the couple opted to transfer their two frozen embryos from one clinic to another. They sued the clinic for negligence and breach of contract. Kelly Puente, *Orange County Couple Says Irvine*

These are just a few such examples of issues playing out in the field of assisted reproductive technology (ART) that are part of a broadening and increasingly complex public discussion involving embryos and gametes. With medicine evolving at a much faster rate than the legal theories and procedures surrounding them and needed to create and ratify contracts and to solidify parentage determinations, to say nothing of the rising numbers of disputes between donors, intended parents, fertility clinics, and storage facilities, lawyers are being bombarded with a myriad of emerging complex legal issues. Many jurisdictions have no statutes or procedural rules to address these constantly evolving medical advances and the desperate clients wanting to build families as quickly, easily, and inexpensively as possible.¹³ Matching

Fertility Clinic Lost or Destroyed Their Embryo, ORANGE COUNTY REG. (Feb. 14, 2018), <https://www.ocregister.com/2018/02/14/orange-county-couple-says-irvine-fertility-clinic-lost-or-destroyed-their-embryos/>.

¹³ Debra Bruno, *Why You Need a Prenup for All of Your Relationships*, WASHINGTONIAN, Aug. 12, 2015. For an interesting illustration of the variable regulation and lack of regulation of these medical practices and developments and how these medical developments are fast outpacing legal regulation and practices, see the article about Dr. John Zhang, a Chinese-born, British educated founder and medical director of a New York City fertility center that is challenging traditional way humans reproduce far beyond standard IVF. In 2009, he helped a 49-year-old patient become the world's oldest known woman to carry her own genetic child, and he says that in the not-too-distant future, 60-year-old women will be able to do the same. In 2015 he stunned his scientific peers by transferring a genetically "abnormal" embryo into the womb of a woman who had run out of other options. What Dr. Zhang is more notoriously known for, however, is his creation of what has been referred to in popular and ill-informed media as a "three-person" or "three-parent" baby. Here he took an intended mother's egg that had defective DNA in the mitochondria (the fluid surrounding the egg's nucleus) responsible for a neurological disorder, extracted the nucleus, which is believed to carry virtually all of the DNA material responsible for such things as physical appearance and other major traits, but not the ones that lead to the concerning disease for which she carried a genetic mutation, then he inserted her extracted nucleus into a healthy donor egg and fertilized it with the intended father's sperm, and the intended mother gave birth to a child with technically three progenitors and apparently free from the concerning disease. Although mitochondrial disease is often fatal, and this process alleviates the disease, and thus has recently been approved by the United Kingdom's regulatory agency, HFEA, many U.S. medical and ethics professionals, including the Food and Drug Administration, viewed this process as a step too far towards genetic manipulation that might lead to manipulation for trait selection such as intellectual or athletic ability. The FDA, which for

and facilitating programs — in some sense the modern kin to adoption agencies of years ago — have emerged, with their typical tasks including the following: recruiting and matching donors and gestational carriers (and in much more limited circumstances, genetic or traditional surrogates) with intended parents; referring or coordinating contractual arrangements between such parties or providing them outright; facilitating contacts with medical and mental health providers; helping to navigate the complex web of medical insurance coverage that may or may not cover some of these expenses; and perhaps maintaining records of who is working with whom in order to facilitate ongoing post-birth contacts and the sharing of medical and genetic history, and at least in some marginal fashion, keeping a record of who is genetically related to whom as their clients' embryos and other reproductive tissue are moved about as they are cryopreserved, stored, used or donated for procreation, or eventually destroyed.¹⁴ Stor-

decades has taken a mostly hands-off policy when it comes to the fertility industry, ordered Dr. Zhang to stop marketing this technology, effectively shutting down this program and its practice in the United States. In the meantime, the procedure has been allowed and used in Great Britain, Ukraine, and China. Ariana Eunjung Cha, *This Fertility Doctor Is Pushing the Boundaries of Human Reproduction, with Little Regulation*, WASH. POST (May 14, 2018), https://www.washingtonpost.com/national/health-science/this-fertility-doctor-is-pushing-the-boundaries-of-human-reproduction-with-little-regulation/2018/05/11/ea9105dc-1831-11e8-8b08-027a6ccb38eb_story.html. As an aside, it is troubling to see the child born as a result of mitochondria manipulation labelled as a “three parent child.” We do not refer to egg, sperm, or embryo donors as parents, and it is difficult to see why a partial egg donation—of mitochondria, which carries a tiny amount of DNA compared to the nucleus of the egg—should alter that legal framework. In the area of assisted reproduction, it is absolutely essential that medically accurate and properly descriptive terms defining legal relationships be used. Failure to do so creates confusion, legal uncertainties around parent-child status, and fuels the already vitriolic ethical and religious debates that have roiled this area of law and medicine. For further discussion of this topic, see Susan L. Crockin, *The “Embryo” Wars: At the Epicenter of Science, Law, Religion, and Politics*, 39 FAM. L.Q. 599 (Fall 2005); Susan L. Crockin & Celine Anselmina Lefebvre, *Sound Bites or Sound Law and Science? Distinguishing “Fertilization” and “Conception” in the Context of Preimplantation IVF Embryos, ESCR, and Personhood*, 3 ETHICS IN BIOLOGY, ENG'G & MED. 247, 247 (2012).

¹⁴ Lauren Freeman-Anchor & Tera Roberson, *Program Matches Families Willing to Donate Embryos to Those Who Want Children*, HOUSTON.COM NEWS (Jan. 15, 2015), <https://www.click2houston.com/news/program-matches-families->

age facilities that cryopreserve, store, and ship the materials continue to proliferate, as do lawsuits, many based on novel legal theories centered on the nature of the materials being frozen, stored, and transported.¹⁵ Politicians and state legislatures have followed these trends and have tried to address these issues, colliding in the process with the complex issues, and strongly held views of many people, of determining when human life begins and dealing with those opposed to assisted reproduction on religious and ethical grounds or positions flowing from the abortion culture wars.¹⁶ Some constituencies see ART as a direct assault on adoption.¹⁷ As families created using ART become nearly commonplace, and as medical advances continue, along with more genetic diagnosis, manipulation, and increased ability to store various forms of reproductive tissue, these issues will continue to be significant topics of public, political, and legal discourse.

willing-to-donate-embryos-to-those-who-want-children_20151124015249816; Tamar Lewin, *Industry's Growth Leads to Leftover Embryos, and Painful Choices*, N.Y. TIMES, June 17, 2015; Ellen McCarthy, *Fertility Medicine Brings Babies—and Tough Decisions*, WASH. POST (May 18, 2015); Sumath Reddy, *Fertility Clinics Let You Select If You Want a Boy or a Girl*, WALL ST. J., Aug. 18, 2015; Michael Sullivan, *Outside the Womb* (July 14, 2015), www.lifeofthelaw.org.

¹⁵ For a general overview, see Annotation, *Liability of Cryobanks or Fertility Clinics for Negligence and Other Actions Related to Frozen Sperm or Embryos*, 16 A.L.R. 7TH 8 (2016); many of these disputes have been resolved with confidential settlements, making it difficult to assess the strength of various theories of liability.

¹⁶ Tamar Lewin, *Groups Opposed to Abortion Join Fights on Frozen Embryos*, N.Y. TIMES Jan. 20, 2016.

¹⁷ Angela Pittenger, *Building Families Through Embryo Adoption*, TUCSON.COM (July 4, 2015). As an example of how politically fraught these issues can be, the Arizona legislature passed a law in March of 2018 that provides that in a dispute over embryo custody, a judge is required to rule in favor of the party who desires to use the embryos for conception and birth rather than to destroy them or donate them for research, regardless of any previous contracts or agreements between the parties providing otherwise. See *supra* text at note 3. *American Society for Reproductive Medicine on Arizona Senate Bill 1393*, SOC. FOR ASSISTED REPRODUCTIVE TECH., (Mar. 6, 2018), <https://www.sart.org/news-and-publications/news-and-research/press-releases-and-bulletins/american-society-for-reproductive-medicine-on-arizona-senate-bill-1393/>. For a discussion of concerns about using the term “adoption” when referring to donations for embryos for procreation purposes, see *infra* note 22.

As assisted reproduction proliferates, it is also becoming nearly common to have divorcing couples who have grappled with infertility issues build a family using assisted reproduction, and who may now have stored embryos or gametes that must be dealt with in the divorce. Hopefully family law attorneys — and also estate planning attorneys — are asking potential clients whether they have experienced infertility issues, ever availed themselves of assisted reproduction in building their families, or have any stored reproductive tissue in the form of embryos or gametes. Chances are that at some time in the family law attorney's practice, these gametes or embryos are going to have a place in the divorce, parentage, or custody proceeding that the family law attorney must address. The purpose of this article is to provide an overview of the legal issues that currently surround the storage, use, and ultimate disposition of cryopreserved embryos and gametes for the family law attorney who does not practice assisted reproduction law. This article will begin by exploring the unique nature of gametes and embryos and discuss what makes them so legally complex. The next section will discuss the disposition options available to persons who have control over stored embryos and gametes, as well as the challenges that can emerge from disparate views as to how embryos and gametes are legally characterized. This will be followed by a section that considers the various situations where disputes as to disposition have occurred, including a detailed look at divorce and legal separation, patient and provider disputes due to erroneous handling of embryos and gametes, and a section on posthumous procreation and resulting disputes. The article will conclude with a section that considers a potpourri of cutting-edge legal issues that have emerged around stored embryos and gametes.

II. What Are Gametes and Embryos, and What Makes Them So Legally Complex?

Perhaps a necessary starting point in this discussion of legal issues surrounding embryos and gametes is to briefly examine the nature of this tissue and the reproductive processes in which it is used. Since Louise Brown's birth in 1978, the ability to create ex utero or preimplantation embryos through in vitro fertilization (IVF) has created opportunities for both parenthood and re-

search that were previously impossible and almost unimaginable.¹⁸ Before IVF, fertilization could only occur within a woman's body. Thus, a potential pregnancy could be achieved only through sexual intercourse or artificial insemination. From a biological perspective, by creating the possibility of ex utero fertilization, IVF required a fundamental shift in the understanding of reproduction: from a single process that can only take place in vivo, to a continuum of distinctly identifiable processes involving in vivo (via natural conception or artificial insemination) or in vitro fertilization (IVF), the latter followed by implantation of an IVF embryo within days of fertilization and development in vivo.¹⁹ IVF technology rapidly expanded to allow for cryopreservation (freezing) of the early stage embryo (originally at day three, now more commonly at day five), with later thawing and implantation, as well as including the potential use of donor sperm or donor eggs. These new opportunities for reproduction have required courts to consider whole new categories of parents as well as the status of ex utero or pre-implantation IVF embryos. No longer does society just have biological, step, or adoptive parents, but these advancements in reproductive medicine have led to categories such as genetic, intended, or gestational parents as well as revisiting definitions of donors and surrogates.²⁰

An IVF embryo — sometimes referred to as a “pre-embryo” before it is implanted in a woman's uterus²¹ — is an incredibly complex bit of human cells that initially are undifferentiated (and frozen at that stage) with the capacity for developing into any cell in the human body and even into separate individuals as is the case with identical twins. Embryos are typically produced

¹⁸ Crocchin & Lefebvre, *supra* note 13, at 247.

¹⁹ *Id.*

²⁰ *Id.*

²¹ As one of the authors has discussed in numerous articles and presentations, there is a long-standing debate in the medical community as to whether “pre-embryo” or “embryo” is the more accurate term to use when referring to embryos at this stage of the medical process. Also of both medical and legal significance are the concepts of fertilization and conception — terms that have been caught up in the debate of what constitutes a person for purposes of determining when abortion can legally occur and how gametes and embryos can be handled and legally treated throughout these reproductive processes. See Crocchin & Lebebrve, *supra* note 13.

64 *Journal of the American Academy of Matrimonial Lawyers*

through the in vitro fertilization process using gametes that were retrieved solely for the purpose of procreation (or fertility preservation and later procreation).

Numerous participants may be involved in the creation, use, storage, and shipping of these embryos and gametes. Intended parents are frequently the parties who start the process since they are seeking to build families through the use of their own or some combination of donor gametes or embryos. These intended parents may be married, single, same-sex, heterosexual, and transgender — a complex reality that is having a significant impact on how the law of parentage determines who is legally deemed to be a parent of a child born of these assisted reproduction processes, as well as how to respect and protect third-party participants, including donors and surrogates, who are not intended parents.

Depending on the particular needs of the intended parents, there may be one or two gamete donors, depending on whether intended parents need eggs, sperm, or both. If an embryo is donated to intended parents, that transaction may involve literally layers of donors as the gametes that went into creating the embryo may have also been donated to the initial recipients, now embryo donors.²² If the intended parents are unable to carry the embryo because of medical or gender limitations (including all same-sex male couples), it may be necessary to involve a gestational carrier or traditional or “genetic” surrogate (the latter term having been endorsed by the Uniform Parentage Act 2017 as more descriptive than the term “traditional”).²³

²² Here is a good place to note that the tricky and often emotion laden terminology at play in assisted reproduction often bubbles up when it is debated as to whether a donation of an embryo is a donation or an adoption. The authors of this article, as well as the American Society of Reproductive Medicine, (ASRM), strongly support the term donation over adoption. *See Defining Embryo Donation: A Committee Opinion*, 99 FERTILITY & STERILITY 1846 (2013) (“Building families through adoption of children has been supported by human society throughout history. The ethical appropriateness of patients donating embryos to other patients for family building, or for research, is well established and is affirmed by this body. The use of the term “adoption” to embryos is inaccurate and should be avoided.”). *See also* Crockin, *supra* note 13.

²³ UNIF. PARENTAGE ACT 2017, [http://www.uniformlaws.org/Act.aspx?title=Parentage%20Act%20\(2017\)](http://www.uniformlaws.org/Act.aspx?title=Parentage%20Act%20(2017)).

A raft of medical professionals are also involved: fertility doctors who assess the medical condition of the participants, and perform IVF and related procedures; embryologists who fertilize eggs, freeze embryos and gametes, and often ship the cryopreserved gametes or embryos to other locations; as well as the obstetrician who treats the pregnant woman and hopefully delivers the resulting child. Separate cryopreservation storage facilities have grown into a large, mature industry with improved handling, storage, and shipping protocols for cryopreserved embryos and gametes.

Lawyers have gotten into the act, drafting donor and gestational carrier contracts; reviewing medical consent forms or dispositional documents crafted as consents or contracts with potentially enormous legal impact in subsequent disputes as to possession and use of cryopreserved embryos and gametes, and resulting parentage; and in some cases securing parentage orders. Given the increasingly interstate and international nature of these arrangements, securing parentage through parentage orders, statutory law, or at times termination of parental rights and adoption decrees, has introduced an almost mind-boggling array of choice of law and conflict of law issues.

Under professional guidelines, and some state laws, mental health professionals are also called upon to do psychosocial assessments, evaluations, and/or education of many of the participants, and also to do counseling both to help address causative infertility issues as well as the unique inter-familial relationship struggles that may emerge out of these unconventional ways of family building.²⁴

III. Disposition and Characterization of Embryos and Gametes

Not only are stored embryos and gametes becoming more commonly discussed in popular media and dealt with by more professionals affiliated with reproductive medicine, but also there are a number of different dispositional options that family law attorneys need to be aware of as they are more frequently asked to deal with stored embryos and gametes in their cases.

²⁴ Ellen A. Waldman, *Disputing over Embryos: Of Contracts and Consents*, 32 ARIZ. ST. L.J. 897 (2000).

Several options exist that intended parents and progenitors need to think about, as do the medical and storage facilities that are asked to handle and store this reproductive tissue. While the initial intention is for the intended parents to use their stored embryos or gametes to create a family, fertility programs now routinely seek to have patients record their dispositional choices in the event they no longer are jointly seeking to parent, whether because of a divorce, death, or cessation of treatment.

