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## Building a Better Baby Business

Debora Spar\* & Anna M. Harrington\*\*

Thirty years ago, Louise Brown's 1978 birth<sup>1</sup> ushered in a new era of reproductive technology. The first baby born via *in vitro* fertilization ("IVF"), mixing eggs and sperm in a test tube, promised hope to millions desperate to conceive. Yet along with the promise came dilemmas about just how far one should go to have a child. Heather Higgins, for example, lost track of the number of IVF cycles she had undergone at twenty-eight years of age and twenty-one cycles.<sup>2</sup> Roberta Kraft was \$38,700 in debt after spending everything she had and borrowing more trying to get pregnant.<sup>3</sup> Nkem Chukwu gave birth to the world's first octuplets in 1998 as a result of fertility drugs,<sup>4</sup> though the fifth and smallest died.<sup>5</sup> Pregnant fifty-one-year-old Sophia hoped to join a hundred other women who had become mothers over the age of fifty, including Arceli Keh, the oldest reported woman to give birth to a child at age sixty-three.<sup>6</sup> Samantha Carolan received \$7,000 to donate her eggs the first time at age twenty-three, and \$8,000 the second time,

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1. *First 'Test Tube Baby' Born*, BBC NEWS, [http://news.bbc.co.uk/onthisday/hi/dates/stories/july/25/newsid\\_2499000/2499411.stm](http://news.bbc.co.uk/onthisday/hi/dates/stories/july/25/newsid_2499000/2499411.stm) (last visited Sept. 26, 2008).

2. Sheryl Gay Stolberg, *For the Infertile, a High-Tech Treadmill*, N.Y. TIMES, Dec. 14, 1997, § 1, at 36.

3. Esther B. Fein, *Calling Infertility a Disease, Couples Battle with Insurers*, N.Y. TIMES, Feb. 22, 1998, § 1, at 1.

4. *See Americas Octuplet Baby Dies*, BBC NEWS, Dec. 27, 1998, <http://news.bbc.co.uk/2/hi/americas/243155.stm>.

5. Lawrence K. Altman, *Smallest Octuplet Dies; Others Remain Critical*, N.Y. TIMES, Dec. 28, 1998, at A18.

6. Lisa Belkin, *Pregnant with Complications*, N.Y. TIMES, Oct. 26, 1997, § 6 (Magazine), at 33-36.

using the money to pay off her student loans.<sup>7</sup> She planned to donate again.<sup>8</sup> Geraldine Wesolowski, age fifty-three, gave birth to her child and grandchild, conceived from her son's sperm and his infertile wife's eggs.<sup>9</sup> Augusta Roman was told by a Texas court that her three frozen embryos, created with her ex-husband Randy, would have to be destroyed.<sup>10</sup> Danielle Pagano, age sixteen, desperate to know her origins, placed an advertisement on Donor Sibling Registry, a website that facilitates connections between the parents and offspring of assisted reproduction: "Hello, I'm Your Sister. Our Father Is Donor 150."<sup>11</sup>

These are