In trying to fully understand the surrounding legal issues and the various legal disputes they can engender, it is helpful to review the three principal disposition options that can be considered: donation for procreation, donation for research, and discard/destroy. A former, commonly seen option, namely, to store the materials indefinitely with no dispositional choice indicated (and implicitly or explicitly require contemporaneous consent to use), is considered by many today to be a “non-option” since it simply delays other decision-making, invites judicial disputes, and may lead to increased numbers of unresolved, stored gametes and embryos.²⁵

²⁵ Older cases illustrate both the more frequent use of the “indefinite storage” language in fertility center documents and the problems it created. *E.g.*, *In re Marriage of Witten*, 672 N.W. 2d 768 (Iowa 2003). In more recent years, fertility centers and model consents and agreements promulgated by the Society for Assisted Reproductive Technology (SART) do not include this “option” and instead suggest a default option be required, usually to discard if patients’ other choices are not available. Patients may, of course, change any previously chosen option by mutual consent to do so. Indefinite storage can be enormously expensive, it exposes the holders of the material to ongoing potential liability (as the facilities that had their freezers malfunction found out), and it is simply putting off clear disposition decisions for another day; as people’s memories fade, intentions are no longer clearly recalled and more difficult to prove and establish, or former patients cannot be located, so that those decisions often become more challenging as time goes on. In fact, partially in response to concerns about indefinite storage creating even greater future problems, pursuant to the Human Fertilisation and Embryology Act (HFEA; 1990), Great Britain chartered a committee called the Human Fertilisation and Embryology Authority, which is charged with among other things, regulating clinics that perform the various types of assisted reproductive technologies. This regulatory body sets the terms of years for which embryos may be stored, and after which must be discarded. For a more detailed discussion of these alternative options for the use and disposition of embryos and other reproductive tissue, see Molly O’Brien, Note, *An Intersection of Ethics and Law: the*

In the realm of embryo donation, it is worth noting that there has long been a debate among professionals working in the assisted reproduction field, policy makers, and the public as to the use of the term “donation” versus “adoption.” The issue is more than semantics: it is tied to the dispute as to whether embryos are persons, property, or something in between, and adoption has been promoted by anti-abortion proponents, with some critics arguing it has become part of a well-coordinated anti-abortion effort. Although adoption laws do not readily apply, generally those who support the use of the term “adoption” to transfer embryos to another person or couple for procreation tend to view the usage of donated embryos for procreation as a form of adoption, including the overarching view that the disposition must ultimately be governed by the “best interests of the child.”²⁶

Two other disposition options are donation for non-procreative means, such as approved research or clinical training, or simply to discard. For reasons discussed in the next section of this article, how embryos and gametes are characterized — property or persons — greatly impacts these disposition options. If people view embryos or gametes as something other than a form of property that can be transferred, manipulated, and used as the owner sees fit, this can cause great concern for some people and color their views as to either of these being viable and supportable dispositions.

It is important to note the difference between embryos and gametes (either eggs or sperm). Gametes — eggs and sperm — are the only human cells that have reproductive capacity to form a new human life, but alone neither can create life. They must be combined to create an embryo, fetus, and potentially, a baby. Embryos are one crucial step closer to producing a child since

Frozen Embryo Dilemma and the Chilling Choice Between Life and Death, 32 WHITTIER L. REV. 171 (2010).

²⁶ For an elaboration on this debate, see Alexia M. Baiman, *Cryopreserved Embryos as America's Prospective Adoptees: Are Couples Truly "Adopting" or Merely Transferring Property Rights?*, 16 WM. & MARY J. WOMEN & L. 133 (2009); Polina M. Dostalík, *Embryo "Adoption?" The Rhetoric, the Law, and the Legal Consequences*, 55 N.Y.L. SCH. L. REV. 867 (2010/2011); Molly Miller, *Embryo Adoption: the Solution to an Ambiguous Intent Standard*, 94 MINN. L. REV. 869 (Feb. 2010).

fertilization has already occurred.²⁷ While cryopreservation technology is advancing and changing the reproductive options for the users of stored embryos and gametes, legal challenges in how to characterize and resolve disputes over these materials continue to illustrate their complex nature, and in many instances, the outcome of the dispute is heavily dependent on its context. How the tissue is characterized – whether as property, human life, or something in between — has dramatic impact on the legal issues that come into play, and the ultimate outcomes, in this intertwined area of medicine and law. A review of legal trends in the characterization battles will set the context for the legal disputes involving embryos and other cryopreserved reproductive tissue that will be discussed in the next section.

Courts have always struggled with characterizing embryos in disputes over their possession or use; the context of the dispute matters and often leads directly to the outcome. A number of courts have considered them a special kind of property or in some cases, *sui generis*, stating they are deserving of special treatment; in the divorce context most courts have considered them a unique form of joint or marital property that could not simply be valued and divided down the middle, with equal shares going to each party. One of the earliest, and most often cited, judicial definitions treats stored embryos and gametes as, “neither persons nor property,” but “potential life deserving of special respect and protection,” adopting the definition first articulated by the American Society of Reproductive Medicine (actually its predecessor, the American Fertility Society), and accepted in the seminal Tennessee Supreme Court case, *Davis v. Davis*.²⁸ Similarly, in the later case of *Jeter v. Mayo Clinic Arizona*, the Arizona Court of Appeals held that human embryos “occupy an interim category between mere human tissues and persons because of their potential to become persons.”²⁹ The American Society of Reproductive Medicine (ASRM) remains a staunch supporter of the “interim status” classification, stating that em-

²⁷ For a discussion of the important — yet frequently ignored or abused for political purposes — distinction between the medically complicated processes of “fertilization” and “conception,” see Crockin & Lefebvre, *supra* note 13, at 247.

²⁸ 842 S.W.2d 588 (Tenn. 1992).

²⁹ 121 P.3d 1256, 1271 (Ariz. Ct. App. 2005).

bryos should be afforded “profound respect” but not the same moral and legal rights that are afforded human beings. The Food and Drug Administration in 2002 officially defined a human embryo as “biological tissue” subject to rules and regulations applicable to such tissue.³⁰

These “interim status” definitions do not preclude the embryos from being discarded. After *Davis*, many courts have gone on to consider embryos to be a special kind of property that is not easily divided between the parties, and because of their essential role in procreation, to raise other complex issues beyond mere possession and valuation.³¹ The *Davis* case set the stage for this analysis, stating, as in *Jeter*, that “we conclude that pre-embryos are not, strictly speaking, either ‘persons’ or ‘property,’ but occupy an interim category that entitles them to special respect because of their potential for human life.”³² This did not preclude the husband from discarding the embryos or the wife from using them, but in the absence of a prior agreement, the court then had to engage in a complex analysis of determining and weighing the couple’s competing rights and interests, some of which were constitutional in nature.

Other courts in various contexts have deemed embryos and gametes to be simply property without the special characteristics ascribed to them in *Davis* and its progeny. In *York v. Jones*,³³ an early effort by a federal district court in the Eastern District of Virginia to deal with who retained control over embryos in a dispute between the clinic holding the embryos and the couple who were the gamete providers, the court characterized the embryos as the patients’ personal property and held that the patients and the clinic were in a bailor/bailee relationship. It is important to note, however, that this dispute was not between two gamete providers, but a dispute with a clinic that did not want to release

³⁰ O’Brien, *supra* note 25, at 181.

³¹ See, e.g., *McQueen v. Gadberry*, 507 S.W.3d 127 (Mo. 2017), where the Missouri Supreme Court had to consider the circumstances of how the embryos were created, and took into account that these were embryos to which both parties had contributed gametes, and that the written agreement between the parties was riven with a lack of clarity and chaos in circumstances and content. The court had to balance the competing constitutional interests of the wife to produce a child and the husband to not produce.

³² 842 S.W.2d at 597.

³³ 717 F. Supp. 421 (E.D. Va. 1989).

the embryos to the two gamete providers' new clinic. In *Kass v. Kass*,³⁴ a case involving a dispute between a divorcing couple, the New York Court of Appeals held that the five frozen embryos produced during the couples' participation in IVF would not be recognized as "persons" and that contract law would determine the disposition of the embryos. By applying contract law to their disposition, the court implicitly held that embryos are property. In *In re Marriage of Dahl and Angle*,³⁵ the Oregon Court of Appeals held that frozen embryos are "personal property" and that parties hold the contractual right to possess or dispose of the frozen embryos as personal property. In *Hall v. Fertility Institute of New Orleans*,³⁶ the Louisiana Supreme Court held that a decedent's frozen semen deposited with the fertility institute was succession property devisable as part of his estate plan. In a variety of different contexts, these cases emerging over a span of more than twenty years started to develop jurisprudence that often — but not always — articulates a practical view that cryopreserved embryos are akin to property, most often of a special or joint kind, and treated them accordingly in possession and use disputes in the context of storage fee disputes, divorce and family formation, and probate.

Because context matters, the court in *York* did not need to address what the embryos were, but only that the patients, rather than the clinic, controlled them. Similarly, in *Kass*, the court deemed it both important and dispositive that the patients had a written disposition agreement in place held that the agreement controlled. The particular factual circumstances in many respects compelled these varying views of the embryos and gametes and supported the courts' characterization of them in the particular cases. In looking at how embryos and gametes are characterized by courts, context is everything.

Legislation in several states has exhibited more extremes in approach. Some states have followed a path similar to the majority of courts in the characterization of disputes. For example, the state of Florida codified a progenitor's property interest in his or her embryos, granting the progenitors joint decision-making authority regarding the embryos' disposition, with control and deci-

³⁴ 91 N.Y. 2d 554 (N.Y. 1998).

³⁵ 194 P.3d 834 (Or. Ct. App. 2008).

³⁶ 647 So. 2d 1348 (La. Ct. App. 1994).

sional authority always remaining with the progenitors.³⁷ In Michigan, the state legislature categorized embryos as “property” when it allowed Michigan researchers to create new embryonic stem-cell lines from embryos created initially for fertility treatment purposes with patient consent.³⁸

A few legislatures — but so far not any courts — have gone in the other direction and given greater protections to cryopreserved embryos. In one instance, a legislature has categorized embryos as persons. A Louisiana statute expressly declares a human embryo to be “a biological human being which is not the property of the physician who acts as an agent of fertilization, or the facility clinic which employs him or the donors of the sperm or ovum.”³⁹ The statute goes on to define a “human embryo” as composed of one or more living cells and human reproductive tissue so unified and organized that it will develop in utero into an unborn child. A human embryo may not be intentionally destroyed or created solely for research purposes. The best interests of the embryo standard governs custody disputes between genetic parents to best protect the embryo’s future.⁴⁰ Somewhat ironically, however, a Louisiana court refused to allow a medical malpractice claim for embryos lost in a tank incident in that state.⁴¹ This is the only state legislature to currently acknowledge “embryo adoption,” allowing IVF patients to relinquish their parental rights to the embryo as long as another *married* couple implants the embryo.⁴²

In New Mexico, a state statute declares its firm protection of a fetus’s future safety and well-being, although the legislature

³⁷ FLA. STAT. § 742.17(2) (2009).

³⁸ MICH. COMP. LAWS § 333.10102 (2018).

³⁹ LA. REV. STAT. ANN. § 9:126 (2008).

⁴⁰ *Id.*

⁴¹ *Heather v. Ochsner Fertility Clinic*, 102 So. 3d 913 (La. Ct. App. 2012).

⁴² But see Georgia’s Option of Adoption Act. GA. CODE ANN. § 198-40 (2010). Unlike the Louisiana statute, the Georgia statute does not explicitly define an embryo as a person or provide for adoption of an embryo per se; rather, it sets out an optional two-step process for adoption following the birth of a child born from the donation of an embryo, whereby the embryo donors relinquish all rights to the donee parents via a written contract and the donees then petition the court for an order of adoption. There is also an argument to be made that the Florida statute also acknowledges embryo adoption, but this is not clear.

falls short of an absolute grant of “judicial person” status; once an embryo is formed, those same protections exist for the embryo, including a prohibition against donating for research.⁴³ The state of Oklahoma defines “unborn child” to mean the unborn offspring of human beings from the moment of conception through pregnancy and until live birth, and specifically includes “embryo.” Written consent of both donating and recipient couples is required for embryo donation.⁴⁴ Missouri’s statute might also be seen as applying to embryos, but the court in *McQueen v. Gadberry* soundly rejected that conclusion.⁴⁵

Each year various state legislatures across the country consider requests to label embryos as human beings. These so called “personhood” bills are often met with significant opposition and fervent support, placing the characterization of ex utero embryos squarely in the center of the ongoing culture wars. Many in the medical profession consider them to be “anti-IVF” initiatives, with the potential to severely restrict IVF, and even obstetric, practices. Time will tell if the increasingly widespread freezing of eggs will potentially defuse these “personhood” debates that currently exist in the challenges of embryo use and disposition. The storage of sperm has never been a significant topic, but harvesting, preserving, and using or discarding of frozen eggs will undoubtedly complicate these discussions further. While embryo creation and storage has been the norm for fertility preservation for future use for several decades, and since long before that sperm storage has been relatively commonplace, it has only recently become technologically feasible to extract and freeze unfertilized eggs of women for future use. This emerging technology has the potential to simplify legal issues and perhaps reduce litigation given that only one person’s reproductive tissue is involved, as opposed to the difficult disputes between egg and sperm providers (progenitors) — often involving spouses or partners falling out of relationships — who do not agree how their embryos should be used or disposed. But as discussed above, even with fewer progenitors involved, legal disputes and controversy continue to surround these medical advances and the ever changing legal terrain.

⁴³ N.M. STAT. § 24-9A-3 (2008).

⁴⁴ OKLA. STAT. tit. 10, § 556(A)(1)(2010).

⁴⁵ 507 S.W.3d at 142-43.

As these sometimes confusing and contradictory trends continue to play out in state legislatures, it is important to note that the U.S. Supreme Court has never directly entered the debate of defining the status of an embryo or other reproductive tissue, although it has continuously rejected characterizing fetuses, which are in utero and occupy a later stage of human development than do embryos, as judicial persons.⁴⁶ That Court would likely refuse to further stretch the definition to encompass an embryo, which is clearly a less developed potential human. No state court has yet declared an ex utero embryo to be a person. Many of the courts have gone out of their way to distinguish the treatment of embryos from abortion and the debate surrounding *Roe v. Wade*.⁴⁷ The argument advanced is that because the embryo exists separate and apart from the woman's body, and is thus distinctly unlike a fetus, it is not, and should not be, subject to the same considerations or treatment. In short, in the context of pregnancy, the abortion right outweighs the right to procreate. Because an ex utero embryo does not exist within a female's body, the protection of body integrity and autonomy are of no moment in the embryo context.⁴⁸

As several of the courts in their decisions discussed above illustrate, in cases involving separating couples disputing their respective rights to possess and ultimately use their stored reproductive tissue for procreation, both a contract analysis and a constitutional balancing of interests may be undertaken with the characterization dispute often driving the outcome. There is a

⁴⁶ *Roe v. Wade*, 410 U.S. 113 (1973).

⁴⁷ *Id.*

⁴⁸ With this discussion regarding abortion and the characterization of the embryo, it cannot be overstated that the impact of this complicated issue on the world of reproductive rights in general and assisted reproduction in particular is critically important. With an appointment of a new justice to the U.S. Supreme Court pending at the time of the writing of this article to replace the retiring Justice Anthony Kennedy who was often the critical fifth vote to maintain the integrity of the *Roe v. Wade* decision, there could be significant new developments in how embryos are defined and in the area of constitutionally protected reproductive rights in general. This could have significant impact on the storage and use of embryos, as well as provisions in gestational carrier contracts that address the issue of selective reduction.

constitutionally protected right to procreate⁴⁹ and a constitutionally protected right not to procreate.⁵⁰ The majority trend is to side with the progenitor opposed to procreation — but such a view is not without detractors who question whether the right to oppose procreation is constitutionally superior to the right to procreate and to use one's reproductive tissue for that purpose. One author has suggested that courts and legislatures are mandated to act in a neutral fashion and to not hold one constitutional right superior to another in this context.⁵¹ But courts must characterize stored embryos and gametes as they try to decide the rights of the disputants to possession and use of them. As Part IV develops below, those characterizations are at play in the various models that have been developing over time to resolve the possession and use disputes that now flow into family law attorneys' offices with greater frequency.

IV. Situations Where Disputes as to Disposition Have Arisen

Given the complexities discussed above, ongoing disputes about whether IVF embryos should be considered property or human life or something in between, and given that the various dispositional alternatives are colored by strongly held religious, ethical, and emotional concerns, it should not be surprising that embryos, and sperm (with eggs likely to follow now that freezing is common), are at the center of various types of disputes. Some of the disputes are legal in nature and wind up in courts for resolution or are the genesis of legislative actions to address the situations. Others are emotional, psychological, religious, or ethical dilemmas that emerge in various contexts where persons involved must make decisions on how to move forward. This section of the article will provide an overview as to how stored embryos and gametes are being addressed in divorces and legal separations involving married couples, including both same-sex

⁴⁹ *Skinner v. Oklahoma*, 316 U.S. 535 (1942); *Griswold v. Connecticut*, 381 U.S. 479 (1965).

⁵⁰ *Eisenstadt v. Baird*, 405 U.S. 438 (1972).

⁵¹ See Mark W. Myott, *Revisiting the Current Legal Approaches in Frozen Embryo Disposition Disputes Through the Lens of Neutrality*, 10 *GEO. J.L. & PUB. POL'Y* 619 (2012).

and heterosexual married couples, disputes between unmarried couples, regardless of whether the couples are same sex or heterosexual, situations involving death and probate court, litigation between progenitors or “owners” of the reproductive tissue and storage facilities, and disputes between the medical professionals handling the materials and their patients. Given that all same-sex couples and many heterosexual couples will have used donor sperm or eggs to create embryos, the role and weight of being a progenitor or not has also factored into these disputes. A substantial portion of this section will review trends and approaches taken by courts and state legislatures in the United States to deal with these disputes. As the reader will soon discover, there is no uniformity on these issues in the United States.

A. Divorce, Separation, and the Models for Analysis

A complex body of family law exists to guide determinations of how jointly owned property should be divided between married spouses when they divorce or separate. This body of law, as well as the question of characterizing IVF embryos, can be a starting point when the dispute involves a married couple who jointly contributed gametes to create a fertilized embryo, and the question becomes whose post-divorce claims for dispositional authority should prevail. The issues are especially complicated because of the unsettled nature of the reproductive tissue – is it property, a person, or something in between? In other disputes in family court involving the division of assets or the determination of custody and parenting time between divorcing spouses, courts have long considered such factors as origin of the asset and the timing and method of acquisition as to items of property, and with custody and parenting time, courts have looked at the best interests of the child and the role of each spouse in parenting and caring for the child. Intent of the parties could also be a consideration with both property and children, with intent often being gleaned from written agreements — such as prenuptial and post-nuptial agreements — or paper trails of acquisition documents or actions of the parents in child rearing. Ultimately, most family courts have resorted to long-standing, if not old-fashioned, notions of equity and fairness, with these courts often wielding significant amounts of discretion to do justice and apply fairness in

the particular factual context of the dispute that is then before the court.

In situations involving divorce and stored embryos or gametes, all of these methods of deciding who will get possession and possible use of the disputed embryo or reproductive tissue can come into play. Use of donor egg or sperm to create embryos under dispute may factor into a court's calculations, and there have been a limited number of such lawsuits where courts have looked to contractual terms the couple agreed to in deciding rights of a non-progenitor to any embryos.⁵²

Certainly looming over this entire reality of chaos and confusion for divorce courts needing to deal with the disposition of disputed frozen embryos is whether these kinds of disputes between spouses who each have made a genetic contribution to the disputed embryo can now be avoided by simply freezing eggs and/or sperm. Will dealing with one spouse's own gametes be simpler than having to disentangle an embryo composed of gametes from both spouses? This new technological reality (new at least as to egg freezing) will probably not provide easy answers to disputes in the divorce context. There will still undoubtedly be questions of who is allowed to retain and use the gametes if any of the gametes were used during the marriage to create children who now have genetic connections to the stored gametes. Or where marital monies were spent on retrieving and storing the gametes, or situations where one spouse is determined there was an understanding that these gametes would be available to support procreation and the use of the gametes remains the only viable avenue to reproduction for the non-contributing spouse, these circumstances may give rise to claims of vested interest or compensation. The marital relationship creates legal rights and obligations that almost always transcend title, ownership, payment, use, and control of the subject gametes. It is not clear if these gametes, just as with stored embryos, will be treated as marital or non-marital property or something else or how parties

⁵² See *In re Marriage of Witten*, 672 N.W.2d 768 (Iowa 2003); *Wilson v. Delgado*, Ga. Sup. Ct. (S17A0797), dismissed after oral arguments (Nov. 2, 2017).

would be compensated for their participation, use, and future desires as to these stored gametes.⁵³

The question also remains as to when and how the disposition of these stored embryos or gametes should be addressed in the course of a marital relationship. Should it be the responsibility of the fertility clinic, any matching program, or the individual spouses? Should such planning and disposition be discussed with a family or estate planning lawyer? What kinds of contracts are needed? Will medical consent forms suffice? Are medical consent forms even valid contracts?⁵⁴ Many clinics, and professional recommendations, now provide a separate consent form for medical treatment and an agreement or contract as to any future disposition of embryos. Will fill in the blank dispositional forms, drafted in the form of a legal contract, and provided by medical clinics or storage facilities do the job?⁵⁵ Some courts have said “yes,” finding the specific forms met contractual standards.⁵⁶ Should the parties enter into formal prenuptial and postnuptial agreements addressing the stored reproductive tissue? Again, many challenges remain in these uncharted waters when dealing with complex stored reproductive tissue whose very nature and legal aspects are still disputed and debated.

⁵³ For a discussion of a very unusual way in which frozen embryos/eggs have entered into a divorce proceeding, see Katelin Eastman, *Alimony for Your Eggs: Fertility Compensation in Divorce Proceedings*, 42 PEPP. L. REV. 293 (2015). And for a recent decision from Canada in which a trial court gave the sole embryo to the wife while awarding the husband half the cost of buying the donor gametes the couple had used to create it, see *Longstreet v. Brawn*, SH v. DH, 2018, Ontario Superior Court of Justice, ONSC 4506 (2018).

⁵⁴ Regardless, the reality is that many parties to the consents forms, the medical providers and facilities, and indeed courts that are asked to resolve these possession and use disputes, frequently look to the consent forms and other clinic documentation at least for guidance as to intent of the parties. The recommendations of SART and many practices now provide both a medical consent form that addresses the medical procedures and a separate document in the form of a contract for storage and disposition of the resulting embryos or gametes.

⁵⁵ Recommendations from SART and many practices now provide separate consent forms and formal contracts or written agreements for storage and disposition. SART model consents are available, to its members only, as a membership resource, via www.sart.org.

⁵⁶ See, e.g., *Findley v. Lee*, FDI 13-730539 (Cal. Super. Ct. 2015).

In July 2012, the National Conference of Commissioners on Uniform State Laws (NCCUSL) approved and recommended that states adopt the Uniform Premarital and Marital Agreements Act.⁵⁷ This Act not only regulates property and money issues in the drafting of premarital and marital agreements, but also expressly recognizes that there may be agreements included in these contracts addressing “custodial responsibility.” This term includes child custody, child support, and child creation. Under the Act, such agreements would not “bind” the courts because parents and prospective parents do not have the power to waive the rights of their current or future children or to remove the jurisdiction or duty of the courts to protect the best interests of minor children. But while such agreements may not always be enforceable, they can provide guidance to courts and promote stability and permanence in family relationships by allowing intended parents to plan for their children, reinforcing the expectations of all parties to the agreement, and possibly reducing contentious litigation. Child creation agreements would significantly implicate parental rights and other federal constitutional interests (like paternity opportunity interests), as well as public policy concerns. While some statutes and a handful of cases provide some guidance to courts, these agreements could provide another source of guidance for courts.⁵⁸

1. *Same-sex marriage and impact on ART related disputes*

As discussed above, the ability to store embryos and gametes has dramatically affected the human reproductive process. Not surprisingly, these developments have also seeped into the law of parentage, and this development is a prominent feature in the disputes between couples over the use and disposition of embryos and gametes when relationships sour and couples separate. For more than thirty years, the central question of the law of parentage has been when and to what extent determinations of

⁵⁷ UNIF. PREMARITAL AND MARITAL AGREEMENTS ACT (Unif. Law Comm’n 2012).

⁵⁸ See Bruno, *supra* note 13; Jeffrey A. Parness, *Parentage Prenups and Midnups*, 31 GA. ST. U. L. REV. 343 (2015); Marisa G. Zizzi, *The Pre-embryo Prenup: A Proposed Pennsylvania Statute Adopting a Contractual Approach to Resolving Disputes Concerning the Disposition of Frozen Embryos*, 21 WIDENER L.J. 391 (2012).

legal parenthood should be based on biological relationship, marriage to a child's biological parent, or functioning as or intending to be a parent.⁵⁹ Applying these evolving notions and paths to parentage has been especially challenging in situations involving same-sex couples. Even though the U.S. Supreme Court has now declared same-sex marriages legal across the land,⁶⁰ married same-sex couples who have disputes about stored embryos or gametes may face even greater legal challenges due to the fact that many of the legal concepts, statutes, and case law create various presumptions that may not be applied beyond the right to get married. The reality that any embryos created and used by same-sex couples for building a family will of biological necessity only contain the reproductive tissue of one of the spouses/intended parents creates the root of the challenges.

To the extent that the *Obergefell* decision had any discussion as to the particulars of same-sex parentage as opposed to focusing on allowing same-sex couples the right to marry, the *Obergefell* Court assumed that both members of the same-sex married couple would in fact be parents of the children, even though in all same-sex situations, only one of the spouses can be directly genetically related to the child. The assumption made by many people, but not everyone, is that both spouses will be considered parents because both presumably have functioned or will function as parents during the marriage.⁶¹ In some sense, it seems that the marital presumption was based on a functional view of parentage. That assumption made sense when most couples having children were married. But as more children recently have been and are being born outside of marriage, the other way parentage is established instead of through the marital presumption or adoption, is by establishing a biological connection — i.e., a DNA test showing genetic connection or the actual biological act of giving birth.⁶² This shifting emphasis on biology, genetics, and intent to parent is at the heart of the special challenges facing both married and unmarried same-sex couples in these disputes as to the possession and use of embryos. Until

⁵⁹ Leslie Joan Harris, *Obergefell's Ambiguous Impact on Legal Parentage*, 92 CHI.-KENT L. REV. 55, 56 (2017).

⁶⁰ *Obergefell v. Hodges*, 135 S. Ct. 2584 (2015).

⁶¹ Harris, *supra* note 59, at 57.

⁶² *Id.*

such time as functional parentage becomes as accepted as parentage based on a marriage presumption, biology, or adoption, these challenges for same-sex couples, whether married or not, will remain.⁶³

Somewhat surprisingly, in the years after the Court issued the *Obergefell* decision, there were still a handful of states that refused to recognize both same-sex spouses as parents to children born to the couple during their marriage using donated gametes. The state of Arkansas was one such state; it refused to issue birth certificates to two same-sex married couples who conceived children through anonymous sperm donation. The couples took their grievance all the way to the U.S. Supreme Court where the Court delivered a per curiam decision stating that because the ruling treated married same-sex couples differently than married heterosexual couples in being able to assert the marital presumption and parentage of both spouses reflected on the birth certificate, such differential treatment infringed upon *Obergefell's* commitment to provide same-sex couples the constellation of benefits that the states have linked to marriage. The Court overturned Arkansas' refusal to issue birth certificates to these married same-sex couples.⁶⁴

In some sense, disputes between unmarried couples involving the use and possession of embryos and gametes are even more complicated than cases involving married couples. Property disputes between unmarried couples usually end up in civil court rather than family court and the laws and presumptions ap-

⁶³ *Id.* at 58. For an example of a recent case where the court struggled with, but ultimately applied, the various statutory presumptions for parentage to a same-sex, unmarried couple where one of the parties did not have a genetic tie to the subject child, see *Partanen v. Gallagher*, 59 N.E.3d 1133 (Mass. 2016). Here the lower court dismissed the non-genetic partner's complaint which sought to establish legal parentage to two young children, where despite her not having a biological relationship with the children, she alleged that both children were born to her former partner, and that both partners received the children into their home and openly held the children out as their own. The Massachusetts Supreme Court reversed that decision, holding that one may establish oneself as a child's legal parent under the state's parentage statute in the absence of either a biological relationship with the child or marital relationship with the biological parent, where nothing in the language of the statute expressly limits the applicability to parentage claims based on asserted biological ties.

⁶⁴ *Pavan v. Smith*, 137 S. Ct. 2075 (2017).

plicable in marriage dissolution cases regarding property and custody do not apply; the civil laws that do apply may not be a good fit for the issues in dispute. Custody and parentage issues for unmarried couples are even more complicated. Much of this flows from the holding in the U.S. Supreme Court decision of *Troxel v. Granville*⁶⁵ that created a major legal barrier to permitting an adult who is not a child's biological or adoptive parent access to a child over the parent's objection. It provides due process protection for the childrearing decisions of fit parents, particularly decisions about whether the children will spend time with other adults who are not legal parents. Thus, in these unmarried situations where there are no biological or genetic connections and no marital presumption of parental status, the non-parent will be dependent on some kind of functional parentage relationship being implied from actions taken by that person.

This is a critical consideration where unmarried separated partners — whether same-sex or not — are disputing possession of stored embryos or gametes.⁶⁶ Questions exist as to whether the notion that a genetic or biological parent receives sole legal and sole physical custody of the child born outside of marriage carry over into the legal treatment of embryos, or whether the progenitor of stored embryos or gametes accumulated during a relationship is deemed to have the right to use and disposition of the material. It is not clear. Egg donor, sperm donor, or alternatively, co-parentage agreements, are critical in these situations, since those agreements can fill the void of missing presumptions and other statutory provisions that are used to resolve typical family law disputes in family court. It may also be helpful to consider drafting and executing cohabitation agreements and domestic partnership agreements that address these issues, even if those kinds of contracts have traditionally been limited to financial, property, and support considerations. Cohabitation agreements, owing in significant part to the long-standing controversy regarding palimony disputes, are even more controversial and less consistently used and enforced than premarital agreements.⁶⁷

As with same-sex married couples, these disputes between unmarried same-sex couples who split up and have stored em-

⁶⁵ 530 U.S. 57, 65 (2000)

⁶⁶ Harris, *supra* note 59, at 59-63.

⁶⁷ See, e.g., *Miller-Jenkins v. Miller-Jenkins*, 912 A.2d 951 (Vt. 2006).

bryos and gametes are even more complex. In fact, debates on these issues have been playing out in the same-sex community for some time, with wildly inconsistent outcomes. It seems that extra planning of, drafting of, and special attention to disposition provisions in both private agreements and clinic form documents (which may need to be amended) is in order for any same-sex clients, even those who are married.

2. *Methods of Dispute Resolution*

Various methods of resolving disputes regarding possession and use of stored embryos have been emerging over the last several decades. It will be helpful for family law practitioners, even if they do not practice in the area of assisted reproduction, to have a working knowledge of these various methods so they can counsel clients as to how courts might address these issues for their clients, whether they are married, living together in a committed relationship, or are a married or unmarried same-sex couple. Essentially, three models have emerged from the common law accretions over the past few decades. These are the contractual approach, the contemporaneous mutual consent model, and the balancing test, although at times courts seem to combine one or more of these approaches.⁶⁸

a. *The Contractual Approach*

This method of dispute resolution is premised on the notion that contracts entered into at the time of IVF, typically provided to patients by their fertility clinic, are enforceable so long as they do not violate public policy. This method is preferred for its relative simplicity, respect for the parties to make their own personal decisions, clarity and predictability between clinic and patient(s), all while keeping the state from interfering in the matter. One suggested model of analysis under the contractual approach has the deciding court ask the following questions: (i) did the progenitor or provider of an embryo or gametes enter into a disposition

⁶⁸ For various discussions of these three models for dispute resolution, see Michael T. Flannery, “Rethinking” *Embryo Disposition upon Divorce*, 29 J. CONTEMP. HEALTH L. & POL’Y 233 (Spring 2013); Deborah L. Forman, *Embryo Disposition and Divorce: Why Clinic Consent Forms Are Not the Answer*, 24 J. AM. ACAD. MATRIM. LAW. 57 (2011); Zizzi, *supra* note 58.

contract? (ii) is the contract adequate? (iii) should the contract be enforced as a matter of public policy?⁶⁹

Several courts have attempted to apply this approach to embryo possession and use disputes. In *Kass v. Kass*,⁷⁰ the court considered a situation where the divorcing couple had five cryopreserved embryos. They signed a form at the fertility clinic providing that disposition of the embryos in the event of divorce would be determined in a property settlement, and if the parties could not agree, the embryos would be donated for research. The court held that the agreements should be presumed valid and enforceable, and because these parties could not agree on disposition, the provision for donation to research would control. The court did, however, allude to the view that significantly changed circumstances in some cases might preclude future contract enforcement.⁷¹

Recently, an intermediate New York appellate court in *Finkelstein v. Finkelstein*,⁷² had the opportunity to revisit the legal issues in *Kass* where a divorcing couple disputed who would control and have use of their cryopreserved embryos following divorce. Here the couple had signed a consent form with their fertility clinic which indicated the embryos could only be used for their own reproductive purposes and not be donated for other couples to use, and that either party could withdraw their consent at any time. The court and the parties considered the embryos to be property and the husband, after the divorce proceeding was commenced, executed a revocation of his consent for his wife to use the embryos for procreation. The wife argued that she should receive the embryos and be allowed to use them post-divorce for her own procreation because this would most likely be her last opportunity to have biological children. The appellate court, in applying *Kass*, found what it termed the “consent agreement” provided by the fertility clinic as originally signed by the parties and as subsequently modified by the hus-

⁶⁹ Myott, *supra* note 51.

⁷⁰ 696 N.E.2d 174 (N.Y. 1998).

⁷¹ Other courts have followed this analysis. *See, e.g.*, Findley v. Lee, Case No. FDI-13-780539, in the Superior Court of the State of California, in and for the County of San Francisco (Nov. 18, 2015).

⁷² Supreme Court of New York, Appellate Division, First Department, June 5, 2018.

84 *Journal of the American Academy of Matrimonial Lawyers*

band through his subsequent revocation of consent, was an enforceable contract. Hence, the husband's requested relief was granted and the embryos could not be used for any purpose by either party; the clinic was directed to dispose of the embryo as provided in the consent agreement signed by the parties.⁷³

In *Litowitz v. Litowitz*,⁷⁴ embryos had been created with the husband's sperm and donor eggs. At the time of divorce, wife intended to implant the embryos in a surrogate and procreate. The husband wanted to donate the embryos for procreation by someone else. The cryopreservation contract provided that the couple must petition the court if they could not agree on disposition, but also provided that the clinic would thaw and destroy any embryos still in storage five years after the initial date of cryopreservation. While the divorce was commenced two years after the cryopreservation contract was signed, by the time the matter reached the supreme court, more than five years had passed and so the court ordered that any remaining embryos were to be thawed and discarded based on the terms of the cryopreservation agreement.

In *Roman v. Roman*,⁷⁵ the Texas Supreme Court in this divorce case held that where the husband wanted to discard the embryos and the wife wanted to implant them, a provision in the clinic consent form to discard unused embryos in the event of divorce controlled. Similarly, in *In re Marriage of Dahl and Angle*,⁷⁶ the Oregon Court of Appeals gave effect to a clinic cryopreservation contract that provided that the wife would have decision making authority over the embryos if the parties could not agree. Here the wife wanted to destroy the embryos and the husband wanted to donate them to another couple. The wife prevailed.

The contract approach rests squarely on there being well drafted, supported, and enforceable contracts. The cases above illustrate the challenges where courts have had to discern intent from a fill-in-the-blank clinic form, especially in the form of a medical consent designed to primarily make sure patients under-

⁷³ See also *Rucker v. Rucker*, No. A16-0942, 2016 WL 7439094 (Minn. Ct. App., Dec. 27, 2016).

⁷⁴ 48 P.3d 261 (Wash. 2002).

⁷⁵ 193 S.W.3d 40 (Tex. 2006).

⁷⁶ 194 P.3d 834 (Or. Ct. App. 2008).

stand the medical procedures they are undertaking and to protect medical providers from malpractice, rather than a separate dispositional agreement. The case law as well as contract principles, clearly suggest that well drafted and negotiated contracts are better vehicles for these situations, and medical practices are evolving in that direction. While a medical consent form may evince the parties' intent, and a separate dispositional agreement may be deemed a contract, it can nonetheless be questionable whether the clients (patients) were well informed and entered into a bargained for agreement. Medical forms are often completed in a stressful situation without the benefit of legal counsel and without much thought being given to the consequences that could arise in a divorce. These same concerns exist when drafting prenuptial and post-nuptial agreements, which are themselves complicated and often emotionally challenging exercises. Deciding the future disposition of stored embryos and other reproductive tissue carries the same concerns, and written contracts addressing those issues ideally should have the same level of care and judicial scrutiny.

b. *The Contemporaneous Mutual Consent Model*

This model of dispute resolution shares an underlying premise with the contractual approach in that the couple who created the frozen embryos are given the decisional authority concerning the disposition of their frozen embryos and with each of the partners having the right to an equal say regarding disposition, but here neither party is allowed to use, donate or destroy the frozen embryos without both individuals giving their "contemporaneous mutual consent."

Examples of courts that have developed and applied this model include the court in *J.B. v. M.B.*⁷⁷ Here eight embryos were cryopreserved and remained in storage when the husband sought a divorce. He wanted to have the embryos discarded, while the wife wanted to use them herself or donate them to another couple. They had signed a consent form that provided they would relinquish the embryos to the clinic's IVF program in the event of divorce, unless a court ordered otherwise. The court found that the consent form did not manifest a clear intent by

⁷⁷ 783 A.2d 707 (N.J. 2001).

either party regarding disposition in the event of divorce and that they had never entered into a separate binding contract providing for the disposition of the embryos. The court importantly notes that contracts entered into at the time of IVF could only be enforced if they had been executed with reasonable safeguards, such as the agreement being written in plain language, reviewed with clinic personnel, and not signed in blank, and that they would have to be subject to either party's right to change his or her mind about disposition up to the point of use or destruction. In the absence of mutual contemporaneous agreement, the party choosing not to procreate would usually prevail. Since the husband did not object to continued storage, the wife could continue to pay the storage fees, and if she stopped or refused, the embryos would be destroyed.

In the case of *In re Marriage of Witten*,⁷⁸ the divorcing couple had seventeen embryos in storage when they sought to divorce. They had signed a form that required joint consent for release of the embryos and an exception in the event of the death of a party. The agreement was silent as to divorce. The wife wanted to use the embryos for her own pregnancy, while the husband wanted them discarded. The court held that where the progenitors disagree about disposition, contemporaneous mutual consent is required, and in the absence of mutual consent, no transfer, release, use or other disposition can occur. Thus, the embryos would remain in storage indefinitely with the party opposing destruction paying the fees.

c. The Balancing Test

In *A.Z. v. B.Z.*,⁷⁹ the parties had entered into a series of cryopreservation agreements over several IVF cycles, each containing a provision giving the stored embryos to the wife for implantation in the event the parties separated. There were ambiguities as to the language and the circumstances surrounding the signing of the form where the husband had signed a blank form and the wife subsequently wrote in the terms of disposition. Thus, the court was skeptical that the agreement actually reflected the intent of the parties. The court went on to hold, how-

⁷⁸ 672 N.W.2d 768 (Iowa 2003).

⁷⁹ 725 N.E.2d 1051 (Mass. 2000).

ever, that even if the agreement had been unambiguous, it would not enforce a clause that would compel one progenitor to become a parent against his or her wishes and that the court would require mutual contemporaneous consent. In this third test, courts look at and weigh each party's interests in either use, preservation, donation, or destruction of the embryos, rejecting the requirements of contractual enforcement and mutual consent.

The most famous and probably most widely cited case developing the balancing test approach was *Davis v. Davis*.⁸⁰ This was the first case to consider disposition of disputed frozen embryos in a divorce situation. The parties had not signed any written agreement regarding disposition of the embryos. In the absence of a prior agreement, the Tennessee Supreme Court balanced the parties' conflicting constitutional interests in procreation, ultimately deciding in favor of the husband's right not to procreate and noting that the wife might achieve parenthood through another cycle of IVF or through adoption. The court ultimately held that the court's balancing test would be a last resort, exercised only in the absence of an agreement between the parties, and in most such cases, the party wishing to avoid procreation would prevail.

In *Reber v. Reiss*,⁸¹ the Superior Court of Pennsylvania explicitly adopted the *Davis* balancing test so that in a divorce proceeding the wife would be awarded the frozen embryos when the parties did not have an agreement regarding their disposition in the event of divorce. Here the wife had undergone chemotherapy for breast cancer and the evidence was sufficient to establish that the wife did not have a current ability to procreate biologically.

In a case with similar medical hardship claims, *Szafranski v. Dunston*,⁸² the dispute was between an unmarried couple who disagreed as to the use of three frozen pre-embryos created with their eggs and sperm. The case came before the First District Appellate Court of Illinois two times. The couple underwent IVF after the female partner was diagnosed with lymphoma and was expected to suffer ovarian failure and infertility as a result of her chemotherapy treatment. After the parties separated, she sought

⁸⁰ 842 S.W.2d 588 (Tenn. 1992).

⁸¹ 42 A.3d 1131 (Pa. Super. Ct. 2012).

⁸² 993 N.E.2d 502 (Ill. App. Ct. 2013), *appeal denied*, 39 N.E.3d 1012 (Ill. App. Ct. 2015), *cert. denied*, 136 S. Ct. 1230 (2016).

control and use of the embryos over the objection of her former male partner. Ultimately, the court found that although there was no enforceable, written disposition agreement between the parties, and the written consent form with the fertility clinic was not dispositive as to a dispute between the parties, there was an oral agreement reflecting the intent of the parties that the female partner would have the right to use the embryos without the male partner's consent, and that the man would even be a sperm donor if they separated. The court also performed a balancing of interests analysis similar to what the court did in *Reber v. Reiss* and also used that approach as an additional basis to rule in favor of the female partner.⁸³

d. *Legislation and Model Acts*

Various state legislatures have also been active in addressing these difficult disposition issues when couples either divorce or split up. Various entities that promulgate model acts have also entered the fray. The state of Florida passed a law that places all decision making authority in the hands of the couple providing the sperm and eggs by requiring them and the treating physician to enter into a written agreement that provides for the disposition of the eggs, sperm, and embryos in the event of divorce, death of either spouse, or other unforeseen circumstance. If there is no written agreement executed, the decision making authority pertaining to the disposition of the embryos will reside jointly with the commissioning couple.⁸⁴

In California, the legislature enacted a statute that requires the health care provider who is conducting the fertility treatment to provide the patient with timely, relevant, and appropriate information to allow the individual to make an informed and voluntary choice regarding the disposition of any human embryos remaining following the fertility treatment. They must be given the choice of storing any remaining, unused embryos, donating

⁸³ Arguably the *Reber* case falls into two of these categories — the contract approach and the balancing of interests approach. It illustrates the point made at the outset of this section and a point made throughout this article, that context really does matter to the outcome of these cases as courts evaluate the facts and circumstances to come to a just and often nuanced decision as to use and disposition in frequently emotionally charged circumstances.

⁸⁴ FLA. STAT. § 742.17 (2005).

them to another individual, discarding them, or donating them for research. The form must set forth advanced written directives regarding the disposition of embryos. The form is required to set forth the time limit for storage of the unused embryos at a storage facility and requires the couple to make choices in the following circumstances: death of either partner, separation or divorce, abandonment, or failure to pay storage fees.⁸⁵

Massachusetts enacted a statute that tracks an earlier version of California's advance directive statute, also located in its chapter on biotechnology. It provides that a physician must present the patient with the options of storing, donating to another person or to research, or destroying any unused embryos "as appropriate." It does not address any specific contingencies such as divorce or death.⁸⁶ New Jersey, Connecticut, and New York have enacted similar provisions in the context of stem cell research.

Two states stand in stark contrast to the above contractual legislative approach. As stated above, Louisiana defines embryos as persons and affords a variety of protections and restrictions based on that status. Under this state's law, if patients surrender their parental rights to implant the pre-embryo, then the pre-embryo shall be available for "adoptive implantation in accordance with the written procedures of the facility where it is housed or stored."⁸⁷ And most recently, the state of Arizona in a first-in-the-nation law that went into effect on July 1, 2018, has perhaps gone the farthest in applying a view of an embryo as a person, providing that in the event of a dispute between a separating couple as to the disposition and use of cryopreserved embryos, custody must be given to the party who intended to help the embryos "develop to birth," regardless of any agreements reached between the parties or the parties and the clinic.⁸⁸

B. *Patient/Provider Disputes Due to Erroneous Handling of Embryos*

Disputes between patients and providers may arise from claims of erroneous handling of embryos. Errors can include (1) being implanted with the wrong embryo (or having one's embryo

⁸⁵ CAL. HEALTH & SAFETY CODE § 125315 (West, 2006).

⁸⁶ MASS. GEN. LAWS ANN. ch. 111L § 4 (West 2007).

⁸⁷ LA. REV. STAT. ANN. § § 9:121-33 (2008).

⁸⁸ Cha, *supra* note 3.

wrongfully implanted in another individual); (2) being implanted with an embryo created with the wrong sperm or eggs (or having one's gametes used by another person without consent); (3) testing errors in pre-implantation genetic testing (PGT), which can encompass both diagnosis (PGD) of genetically affected, unhealthy IVF embryos or screening (PGS) of IVF embryos for aneuploidy (a similar claim may arise from testing of the involved adults, i.e. intended parents or potential donors for their "carrier" status) that results in the implantation of an unhealthy embryo, and (4) the loss or destruction of embryos within a clinic's laboratory or a storage facility, or in transit between facilities. These errors can result from both negligent and intentional behavior, and from professional or human error or mechanical failures.

1. *Implantation of Healthy Embryos with the Wrong Genetic Makeup*

The first and second errors result in patients having a healthy embryo with the wrong genetic makeup implanted in them. While these errors may never be discovered, when they are, patients may bring claims against the medical practitioner or IVF program.⁸⁹ Such tort-based litigation has met with little success thus far, since existing childbirth-related torts can be difficult to apply to the IVF context. Claims such as "wrongful life" and "wrongful birth" typically involve a child born with serious genetic defects, and thus may not apply where a child has a different genetic make-up than is expected but is otherwise healthy. Plaintiffs may also attempt to seek recovery through a "wrongful pregnancy" claim; however, historically such claims typically assert that but for a physician's negligence, a child would never have been conceived at all.⁹⁰ Further, given their reluctance to quantify the value of a life, most courts have rejected claims for

⁸⁹ There have been several such anecdotally reported cases of which the authors are aware, including several settled with confidentiality agreements in place, that are not accessible as publicly reported cases.

⁹⁰ DAN B. DOBBS, PAUL T. HAYDEN & ELLEN M. BUBLICK, *THE LAW OF TORTS* § 369 (2d ed. 2011).

the costs of rearing a healthy child as damages;⁹¹ thus, even with a viable basis for a claim, damages would likely be limited.

Plaintiffs have also attempted to seek damages for emotional harm caused by the mix-up without much success, since tort law generally does not permit recovery for emotional distress without any physical injury.⁹² However, in *Perry-Rogers v. Obasaju*, the Supreme Court of New York granted damages for emotional distress to a couple whose embryo was mistakenly implanted in another woman along with her own embryo.⁹³ The court held that the plaintiffs were not requesting recovery for harm caused by the creation of human life, but for the “emotional harm caused by their having been deprived of the opportunity of experiencing pregnancy, prenatal bonding and the birth of their child, and by their separation from the child for more than four months.”⁹⁴ As discussed below, the court ultimately ordered the child returned to his genetic, intended parents. Further, while courts may reject claims for emotional distress, they may be more amenable to allowing claims grounded in negligence or medical malpractice. For example, in *Andrews v. Keltz*, the court held that the plaintiffs could not recover for mental distress caused by having a healthy child that was not the husband’s biological offspring as the couple had intended, but allowed summary judgment against the embryologist for negligence.⁹⁵

In addition to disputes between patients and providers, the first two categories of error are also likely to result in parentage disputes between the respective victims of the harm; for example, a couple who learns their embryo was wrongfully implanted in another woman may seek parentage rights over the resulting child. In third-party ART related cases such as surrogacy disputes, genetic relatedness, giving birth and intent to parent have

⁹¹ See, e.g., *Cockrum v. Baumgartner*, 447 N.E.2d 385, 389 (Ill. 1983) (Illinois Supreme Court agreeing with most jurisdictions that the costs of rearing a healthy child cannot be recovered as damages).

⁹² See, e.g., *Andrews v. Keltz*, 838 N.Y.S.2d 363 (2007).

⁹³ *Perry-Rogers v. Obasaju*, 723 N.Y.S.2d 28, 29 (N.Y. App. Div. 2000).

⁹⁴ *Id.*

⁹⁵ *Andrews v. Keltz*, 838 N.Y.S.2d at 372-3. The court held that this was a “rare *res ipsa loquitur* case” where the plaintiffs are entitled to summary judgment, since they had come forth with “convincing circumstantial evidence” that the wrong sperm donor was used, while the respondent had completely failed to respond to the plaintiffs’ claims.

all been means of establishing a parent-child relationship.⁹⁶ In previous embryo and gamete mix-up cases, genetics seems to have played a large and determinative role in establishing parentage rights. For example, *Perry-Rogers v. Fasano* was the parentage case that arose from the same facts as *Perry-Rogers v. Obasaju*. The couple who carried both their own child and the child resulting from the mix-up were initially unresponsive to both the clinic's and the genetic parents' attempts to contact them and did not voluntarily relinquish the child after birth.⁹⁷ They later agreed to relinquish custody to the genetic parents in exchange for visitation rights, an agreement which included a damages clause should the genetic parents violate the visitation rights of the couple who viewed themselves as the gestational parents.⁹⁸ However, the genetic parents, frustrated by an arrangement they came to believe was harmful to their son (in which the gestational couple insisted on calling him by their given name for him)⁹⁹ petitioned the court for sole and exclusive custody of the child. The trial court initially issued an order granting the gestational couple visitation, which the genetic parents sought to void entirely.¹⁰⁰ Crucially, the appeals court refused to even grant the woman who carried the pregnancy standing to claim visitation rights, holding that she simply should not have bonded with the child.¹⁰¹

A case involving an unmarried woman, Susan B., who intended to be a single mother with an anonymously donated embryo, resulted in another parentage and custody dispute. In *Robert B v. Susan B* one of a group of embryos created with Robert's sperm and donor egg and intended for his and his wife's use, was wrongfully implanted in Susan. Another was implanted in Denise. Both women became pregnant. When the physician ultimately told the patients of the mix-up with the expressed

⁹⁶ See, e.g., *Johnson v. Calvert*, 5 Cal. 4th 84, 92 (1993).

⁹⁷ *Perry-Rogers*, 715 N.Y.S.2d at 21-22.

⁹⁸ *Id.*

⁹⁹ David Rhode, *Biological Parents Win in Implant Case*, N.Y. TIMES (Jul. 17, 1999), <https://www.nytimes.com/1999/07/17/nyregion/biological-parents-win-in-implant-case.html>.

¹⁰⁰ *Perry-Rogers*, 715 N.Y.S.2d at 21-22.

¹⁰¹ *Id.* at 26. Note also that all the patients sued the IVF program for the mix-up. See *Perry-Rogers*, 715 N.Y.S.2d 19; *Fasano v. Nash*, 282 A.D.2d 277 (N.Y. App. Div. 2001).

hope they could informally resolve the situation, the parties instead went to court. Over Susan's objection, the court granted legal parentage to Robert, but refused to recognize his wife Denise as an "interested person" even though she intended to parent any child resulting from the embryos, ruling that she lacked standing since she had neither a genetic nor gestational connection to the child.¹⁰² The court ultimately held that both Robert and Susan were legal parents of the child, and that their dispute was thus essentially a custody dispute.¹⁰³

A large-scale scandal regarding the misuse of reproductive tissue arose in 1995 following the discovery that three doctors at the University of California at Irvine (UCI) IVF program had taken eggs and embryos retrieved from their patients and implanted them into other patients without the knowledge or consent of the recipients or unwitting donors. The lead doctor, Ricardo Asch, fled to Mexico City, while one of his colleagues, Jose Balmacada, escaped to Chile. Both doctors reportedly continue to offer reproductive fertility services. The third doctor, Sergio Stone, remained in the United States and was convicted of offences unrelated to the scandal.¹⁰⁴ More than a dozen lawsuits were filed against UCI, which were ultimately settled for a total of \$4.23 million.¹⁰⁵ In addition, disputes also arose between the parents who gave birth to and raised children they had believed were their genetic offspring and the couples whose reproductive tissue was misappropriated. In one such parentage action, *Prato-Morrison v. Doe*, the Morrisons found out that the Does *might have* received the Morrisons' reproductive tissue and given birth

¹⁰² Robert B. v. Susan B. 135 Cal. Rptr. 2d 785, 788-9 (2003).

¹⁰³ *Id.* at 790. Note also that Susan B. reached a \$1 million settlement with the doctor who performed the IVF procedure. The Medical Board of California also revoked the doctor's license after it was revealed that the doctor was informed by staff of the mistaken implantation ten minutes after it happened, and not only did not notify Susan of the mix-up in a timely manner, but also made efforts to terminate the pregnancy without informing Susan B. See Katherine Seligman, *License Revoked for Embryo Mix-Up*, S.F. CHRON., Mar 31, 2004, at B4.

¹⁰⁴ JUDITH DAAR, REPRODUCTIVE TECHNOLOGIES AND THE LAW 499 (Lexis Nexis, 2d ed. 2012).

¹⁰⁵ Kimi Yoshino, *UCI Settles Dozens of Fertility Suits*, L.A. TIMES (Sept. 11, 2009), <http://articles.latimes.com/2009/sep/11/local/me-uci-fertility11>.

to the Morrisons' genetic children.¹⁰⁶ The Morrisons filed a "complaint to establish parental relationship" against the Does, demanding blood tests and DNA samples from the children and seeking visitation rights.¹⁰⁷ The California Court of Appeal dismissed the case, finding that it would not be in the best interests of the children to have the Morrisons intrude into their lives or be subjected to blood tests requested by the Morrisons.¹⁰⁸ The court noted that the children were almost fourteen years old at the time of the appeal, and that "the social relationship established by the Does and their daughters" was thus more important to the children "than a genetic relationship with a stranger."¹⁰⁹

However, it must be noted that not all parentage disputes arising from IVF mix-ups conclude on acrimonious terms. For example, two sets of patients at a single IVF center were informed of an embryo mix-up. Carolyn and Sean Savage, who already had three children, were informed by their program that Carolyn was pregnant via an IVF mix-up with another couple's genetic child.¹¹⁰ The mix-up likely resulted from the other patient, Shannon Savage Morrell, having registered at the clinic under her maiden name.¹¹¹ The Savages continued the pregnancy and handed the child over to the Morells, the child's genetic parents, despite knowing that Carolyn would not be able to carry another pregnancy due to health reasons. The couples settled their claims with the IVF program, and later Carolyn Savage ultimately had twins using her remaining embryos with a gestational surrogate.¹¹²

¹⁰⁶ Prato-Morrison v. Doe, 103 Cal. App. 4th 222, 224 (2002).

¹⁰⁷ *Id.* at 225.

¹⁰⁸ *Id.* at 231-2.

¹⁰⁹ *Id.*

¹¹⁰ Stephanie Smith, *Fertility Clinic to Couple: You Got The Wrong Embryos*, CNN, Sept. 22, 2009, www.cnn.com/2009/HEALTH/09/22/wrong.embryo.family/index.html.

¹¹¹ Emma Brockes, *Embryo Swap: The Mother of All Mix-ups*, *GUARDIAN* (Mar 4, 2011), <https://www.theguardian.com/society/2011/mar/05/embryo-swap-emma-brockes>.

¹¹² Susan Donaldson James, *Carolyn and Sean Savage Expecting Twins with Surrogate; Relief After 2009 Embryo Mix-Up*, *ABC NEWS* (Apr. 7, 2011), <http://abcnews.go.com/Health/carolyn-sean-savage-embryo-mix-now-expect-twins/story?id=13318708>.

2. *Implantation of Unhealthy or Genetically Abnormal Embryo Due to Testing Errors*

In the assisted reproduction context, errors resulting in the implantation of a genetically abnormal embryo may happen in one of two key ways. The first type of error involves a failure in “carrier screening,” that is, a failure to screen intended parents or donors for genetic or other health disorders, causing the resulting child to inherit these disorders. The second category involves errors during preimplantation genetic testing (PGT). During PGT, embryos are produced through the normal IVF procedure and allowed to mature to the blastocyst stage (containing at least eight cells).¹¹³ A single cell is then removed from the embryo and analyzed, while the rest of the embryo remains intact and is cryopreserved.¹¹⁴ PGT can be used to screen for single-gene disorders, chromosomal rearrangements, and the embryo’s sex.¹¹⁵ The testing is often done off-site, with the single cell removed from each embryo sent to a specialized lab with sophisticated equipment. Following this testing, a report is delivered to the IVF center, identifying which embryos are affected and which are not. Thus, errors can happen at various points in this process. If the medical professional fails to correctly screen the embryos or correctly report the results, or the report is misread by the IVF program, an affected embryo could be unintentionally transferred to the woman’s uterus.

Given the relative newness of PGT testing, only a small number of such cases have been reported. Most cases brought due to testing errors have been characterized as “wrongful life” cases, where the claim is asserted on behalf of the child suffering from the birth defects. However, these claims have not been met with much success due to the difficulty in proving causation as to the born child. For example, in one of the earliest cases, *Doolan v. IVF America, Inc.*, a couple’s child was born with cystic fibrosis despite the use of PGD and the couple sued the IVF clinic for

¹¹³ DAAR, *supra* note 104, at 290-91.

¹¹⁴ *Id.*

¹¹⁵ Cooper Genomics, Pre-Implantation Genetic Diagnosis, <https://www.coopergenomics.com/products/preimplantation-genetic-diagnosis/> (last visited Aug. 20, 2018). PGD (“diagnosis”) uncovers genetic anomalies, while PGS (“selection”) reveals chromosomal rearrangements and sex. See footnotes 223-226 and accompanying text, *infra*.

failing to properly detect the condition.¹¹⁶ The court held that there was no causal connection between the defendants' negligence and the child's condition, since there was no way this particular child could have been born without cystic fibrosis.¹¹⁷

Parties have also used the causation problem to defeat cases of testing errors involving donors; in *Johnson v. Superior Court*, the court rejected a wrongful life claim on behalf of a child against a sperm bank for failure to disclose that the sperm sold to the Johnsons came from a donor with a history of genetic kidney disease; the court ruled it was the gamete donor, not the sperm bank or medical facility, that caused the child's disease.¹¹⁸ The petitioners also sued the sperm bank and the clinicians for fraud on the basis that the clinicians had "either negligently or intentionally misrepresented, suppressed and/or concealed facts from the Johnsons" regarding the donor's medical history; however, the trial court found there was no evidence to support these claims.¹¹⁹ Similarly, in *Paretta v. Medical Offices for Human Reproduction*, the Supreme Court of New York rejected the theory that by combining the husband's sperm and the donor's egg, where the donor was later found to have been a carrier for cystic fibrosis, the doctors had a role in [the child's] genetic composition and held that a baby "does not have a protected right to be born free of genetic defects."¹²⁰ Despite the relative lack of success of wrongful life claims, courts have shown a greater willingness to allow claims against physicians or embryologists on other grounds, such as negligence or medical malpractice. For example, in *Paretta*, the court noted that it was "hard to ignore defendants' alleged role" in the child's illness, and that thus, "the Paretas will be permitted to vigorously pursue recovery."¹²¹

The statute of limitations may also sometimes preclude successful recovery for a tortious claim. Two such cases came to opposite conclusions. In *Grossbaum v. Genesis Genetics*, a couple sought Genesis Genetics' PGD testing services, hoping to con-

¹¹⁶ *Doolan v. IVF America (MA), Inc.*, 12 Mass. L. Rep. 482, 3 (2000).

¹¹⁷ *Id.* at 11.

¹¹⁸ *Johnson v. Superior Ct.*, 101 Cal. App. 4th 869 (2002).

¹¹⁹ *Id.* at 875.

¹²⁰ *Paretta v. Medical Offices for Hum. Reproduction*, 760 N.Y.S.2d 639, 645-6 (N.Y. Sup. Ct. 2003).

¹²¹ *Id.* at 648.

ceive a child without cystic fibrosis, for which they were both carriers.¹²² However, about two weeks after their daughter was born, she was diagnosed with cystic fibrosis.¹²³ The court held that the plaintiff's claims were barred by New York's statute of limitations, which requires actions for medical malpractice to be commenced within two years and six months of the complained of act; the plaintiffs filed their suit more than two years and eight months after the defendants returned the PGD-testing results, which the court ruled was the operative act.¹²⁴ However, in *B.F. v. Reproductive Medicine Association of New York*, the Court of Appeals held that although the statute of limitations for medical malpractice actions normally runs from the date of the malpractice, in cases where a parent will incur extraordinary expenses to care for a child due to the defendants' negligence or medical malpractice, the cause of action accrues upon the birth of the child.¹²⁵ Since it is impossible to ascertain whether parents will incur extraordinary expenses before a live birth, the court opined that its holding would give the parents a reasonable opportunity to bring suit while time limiting claims to provide certainty to medical professionals.¹²⁶

3. *Loss or Destruction of Embryos*

Unfortunately, cases have also arisen where patients have had their embryos, or gametes, erroneously lost or destroyed by IVF clinics or while in transit. In such cases, victims may bring claims against IVF clinics, storage facilities, or transit companies, for breach of contract or negligence. In one example, a UPS employee tasked with transporting frozen embryos mistakenly thought he saw hazardous material (likely carbon dioxide escaping from the dry ice used to keep the embryos frozen) and opened the container they were in, resulting in their being

¹²² *Grossbaum v. Genesis Genetics Inst., LLC*, No. 07-1359, 2011 U.S. Dist. LEXIS 62180 *3-6 (D. N.J. June 10, 2011).

¹²³ *Id.*

¹²⁴ *Id.* at 31-32.

¹²⁵ *B.F. v. Reproductive Med. Associates of New York, LLP*, 30 N.Y.3d 608, 615 (N.Y. App. Div. 2017).

¹²⁶ *Id.* at 615-66.

thawed and rendered unusable.¹²⁷ The plaintiffs sued UPS for negligence; the case is still pending.

In *Frisina v. Woman and Infant Hospital of Rhode Island*, the plaintiffs sued the defendant clinic for loss or destruction of their embryos, asserting three theories of recovery: medical malpractice, bailment, and breach of contract.¹²⁸ The court dismissed the defendant clinic's motion for summary judgment, holding that there were genuine issues of material fact with respect to the plaintiff's claim of emotional distress due to breach of contract.¹²⁹ In a similar case, *Miller v. American Infertility Group of Illinois*, an IVF clinic that failed to properly cryopreserve embryos was sued for negligence, battery, and breach of contract under Illinois' Wrongful Death Act.¹³⁰ However, the court held that the Wrongful Death Act did not apply to embryos that had not yet been implanted.¹³¹ More recently, in March 2018, a San Francisco and a Cleveland fertility clinics' storage tanks failed over the same weekend, potentially damaging thousands of frozen eggs and embryos, and as of publication, a number of patients have filed lawsuits.¹³² The alleged causes of the failure range from technical faults to human error. One woman whose embryos were destroyed due to the malfunctioning Ohio tank is reportedly seeking a declaratory judgment that "the legal status of an embryo is that of a person" so that a wrongful death claim may eventually be pursued.¹³³

The damages granted in any successful cases are likely to depend on the relative replaceability of any damaged or lost em-

¹²⁷ Adam Litdgett, *UPS Can't Shake Frozen Embryo Mistreatment Case*, LAW360 (Jan. 31, 2017), <https://www.law360.com/articles/886844/ups-can-t-shake-frozen-embryo-mistreatment-case>.

¹²⁸ *Frisina v. Woman & Infant Hosp. of Rhode Island*, No. Civ. A 95-4037, 2002 R.I. Super. LEXIS 73, 6 (May 30, 2002).

¹²⁹ *Id.* at 50-51.

¹³⁰ *Miller v. Am. Infertility Group of Ill.*, 897 N.E.2d 837 (Ill. App. Ct. 2008).

¹³¹ *Id.* at 845.

¹³² Bill Chappell, *Fertility Clinics Says Failure May Have Damaged Thousands of Eggs and Embryos*, NPR (Mar. 12, 2018), <https://www.npr.org/sections/thetwo-way/2018/03/12/592855998/fertility-clinic-says-a-failure-may-have-damaged-thousands-of-eggs-and-embryos>.

¹³³ Sarah Zhang, *Can Lost Embryos Give Rise to a Wrongful-Death Suit?*, ATLANTIC (Apr. 5, 2018), <https://www.theatlantic.com/health/archive/2018/04/fertility-clinic-embryos/557258/>.

bryos or gametes. Damages will probably be much higher if the destroyed reproductive tissue represents an individual or couple's last chance at having children genetically related to them. For example, Julie Norton and her husband cryopreserved embryos prior to Julie beginning cancer treatment that would affect her fertility.¹³⁴ However, the Brigham and Women's Hospital, where the embryos were stored, erroneously destroyed all the couple's embryos. Published reports of the case at the time of the filing reflect the hospital's acceptance of responsibility for the error, which resulted from an initial erroneous belief that the embryos were amongst those marked for discard, and not belonging to an oncofertility patient for whom the hospital had agreed to store indefinitely, and a subsequent failure to internally transmit the patient's correction of that misunderstanding to adequately safeguard them.¹³⁵ There are no publicly available records as to the final outcome of the case, but a number of such cases have reportedly been settled over the years through financial settlements and confidentiality agreements.

C. Disputes Involving Cryopreserved Embryos with Donor Egg or Sperm

Cryopreserved embryos disputes are further complicated where only one of the intended parents has contributed gametes to the embryo, and thus that contributor is the only "progenitor" while a donor has provided the requisite eggs or sperm. This may occur both where one party is unable to produce viable gametes and with same-sex couples. Although there are few embryo disputes involving such facts, historically, the courts that have considered this issue have taken the view that — at least in the absence of a clear, valid agreement to the contrary — an individual who lacks a genetic connection to an embryo has a lesser claim to, or stake in, whether or how the embryo should be used for procreation, or disposed.

For example, in *Litowitz v. Litowitz*, a married couple created five embryos using the husband's sperm and donor eggs, three of which were implanted in a surrogate (Ms. Litowitz had

¹³⁴ Liz Kowalczyk, *Couple Sue Brigham over Embryos' Disposal*, BOSTON.COM (May 16, 2009), archive.boston.com/news/local/massachusetts/articles/2009/05/16/couple_sue_brigham_over_embryos_disposal/.

¹³⁵ *Id.*

had a hysterectomy), and the remaining two were cryopreserved.¹³⁶ The couple entered into three contracts, one with their donor, one with their surrogate, and one with their IVF program. The contract with their egg donor gave sole ownership of the eggs to the husband and wife.¹³⁷ The couple also entered into an agreement with their IVF program agreeing that after five years, the embryos would be thawed (and discarded) unless the couple agreed to an extension; however, if they were unable to reach an agreement regarding the disposition of the embryos, the couple would have to petition the court for a determination.¹³⁸ When the couple divorced, neither wanted their previously agreed upon thaw disposition: the wife wished to use the embryos to have more children, while the husband wanted the embryos to be donated to another patient.¹³⁹ The wife argued she should be awarded equal rights to the embryos due to the egg donor contract, but the court held that the ownership rights to the eggs conferred by the egg donor contract did not extend to the resulting embryos.¹⁴⁰ The court held that since the wife “did not produce the eggs used to create the pre-embryos” and thus “has no biological connection to the pre-embryos,”¹⁴¹ she was not a progenitor, and so, “any right she may have to the [embryos] must be based solely upon contract.”¹⁴² The court then held that the contract between the couple and the IVF program did confer such rights and should be enforced as written,¹⁴³ that is, the embryos must be thawed even though neither the husband or wife wanted this result.

Similarly, in *In re Marriage of Nash*, embryos were created using the husband’s sperm and donor eggs.¹⁴⁴ When the couple divorced, the wife wanted the eggs to be discarded, while the husband wanted to keep them for future use.¹⁴⁵ Although the couple

¹³⁶ Litowitz v. Litowitz, 48 P.3d 261, 262 (Wash. 2002).

¹³⁷ *Id.* at 263.

¹³⁸ *Id.* at 263-44.

¹³⁹ *Id.* at 266-68.

¹⁴⁰ *Id.*

¹⁴¹ *Id.* at 267.

¹⁴² *Id.*

¹⁴³ *Id.* at 271.

¹⁴⁴ *In re Marriage of Nash*, No. 62553-5-I, 2009 Wash. App. LEXIS 1272, 2 (June 1, 2009).

¹⁴⁵ *Id.* at 8.

had signed a contract granting the wife control of the embryos, the court held the contract was not applicable due to a technicality.¹⁴⁶ The trial court awarded the embryos to the husband, noting that since the wife had contributed no reproductive tissue to the embryos, the husband's utilizing the embryos to procreate would not force the wife into becoming a biological parent against her will.¹⁴⁷ The court also noted that "the husband's alternatives to achieve parenthood are not reasonable, since it would require him to restart the expensive process and the success of the process is questionable due to his age."¹⁴⁸ The Washington Court of Appeals affirmed the trial court's decision.¹⁴⁹

Litowitz and *Nash* both show that courts have considered non-progenitors to have a weaker interest in cryopreserved embryos compared to the genetic contributor. Non-genetic intended parents have had to rely on other means to establish a claim, such as a contractual agreement, as in *Litowitz*. In *Nash*, since the court held that the contract was not applicable, the Washington court then used a balancing approach, which turned heavily on the fact that the wife was not a genetic progenitor.

A 2017 case argued before the Georgia Supreme Court squarely confronted the role of genetics and non-genetics in embryo disputes between a divorcing couple. In the case, *Wilson v. Delgado*, the couple had used donor eggs so the ex-wife was not a progenitor. The lower court ruled in favor of the ex-husband who wanted the embryos discarded. The ex-wife appealed, and argued that any approach overly focused on genetics is "outdated" given modern reproductive technologies and changing family structures, and that "genetic connection should not be the controlling factor in determining parenthood for cases involving the use of assisted reproductive technology."¹⁵⁰ In *Wilson*, the couple had cryopreserved embryos created using the husband's sperm and donor eggs; they had signed a consent form prior to their IVF treatment stating that the embryos were joint property and that upon dissolution of the marriage, a court would decide

¹⁴⁶ *Id.* at 14-15.

¹⁴⁷ *Id.* at 10.

¹⁴⁸ *Id.* at 10-11.

¹⁴⁹ *Id.* at 20.

¹⁵⁰ *Wilson v. Delgado*, Ga. Sup. Ct. (S17A0797).

the fate of the embryos.¹⁵¹ At the time of the divorce, the wife stated that she wished to use the embryos to have more children, but the husband argued he did not want any more children, even if he had no legal responsibility for them.¹⁵² The trial court ruled in the husband's favor, since he was the only progenitor, and because there was no agreement between the parties as to how the embryos should be disposed of in the event of divorce.¹⁵³ In the appeal before the Supreme Court of Georgia, the wife referenced Georgia's "Option of Adoption" statute, which allows progenitors to voluntarily "relinquish rights and responsibilities for an embryo to an intended parent prior to embryo transfer" through a written contract resulting in a presumption of parentage for the recipients, and further recognizes the rights of a recipient to undergo a traditional, *post-birth adoption* of any resulting child, without notice to the prior "legal embryo custodian."¹⁵⁴ The wife argued that this statute provided an avenue for her to *force* her former husband to forfeit his parental rights and responsibilities. Months after hearing oral arguments, the Supreme Court of Georgia dismissed the appeal in a one paragraph order: "having reviewed the record and the briefs, the Court concludes that the discretionary application to appeal was improvidently granted."¹⁵⁵

Another donor-related issue raised by *Wilson* and other cases disputing control over cryopreserved embryos is whether such disputes may be resolved by converting an originally intended parent into a gamete donor. In such cases where parties disagree over whether and how to use the embryos, the party who wishes to parent a child resulting from the remaining embryos might be given control over the embryos, while allowing (or, as the wife in *Wilson* argued, requiring) the other party to relinquish his or her intended parent status and instead be

¹⁵¹ Supreme Court of Georgia, Cases Due for Oral Argument: Summaries of Facts and Issues, 13.

¹⁵² *Id.* at 12.

¹⁵³ *Id.*

¹⁵⁴ GA. CODE ANN. § 19-8-41 (reading in part: "[a] child born to a recipient intended parent as the result of embryo relinquishment pursuant to subsection (a) of this Code section shall be presumed to be the legal child of the recipient intended parent; provided that each legal embryo custodian and each recipient intended parent has entered into a written contract.").

¹⁵⁵ Georgia Supreme Court announcement, (S17A0797), Nov. 2, 2017.

treated as, and legally deemed to be, a donor. Section 707 of the Model Uniform Parentage Act 2017 (UPA 2017) provides for an intended parent to *voluntarily* withdraw consent to an assisted reproduction procedure prior to an embryo transfer that results in a pregnancy¹⁵⁶ and no longer be considered a parent of the child.¹⁵⁷ UPA 2017 does not provide for any involuntary conversion of status. Where a party refuses to consent to convert his or her status, although arguments have been made over whether the other party can involuntarily convert an intended parent into a donor, to date, no court has endorsed this principle. In one example, actress Sofia Vergara had created embryos with her ex-boyfriend, Nick Loeb. They had signed a consent form at an IVF clinic which stated that both parties had to consent prior to any uterine transfer of the pre-embryos, otherwise the embryos would remain cryopreserved.¹⁵⁸ When they separated, Vergara wanted the embryos to be cryopreserved indefinitely, consistent with their written agreement, while Loeb wished to have the eggs implanted in a surrogate.¹⁵⁹ He stated he would take on full parenting responsibility and asked the California court to have her declared to be only an egg donor.¹⁶⁰

Although Loeb eventually dropped the case in California,¹⁶¹ the approach was unlikely to have met with much success under current law and trends. As noted above, in *Robert B v. Susan B.*,

¹⁵⁶ UNIF. PARENTAGE ACT § 707(a) (2017).

¹⁵⁷ *Id.* § 707(b).

¹⁵⁸ *Embryo v. Vergara*, Civil Action No. 17-1498, 2017 U.S. Dist. LEXIS 136782, 3 (E.D. La. Aug. 25, 2017).

¹⁵⁹ Nick Loeb, *Sofia Vergara's Ex-Fiancé: Our Frozen Embryos Have a Right to Live*, N.Y. TIMES, Apr. 29, 2015. See also *Loeb v. Vergara and ART Reproductive Centre, Inc.*, Case No. SS024581 (Super. Ct. Los Angeles Cal. 2015).

¹⁶⁰ Loeb, *supra* note 159.

¹⁶¹ After dropping the case in California, another case was brought in Louisiana against Sofia Vergara, *Embryo v. Vergara*, 2017 U.S. Dist. LEXIS 136782. The case was purportedly brought by the embryos, since Louisiana is the only state where embryos are legally recognized to have juridical status. See LA. REV. STAT. § 9:121. In this case, lawyers representing the embryos, and presumably Loeb's interests, also sought to grant him control of the embryos, and to have Vergara declared only a donor. However, the case was dismissed because the court ruled it did not have personal jurisdiction over Vergara or subject matter over the embryos, which were housed in a tank in a California clinic.

a single woman, Susan, was accidentally implanted with an embryo belonging to a married couple, Robert and Denise, which had been formed using donor eggs.¹⁶² Susan had intended to be implanted with anonymous donor embryos. Susan's attempt to have Robert declared as only a sperm donor failed, because the court held that to be a donor, "a man must provide semen to a physician for the purpose of artificially inseminating a woman other than the donor's wife" as a donor, whereas Robert clearly intended the embryos to be frozen and stored "for the exclusive use" of himself and Denise.¹⁶³ Clearly, courts take seriously whether someone intended to be a parent or a donor when determining parenthood. Interestingly, in finding Robert to be the father of the child born to Susan, and Susan the mother of the child, the court did not consider the question of Denise's possible legal maternity, notwithstanding that she was the intended mother of any children resulting from her and Robert's embryos, as well as pregnant from one of the embryos from the same group as Susan.

Further, in the context of frozen embryo disputes, courts have generally been disapproving of "forced procreation." In *A.Z. v. B.Z.*, the Massachusetts Supreme Judicial Court refused to enforce several prior signed consent forms between the couple and their IVF program, which indicated that the couple had decided the embryos should be given to the wife if they "separated," on public policy grounds.¹⁶⁴ Instead, the court ruled that "agreements to enter into familial relationships (marriage or parenthood) should not be enforced against individuals who subsequently reconsider their decisions."¹⁶⁵ Following and quoting *A.Z.*'s reasoning, the New Jersey Supreme Court in *J.B. v. M.B.*, refused to uphold an embryo donation against the ex-wife's contemporaneous objection. In that case, the ex-husband wanted to donate cryopreserved embryos created with sperm and eggs from both intended parents, and the ex-wife wanted them discarded. The court held in favor of the wife, ruling that "ordinarily, the party wishing to avoid procreation should prevail," and emphasizing that an individual should not be forced to be a *biological*

¹⁶² *Robert B. v. Susan B.*, 135 Cal. Rptr. 2d 785, 786 (Cal. Ct. App. 2003).

¹⁶³ *Id.* at 787.

¹⁶⁴ *A.Z. v. B.Z.*, 725 N.E.2d at 1053.

¹⁶⁵ *Id.* at 1059.

parent against her wishes, even if she could be relieved of any legal responsibility for the resulting child.¹⁶⁶

In a very recently filed case in 2018, a New York resident filed suit against an IVF clinic to stop it from giving his former girlfriend cryopreserved embryos they had created together, despite his having signed documents giving her the embryos “for any purpose, including attempting to establish a pregnancy” if their relationship ended.¹⁶⁷ As in *A.Z.* and *J.B.*, the right not to procreate may prevail despite an agreement to the contrary.¹⁶⁸

Courts have allowed embryos to be used against a progenitors’ wishes in some, very limited scenarios. For example, in *Szafranski v. Dunston*, the Appellate Court of Illinois granted a woman use of embryos she had created immediately prior to cancer treatment with a former (non-marital) partner, against his will, both because the embryos represented her last chance to have a biological child and because the court found the parties had entered into an enforceable oral contract that the embryos could be used by the woman to have a biological child even if the relationship did not continue and the partner would thereby be considered a sperm donor.¹⁶⁹ Although the former couple signed an informed consent form with the IVF clinic which stated that both parties must consent to the use of the embryos,¹⁷⁰ the court found that the consent form did not modify or contradict the parties’ earlier oral agreement between themselves, since the informed consent form did not bar a situation where the parties reached an advance agreement or contain any language that would override the prior agreement.¹⁷¹ The court thus concluded that the man had alternatively agreed to be either an intended parent or a donor, and decided that, on balance, the woman’s

¹⁶⁶ *J.B. v. M.B.*, 783 A.2d 707, 716-7 (N.J. 2001).

¹⁶⁷ Kathianne Boniello, *Man Sues Ex to Stop Her from Taking Frozen Embryos*, N.Y. POST (Mar 31, 2018), <https://nypost.com/2018/03/31/man-sues-ex-to-stop-her-from-taking-frozen-embryos/>.

¹⁶⁸ For a similar outcome, see *Findley v. Lee*, No. FDI-13-780539 (Cal. Super. Ct. Nov. 18, 2015), where a lower court upheld a couple’s agreement to destroy their cryopreserved embryos, even though the embryos represented the woman’s last opportunity to have a biological child.

¹⁶⁹ *Szafranski v. Dunston*, 34 N.E.3d 1132, 1162, 1155 (Ill. App. Ct. 2015).

¹⁷⁰ *Id.* at 1153.

¹⁷¹ *Id.* at 1154.

interest in using the embryos outweighed any interest her former partner had in preventing their use.¹⁷²

Additionally, an extremely controversial statute enacted in April 2018 in Arizona essentially does away with any right against forced procreation by requiring that in a case involving the disposition of in vitro human embryos, the court must award the embryos “to the spouse who intends to allow the in vitro human embryos to develop to birth.”¹⁷³ Further, if both spouses intend to allow the embryos to develop the gametes and both spouses contributed gametes to the embryos, the dispute should be resolved, “in a manner that provides the best chance for the in vitro human embryos to develop to birth”; whereas if both spouses intend to allow the embryos to develop to birth but only one party provided gametes for the embryos, the embryos are to be awarded to the gamete provider.¹⁷⁴ The statute also provides that the spouse that is not awarded the embryos “has no parental responsibilities and no right, obligation or interest with respect to any child resulting” from the embryos.¹⁷⁵ The statute does not address assigning the embryos based on who would be the better parent in any disputed claims, whether the recipient must personally use the embryos or may donate them to someone else, or any timeframe or competing constitutional rights to procreate or not procreate. Constitutionally based challenges are likely.

D. *Posthumous Reproduction Disputes*

Posthumous reproduction has long referred to the birth of a child after the death of one or both parents.¹⁷⁶ In the context of ART and cryopreservation, as discussed here, it refers to the birth of a child after the death of an intended parent who had been an embryo or gamete provider (the man who provided the sperm, the woman who provided the egg, or both).¹⁷⁷ Due to advances in cryopreservation technology, it is now possible to

¹⁷² *Id.* at 1162.

¹⁷³ ARIZ. REV. STAT. § 25-318.03(A) (2018).

¹⁷⁴ *Id.*

¹⁷⁵ ARIZ. REV. STAT. § 25-318.03(C).

¹⁷⁶ John Robertson, *Posthumous Reproduction*, 69 IND. L.J. 1027 (1994).

¹⁷⁷ SUSAN L. CROCKIN & HOWARD W. JONES, *LEGAL CONCEPTIONS: THE EVOLVING LAW AND POLICY OF ASSISTED REPRODUCTIVE TECHNOLOGIES* 275 (2010).

freeze and subsequently thaw not only viable sperm (for artificial insemination or IVF) and embryos (for IVF), but more recently, eggs (to subsequently thaw and create embryos for use in IVF procedures). Thus, an individual's biological child can be born long after he or she has passed away; for example, in 2017, a 25-year-old woman gave birth to a baby using an embryo that was frozen more than two decades ago.¹⁷⁸

The use of cryopreserved embryos and gametes in posthumous reproduction raises several legal questions. A central question is whether the deceased gamete provider is a legal parent of the posthumously born offspring. This issue is closely related to the potentially more contentious issue of whether a posthumously conceived or born child is entitled to various financial benefits, such as child support, inheritance, life insurance, and Social Security death benefits. The U.S. Supreme Court reviewed a split in the courts and resolved the issue of whether posthumously born children are entitled to Social Security survivor benefits in the case of *Astrue v. Capato*, which involved a widow's posthumous use of her deceased husband's frozen sperm.¹⁷⁹ The Court held that since Congress' aim was to provide dependent members of a wage earner's family with protection against the hardship caused by the loss of the insured's earnings, state intestacy laws applied to specify which children were legally deemed to be dependents and entitled to receive those earnings.¹⁸⁰ The matter of entitlement to Social Security benefits for these children thus turns on how state law defines the status of a posthumously conceived child.¹⁸¹

Prior to *Astrue*, states had offered alternative means of determining legal parenthood in the case of posthumous reproduction.¹⁸² For example, in *Woodward v. Commissioner of Social Security*, the Supreme Judicial Court of Massachusetts identified three criteria for inheritance eligibility: genetic paternity, actual consent of the decedent to posthumous reproduction, and proof of the decedent's actual consent to support any resulting chil-

¹⁷⁸ Sarah Zhang, *A Woman Gave Birth from an Embryo Frozen for 24 Years*, ATLANTIC (Dec 21, 2017).

¹⁷⁹ *Astrue v. Capato*, 566 U.S. 541 (2012).

¹⁸⁰ *Id.* at 543.

¹⁸¹ *Id.* at 558.

¹⁸² See also CROCKIN & JONES, *supra* note 177, at 275-300.

dren.¹⁸³ In contrast, the Supreme Court of New Hampshire took a more narrow approach in *Khabbaz v. Commissioner, Social Security Administrator*, interpreting the term “surviving issue” in its intestacy issue to preclude any child not “alive” or “in existence” prior to the decedent’s death.¹⁸⁴

The Model Uniform Parentage Act 2017 specifically addresses posthumous reproduction. Section 708(a) provides that an individual who intended to be a parent through assisted reproduction who dies between the transfer of gametes or embryos to a woman and the birth of the child is not precluded from being established as the child’s parent if the individual would otherwise be a parent under the Act.¹⁸⁵ Section 708(b) further states that an individual who consents in a record to assisted reproduction but dies before the transfer of gametes or embryos can be considered a parent only if the individual consented in a record to be a parent even if assisted reproduction occurred after his or her death or this intent is established by clear and convincing evidence, and the embryo is in utero not later than 36 months after the individual’s death or born not more than 45 months after the individual’s death.¹⁸⁶ The Model Uniform Parentage Act also retains a section from the prior version of the Act that provides that an individual is presumed to be a parent of a child if the individual and the woman who gave birth to the child were married, and the child is born not later than 300 days after the marriage is terminated by death.¹⁸⁷ As of publication, UPA 2017 had been adopted in at least four states (California, Rhode Island, Vermont, and Washington).¹⁸⁸

Another important legal issue is who should be granted posthumous *access* to cryopreserved reproductive tissue for use in IVF or artificial insemination, and what role the deceased’s wishes, or failure to provide evidence of their wishes, should play in this determination. The use of cryopreserved gametes and em-

¹⁸³ *Woodward v. Comm’r*, 760 N.E.2d 257 (Mass. 2002).

¹⁸⁴ *Khabbaz v. Comm’r, Soc. Sec. Admin.*, 930 A.2d.1180, 1184 (N.H. 2007).

¹⁸⁵ UNIF. PARENTAGE ACT § 708(a).

¹⁸⁶ *Id.* at § 708(b)).

¹⁸⁷ *Id.* at § 204(a)(1)(B).

¹⁸⁸ Uniform Law Comm’n, *Parentage Act (2017)*, [http://www.uniformlaws.org/Act.aspx?title=Parentage%20Act%20\(2017\)](http://www.uniformlaws.org/Act.aspx?title=Parentage%20Act%20(2017)) (last visited Sept. 3, 2018).

bryos raises novel issues regarding how much control a deceased individual should have over his or her reproductive tissue, and what legal relationship he or she should have to the resulting offspring, particularly if the gametes or embryos are used contrary to the deceased's express wishes or in the absence of any expression of such wishes.

In *the Estate of Kievernagel*, the court prioritized the deceased's instructions and attitudes towards posthumous reproduction over the wishes of his surviving spouse.¹⁸⁹ Iris and Joseph Kievernagel had been IVF patients and had signed an agreement that Joseph's frozen and stored sperm was his "sole and separate property"; Joseph stated that in the agreement that the event of his death, the Medical Center was to have his sperm discarded.¹⁹⁰ After Joseph was killed in a helicopter crash, Iris petitioned the probate court for the sperm to be distributed to her. As interested parties, Joseph's parents opposed Iris' request, arguing that the agreement Joseph signed clearly showed that he did not want the sperm to be released to Iris and used to conceive a child after his death.¹⁹¹ The probate court found that Joseph was opposed to having children and had only agreed to fertility procedures because he believed Iris would divorce him if he did not agree to have children.¹⁹² Based on this finding and the agreement, the probate court denied distribution of the frozen sperm to his widow.¹⁹³ The California Court of Appeals affirmed the decision of the probate court.¹⁹⁴

The question of access to cryopreserved reproductive tissue is further complicated where the decedent had not explicitly consented to, or otherwise addressed, its use for posthumous reproduction. In *Woodward*, the court held that the decedent's mere act of cryopreserving his gametes while alive does not necessarily imply that he consented to posthumous reproduction.¹⁹⁵ Given

¹⁸⁹ *Estate of Kievernagel*, 166 Cal. App. 4th 1024 (2008).

¹⁹⁰ *Id.* at 1026.

¹⁹¹ *Id.*

¹⁹² *Id.*

¹⁹³ *Id.*

¹⁹⁴ *Id.* 1032-33.

¹⁹⁵ *Woodward*, 760 N.E.2d at 269-70.

110 *Journal of the American Academy of Matrimonial Lawyers*

many courts' strong stance against "forced procreation,"¹⁹⁶ it would seem to be unlikely that courts would endorse the use of cryopreserved reproductive tissue in posthumous reproduction without the decedent's explicit or at least implied consent. Nonetheless, there are multiple anecdotally reported cases of both posthumous extraction and use in the absence of the decedent's express consent.¹⁹⁷ In 2013, the ASRM Ethics Committee released an updated opinion regarding the posthumous collection and use of reproductive tissue in which it urged IVF programs to ensure that the consent forms that patients sign when freezing sperm, oocytes, or embryos "include specific directions regarding the use of their gametes or embryos after their death."¹⁹⁸ In the absence of such directions, it opined that medical programs might choose to honor the wishes of the surviving partner, but did not recommend honoring the wishes of any extended family or other individuals.

Technology also allows for the surgical extraction of gametes from a deceased or comatose individual. The first reported posthumous sperm retrieval was performed by Dr. Cappy Rothman in 1978, and the first reported live birth from posthumously retrieved sperm took place in 1999.¹⁹⁹ It is important to note that this technology is much simpler and less invasive for sperm than eggs, which may require stimulation medications and more complex medical interventions. Such requests have been made by both male and female patients' partners or loved ones, as well as extended family, after the patient has died or otherwise lost the capacity to consent for the procedure. While gamete retrieval could allow surviving partners to preserve their prior or future

¹⁹⁶ See, e.g., *A.Z.*, 725 N.E.2d at 1057-58 ("As a matter of public policy, we conclude that forced procreation is not an area amenable to judicial enforcement").

¹⁹⁷ This is based on conversations of the authors with dozens of clients, legal colleagues, and medical programs and personnel who have been involved in these procedures, often under emergency situations, and resolved informally or by expedited court order without objection by various surviving family members.

¹⁹⁸ Ethics Committee of the American Society for Reproductive Medicine, *Posthumous Collection and Use of Reproductive Tissue: A Committee Opinion*, 99 FERTILITY & STERILITY 1842, 1843-44 (2013).

¹⁹⁹ Barron H. Lerner, *In a Wife's Request at Her Husband's Deathbed, Ethics Are an Issue*, N.Y. TIMES (Sep 7, 2004).

familial plans or options through posthumous reproduction, this issue raises myriad legal and ethical questions. For example, should the requirements for extraction be the same for both a dead and a comatose patient? Where the extraction is performed on a comatose patient, should the gender of the patient play a role in whether an extraction should be carried out, since gender impacts the degree of medical intervention needed?²⁰⁰ How should physicians, courts, and ethicists balance the autonomy and bodily integrity of the deceased with the wishes of his or her surviving loved one? A particularly pertinent question is who should be able to request posthumous retrieval of gametes; potential requests could — and have — come from not just spouses and non-married partners, but also relatives of the deceased, such as parents or siblings, with varied intentions for use and legal parentage.

As noted above, and although not binding, the American Society for Reproductive Medicine's (ASRM's) 2013 ethics opinion on posthumous reproduction provides some professional guidance for physicians in this newly emerging area. In it, the ASRM opines that posthumous gamete procurement and reproduction are ethically justifiable if there is written documentation that the deceased authorized the procedure.²⁰¹ However, in the absence of a written directive, physicians are not obligated to comply with requests for posthumous gamete extraction or reproduction.²⁰² Further, physicians and programs open to requests for posthumous gamete extraction or reproduction from surviving spouses or life partners in the absence of written instructions should decline requests for such services from other individuals, such as parents of the deceased.²⁰³ It should be noted that the potential retrieval of gametes from a deceased or incompetent

²⁰⁰ See David M. Greer et al., *Case 21-2010—A Request for Retrieval of Oocytes from a 36-Year-Old Woman with Anoxic Brain Injury*, 363 N. ENGL. J. MED. 276 (2010) (noting there are clinical concerns with performing oocyte retrieval, because the patient would have to receive 7 to 10 days of gonadotropin stimulation; further, the retrieval procedure required the patient to be supine in the dorsal lithotomy position, which could have hastened this particular patient's death).

²⁰¹ Ethics Committee of the American Society for Reproductive Medicine, *supra* note 198, at 1843.

²⁰² *Id.* at 1844.

²⁰³ *Id.*

individual will almost always involve extremely difficult and emotional circumstances, quite likely emergency timing, and occurrence during an intense grief process for those involved. A surviving spouse, partner, or parent may initially seek posthumous extraction and potential procreative use as a means of preserving their connection with their loved one, but come to feel differently after some time of reflection.²⁰⁴ Anecdotally, there are many more cases of posthumous extraction and cryopreservation, often undertaken after obtaining an emergency court order where there are no expressed wishes of the deceased, than there are instances of ultimate procreative use.²⁰⁵ For those lawyers asked to obtain such orders, courts may be more receptive to allowing the retrieval and cryopreservation to be done to preserve the opportunity for future procreative use but require a separate hearing on whether the petitioning party or parties may move forward and use the reproductive tissue at a later date. An experienced mental health counselor can be an invaluable professional to include in any decision-making process, and, in many such cases, attending to the emotional needs of the surviving family members has been a very effective way of helping surviving family members navigate their grief, clarify their ultimate interests and goals, and more clearly address how to navigate what may be shifting priorities and objectives.

With ever increasing technological advances in egg retrieval and cryopreservation, and continuing interest in posthumous reproduction options, it is likely legal issues will continue to surround this practice.

V. Cutting-Edge Issues

A. *Legal Impacts of Developments in Fertility Preservation*

Although the first successful pregnancies from frozen oocytes were achieved in the late 1980s, oocyte cryopreservation techniques were plagued with technical concerns and low success rates for decades.²⁰⁶ In contrast, both sperm and embryo cry-

²⁰⁴ Greer, *supra* note 200, at 280-82.

²⁰⁵ This is based on the personal experience of the authors and colleagues.

²⁰⁶ Catrin E. Argyle, Joyce Catherine Harper, & Melanie C. Davies, *Oocyte Cryopreservation: Where Are We Now?*, 22 *HUM. REPRODUCTION UPDATE* 440 (2016).

opreservation have long been considered routine procedures in assisted reproductive technology.²⁰⁷ It was only in 2012, after the success rates of oocyte cryopreservation had sufficiently improved with the development of vitrification technology, that ASRM declared that oocyte cryopreservation technology should no longer be considered experimental, as there is “good evidence that fertilization and pregnancy rates are similar to IVF with fresh oocytes when vitrified/warmed oocytes are used.”²⁰⁸ More recently, fertility preservation guidelines issued by the American Society of Clinical Oncology in April 2018 made “key recommendations” for patients with cancer, including that “[s]perm, oocyte, and embryo cryopreservation are considered standard practice and are widely available,” and that “the field of ovarian tissue cryopreservation is advancing quickly and may evolve to become standard therapy in the future.”²⁰⁹

A more widely accepted use of oocyte cryopreservation could potentially give much needed certainty and peace of mind to women undergoing oncofertility or other fertility compromising treatment. Given the number of reported embryo disputes discussed above, the uncertainties involved in potentially converting an intended parent to a donor even with a prior contract, and the potential public policy arguments against forced procreation, embryo cryopreservation may have a particularly adverse *legal* and family-building impact on parties with compromised fertility. The developments in oocyte cryopreservation could thus be tremendously beneficial for women going through medical treatments that impair their fertility, such as chemotherapy. If embryos are frozen, which for many years was the only option and remains the medical default position for partnered patients in many IVF programs, women may find their only chance of being a biological parent is vulnerable to the whims of the other gamete contributor. Egg freezing would reduce this vulnerability and essentially eliminate the risk of potential litigation over the

²⁰⁷ Janos Konc et al., *Cryopreservation of Embryos and Oocytes in Human Assisted Reproduction*, BIOMED. RES. INT’L. (Mar 23, 2014), <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3980916/>.

²⁰⁸ ASRM Practice Committee, *Mature Oocyte Cryopreservation: A Guideline*, 99 FERTILITY & STERILITY 37 (2013).

²⁰⁹ Kutluk Oktay et al., *Fertility Preservation in Patients with Cancer: ASCO Clinical Practice Guideline Update*, 36 J. CLINICAL ONCOLOGY 1 (2018).

respective rights to use or prevent use of embryos. Moreover, while the benefit for oncofertility patients may be most compelling, at least from a legal, if not medical, perspective, all patients might be better served by such a change in practice.

Although still a somewhat novel idea, the authors also believe that both health law principles and developing ART law support revisiting and revising standard informed consent protocols in this area. While ART patients have historically most often presented as couples, especially given emerging cryopreservation options, respecting autonomy would suggest each patient should be approached, treated, and have consent sought from as an individual. Steps that can and should be taken to protect patients seeking fertility treatment, and particularly those seeking it for purposes of medically needed fertility preservation, might include requiring separate counselling for each of the parties, including counselling regarding the respective medical and legal risks and benefits of cryopreservation of gametes or embryos, and, at least where the medical outcomes are believed to be similar, recommending gamete cryopreservation over embryo preservation. On the other hand, embryos may have a medical advantage in terms of predicting successful pregnancies given advances in pre-implantation genetic testing and its growing use as a companion technique along with IVF and cryopreservation. Thus, there is an argument that cryopreserved, tested embryos may more reliably predict a successful future pregnancy than cryopreserved eggs which cannot be tested in the same way that embryos can.

Thus, caution in this area is still indicated and medical and legal considerations may need to be balanced and weighed for individual patients and programs. Although oocyte cryopreservation is no longer experimental, due to the still relative novelty of oocyte cryopreservation technology and laboratories' differing experience with both egg freezing via vitrification and thawing, individual IVF practices will vary in skill and success rates when it comes to carrying out the procedure.²¹⁰ Poor outcomes, and potential malpractice suits, could arise if an IVF practice's inexperience in the oocyte cryopreservation and thaw process nega-

²¹⁰ Nicole Noyes, Jeffrey Boldt Zsolt Peter Nagy, *Oocyte Cryopreservation: Is It Time to Remove Its Experimental Label?*, 27 J. ASSISTED REPRODUCTIVE GENETICS 69 (2010).

tively impacts a patient's fertility preservation prognosis. Programs should provide both general and clinic-specific success rates for their various protocols, and patients should be made aware of the clinic's clinical and laboratory experience in oocyte and embryo cryopreservation methods and success rates.

B. *Legal Issues regarding Fertility Preservation in Minors*

Technological development and improvements in medical care have resulted in increased cure rates in children and adolescents diagnosed with cancer, with most of these patients surviving their cancer.²¹¹ However, survivors must still contend with damage to the reproductive system resulting in impaired fertility.²¹² For post-pubertal adolescents, gametes can be cryopreserved using the same methods as adults. Notably, adolescent females can go through hormone stimulation to produce multiple eggs for extraction, which may delay the start of chemotherapy,²¹³ although the time delays have been significantly reduced in recent years. For pre-pubertal children of both sexes, gonadal tissue may be cryopreserved, but this procedure is still considered experimental, although as noted above, ASCO guidelines recognize that ovarian tissue cryopreservation is advancing quickly and may become standard therapy in the future.²¹⁴

From a legal perspective, a pertinent issue is whether minors can consent to medical treatment, including fertility preserving treatments. Minor children are not usually considered legally competent to give or withhold consent and must generally rely on their parents to consent to therapeutic medical treatment on their behalf. In such cases, "assent" by the minor child is often sought, but not legally sufficient.²¹⁵ It should be noted that the law does recognize that some minors possess the maturity to

²¹¹ Susan L. Crockin, *Legal Issues Related to Parenthood After Cancer*, 2005 JNCI MONOGRAPHS 111 (Mar. 1, 2005).

²¹² Jennifer M. Levine, *Preserving Fertility in Children and Adolescents with Cancer*, 1 CHILDREN (Basel) 166 (Sept. 2014).

²¹³ *Id.*

²¹⁴ Lalitha Davi & Sandeep Goel, *Fertility Preservation Through Gonadal Cryopreservation*, 15 REPRODUCTIVE MED. & BIOLOGY 235 (Oct. 2016).

²¹⁵ American Association of Paediatricians Committee on Bioethics, *Informed Consent, Parental Permission, and Assent in Pediatric Practice*, 95 PEDIATRICS 314, 314 (1995), <http://pediatrics.aappublications.org/content/pediatrics/95/2/314.full.pdf>.

make responsible judgments about complex decisions, as established by the “mature minor doctrine.”²¹⁶ Further, many states have promulgated statutes that allow minors, on a finding of sufficient maturity, to give legally effective consent to medical treatment.²¹⁷ However, such statutes may require minors to have attained a specific age and be limited to specific treatments, and thus, may not be applicable in the fertility preservation context described here.

When parents are asked to legally consent on their child’s behalf, there are two possible standards. First, “substituted decision making” requires the decision maker to make a decision based on what the patient would have chosen if competent, taking into consideration the patient’s previous or known behavior, wishes, values, and goals.²¹⁸ The application of this standard to minors has been criticized, because children have never been legally competent, and thus decision makers can only speculate as to what the child would do if he or she was an adult.²¹⁹ Further, parents as decision makers may be strongly influenced by what they hope their child would do if he or she were competent.²²⁰ In the assisted reproduction context, a parent may come to the conclusion that a child will be willing to donate his or her own gametes to the parent for the parent’s own use. The second standard requires parents to make a decision that is in the best interests of the child.²²¹ While a parent may decide that it is in

²¹⁶ Jennifer K. Robbennolt, *Advancing the Rights of Children and Adolescents to be Altruistic: Bone Marrow Donation by Minors*, 9 J.L. & HEALTH 213, 218-21 (1995).

²¹⁷ See, e.g., ALA. CODE §§ 22-8-4 to 6 (2017) (authorizing minors 14 years and older to give consent to any medical treatment and any minor to consent to treatment related to pregnancy, sexually transmitted diseases, and chemical dependency); CAL. FAM. CODE §§ 6920-6929 (2017) (authorizing minors 15 years and older to consent to most medical treatment and minors 12 years and older to consent to some mental health treatment, treatment for substance abuse, and diagnosis and treatment of rape and of communicable diseases); MD. CODE ANN., HEALTH-GEN. § 20-101-104 (2018) (authorizing minors 17 years and older to give consent for treatment of substance abuse, sexually transmitted diseases, pregnancy, contraception, and rape exams, and authorizing minors 16 years and older to consent to treatment of mental or emotional problems).

²¹⁸ Robbennolt, *supra* note 216, at 221-22.

²¹⁹ *Id.* at 226.

²²⁰ *Id.*

²²¹ *Id.* at 222-23.

the child's best interest to undergo fertility preserving procedures to yield gametes for the child's future use, and perhaps some children might wish to provide the possibility of a future child to comfort their parents and be deemed mature enough to make such a decision, in most cases it is unlikely to be in a child's best interests for parents to preserve their child's gametes to potentially allow them to have another child should their ill child pass away.

For these reasons, it is the authors' belief that protocols for freezing minors' gametes, sperm, or eggs, should not include a dispositional option to donate their gametes for procreative use. Although this is a common option provided to adult patients, it would be advisable for program consents used for minor patients to restrict their dispositional options to use, discard, or donation for research or clinical training. Assuming survival, when minor patients reach maturity, they would then be free to re-consent to any dispositional option available to adult patients.

C. Legal Impact of Medical Advances

Other unforeseen legal impacts may arise from recent and future medical advances. For example, long-term storage of reproductive tissue is becoming increasingly common, with embryos and gametes being stored sometimes for decades. While recently stored gametes and embryos are typically accompanied by detailed agreements between patients (as couples or individuals) and their IVF clinic, reproductive tissue banked early in the development of cryopreservation technology may instead have vaguely worded consent forms or contracts that fail to comprehensively or definitively address dispositional issues. Legal disputes have arisen and may continue to arise when those former patients are forced to decide what to do with their reproductive tissue or programs are faced with whether to maintain or discard it.

Additionally, the mainstreaming of oocyte cryopreservation techniques is giving rise to a growing egg bank industry, much like that which has grown up around sperm banking. Women can and are freezing their eggs not just for therapeutic purposes, but for what some people refer to as "social freezing" or "elective fertility preservation" (without a fertility-threatening illness). This type of egg freezing has also been described as an "insur-

ance policy” for women who want to have children later in life but wish to focus on their careers first or have not met their chosen life partner. However, unlike most other biobanks, which may focus on research, banked eggs may represent a woman’s only chance at having her own biological child later in life. From a legal perspective, to the extent that women are encouraged or induced by success rate claims of medical programs or commercial entities to bank eggs without current medical necessity, there may be potential liability if the eggs are not stored or thawed properly to be usable at that anticipated future date. There may also be potential issues with the ages at which women are encouraged to freeze eggs, since egg-age is believed to correlate strongly with fertility. Freezing at too young an age may mean women will never need the cryopreserved eggs or that dramatic improvements in technology would have allowed them to freeze more successfully at a later date. On the other hand, women who are beyond the age where their eggs are likely to be viable for pregnancy may nonetheless be encouraged to undergo IVF and freeze eggs. There are already media reports of disappointed women in the latter category whose frozen eggs did not result in the pregnancies they had expected.²²² Whether any of those issues might arise to legal claims and against whom or what entities remains to be seen.

Recent innovations in genetic and cellular manipulation may also one day have widespread legal implications. For example, CRISPR-Cas9 is a genome editing technology that is precise and affordable and has tremendous potential for therapeutic use in humans,²²³ for example, to eliminate genetic anomalies or alter genetic traits at the embryonic stage.²²⁴ Assuming the procedure is mainstreamed in the future, there is a possibility that malpractice suits will arise should the gene editing process go awry, much like the medical negligence suits arising from mistakes in PGD

²²² Ariana Eunjung Cha, *Social Egg Freezing Is a Numbers Game that Many Women Don’t Understand*, WASH. POST (Jan. 30, 2018), https://www.washingtonpost.com/news/to-your-health/wp/2018/01/29/social-egg-freezing-is-a-numbers-game-that-many-women-dont-understand/?noredirect=on&utm_term=.65f5b49a18ef.

²²³ Heidi Ledford, *CRISPR, The Disrupter*, 522 NATURE 20 (2015).

²²⁴ Mohammad-Reza Mahmoudian-sani et al, *CRISPR Genome Editing and Its Medical Applications*, 32 BIOTECHNOLOGY & BIOTECHNOLOGICAL EQUIPMENT 286 (2017).

(discussed in Section IV.B.2.). However, there are also concerns that use of CRISPR technology in assisted reproduction could give rise to consumer eugenics, where wealthy parents are able to pay for “designer babies” with biological advantages,²²⁵ such as enhanced height or athletic ability. Further, gene editing for human reproduction involves germline modification, that is, the resulting changes in DNA will be passed down to subsequent generations, as opposed to affecting only the resulting child as current technologies such as PGD do. Gene editing may thus have widespread social implications, with some commentators suggesting this may potentially include threatening the health and autonomy of future generations, exacerbating inequality, and fueling discrimination.²²⁶

Further, the continued development of Pre-Implantation Genetic Testing (PGT, a term which has recently been gaining favor to refer to both pre-implantation genetic diagnosis (PGD) and pre-implantation genetic selections (PGS), has led to the discovery of mosaicism, which has legal implications on how doctors carry out pre-implantation genetic testing and subsequent selection of embryos to implant. PGS is a method for screening embryos for aneuploidy (that is, the presence of an abnormal number of chromosomes), which impacts embryos’ ability to implant or develop to term (as opposed to PGD, which reveals genetic information, including anomalies and diseases).²²⁷ Advances in PGS technology have revealed that a percentage of embryos have both normal and abnormal cells, known as “mosaic embryos.”²²⁸ The degree of mosaicism can vary, and the predictive value of PGS and presumption in favor of discarding all

²²⁵ David King, *Editing the Human Genome Brings Us One Step Closer to Consumer Eugenics*, GUARDIAN (Aug 4, 2017), <https://www.theguardian.com/commentisfree/2017/aug/04/editing-human-genome-consumer-eugenics-designer-babies>.

²²⁶ Marcy Darnovsky, Leah Lowthorp & Katie Hasson, *Reproductive Gene Editing Imperils Universal Human Rights*, OPEN GLOBAL RIGHTS (Feb 15, 2018), <https://www.openglobalrights.org/reproductive-gene-editing-imperils-universal-human-rights/?lang=English>.

²²⁷ Sebastiaan Mastenbroek et. al., *Preimplantation Genetic Screening: A Systematic Review and Meta-Analysis of RCTs*, 17 HUM. REPRODUCTION UPDATE 454 (2011).

²²⁸ American Society for Reproductive Medicine, *Diagnosis and Clinical Management of Embryo Mosaicism*, 107 FERTILITY & STERILITY 6 (2017).

mosaic embryos has begun to be questioned since some mosaic embryos are able to self-correct and mature into healthy children.²²⁹ If, however, abnormal cells proliferate in the embryo, it may fail to implant, miscarry, or result in the birth of a child with serious birth defects.²³⁰ Doctors thus face a quandary regarding whether to transfer a mosaic embryo, particularly where a couple only has viable mosaic embryos left. Current questions in the medical field include if, and how, it is possible to uniformly interpret mosaicism, how to provide appropriate informed consent regarding the potential transfer of mosaic embryos, and whether doctors may refuse to transfer mosaic embryos against their patients' wishes.

Finally, in 2017, the first live birth arose from the use of mitochondrial-replacement therapy.²³¹ This technology allows prospective mothers to have a child without passing on metabolic disease caused by faulty mitochondria by replacing the diseased mitochondria from the mother with healthy mitochondria from a donor; it has been at times misleadingly referred to as a "third-parent IVF."²³² The scientific community has explained mitochondrial replacement or donation in lay person's terms as merely replacing the "faulty battery" that fuels the intended mother's nucleus;²³³ the third-party DNA from the donated mitochondria comprises less than 1% of the total genetic contribution.²³⁴ From a legal perspective, a mitochondrial donor is even less of a genetic contributor than a full egg donor or sperm donor, and the legal community has advocated to the medical community and mainstream media that "three-person IVF" or "mitochondrial donor" (or donation), not "three-parent" IVF is

²²⁹ Kira Peikoff, *In IVF, Questions About 'Mosaic' Embryos*, N.Y. TIMES (Apr. 18, 2016), <https://www.nytimes.com/2016/04/19/health/ivf-in-vitro-fertilization-pregnancy-abnormal-embryos-mosaic.html>.

²³⁰ *Id.*

²³¹ Sara Reardon, *Genetic Details of Controversial 'Three-Parent Baby' Revealed*, 544 NATURE 17 (2017).

²³² *Id.*

²³³ Jessica Hamzelou, *Everything You Wanted to Know About '3-Parent' Babies*, NEW SCIENTIST (Sept. 28, 2016), <https://www.newscientist.com/article/2107451-everything-you-wanted-to-know-about-3-parent-babies/>.

²³⁴ John Harris, *Misleading Talk of 'Three-Parent Babies' Helps No One*, GUARDIAN (Sept. 19, 2012), <https://www.theguardian.com/commentisfree/2012/sep/19/misleading-three-parent-babies-gene-therapy>.

the more accurate term. Although a mitochondria donor contributes far less DNA than the intended parents, or a sperm or egg donor, it remains to be seen if these donors will be treated as gamete donors in the eyes of the law or fall into a completely different category.

Advances in assisted reproductive technology are both virtually certain to occur yet difficult to predict. There are current experimental efforts underway, for example, to develop animal artificial wombs capable of gestating premature fetuses to enhance their health outcomes,²³⁵ as well as efforts both to convert some forms of stem cells into gametes²³⁶ and convert gametes from one sex to another,²³⁷ and more. As at least some of these types of future advances come into mainstream family building, it is inevitable that the law will continually need to revisit and revise existing legal frameworks and theories.

VI. Conclusion

As this article makes clear, the medical, legal, and ethical aspects of the creation, use, and storage of embryos and gametes are evolving at a bewildering pace. On an almost daily basis various forms of social media are reporting the ongoing medical breakthroughs in reproductive medicine and the resulting legal and ethical challenges. Family law attorneys who have chosen not to practice in the area of assisted reproduction can no longer simply ignore or avoid these issues. These very small clusters of reproductive cells carry enormous legal significance, ethical controversy, and various legal complications, all of which are potentially lurking in many typical family law cases. A working knowledge of the legal and medical aspects of this reproductive tissue is now essential to any family law practice. An awareness of the legal, ethical, and most basic medical issues is also needed to at least be able to spot the potential issues clients need to con-

²³⁵ See, e.g., Michelle Roberts, *Premature Lambs Kept Alive in 'Plastic Bag' Womb*, BBC NEWS (Apr. 25, 2017), <http://www.bbc.com/news/health-39693851>.

²³⁶ Sonia Suter, *In Vitro Gametogenesis: Just Another Way to Have a Baby?*, 3 J. L. & BIOSCIENCES 87 (2016).

²³⁷ Peter Aldous, *Are Male Eggs and Female Sperm on the Horizon?*, NEW SCIENTIST (Jan 30, 2008), <https://www.newscientist.com/article/mg19726414.000-are-male-eggs-and-female-sperm-on-the-horizon/>.

122 *Journal of the American Academy of Matrimonial Lawyers*

sider — issues that might include how best to create any embryos and future directions for their use, whether and how to use donor gametes for procreation, and ultimately how to store or dispose of any reproductive tissue in a manner that will not generate further trauma or litigation. An awareness of these and emerging issues is essential as ongoing medical developments continue to challenge the legal processes that attorneys use to guide clients through deeply divisive family law issues.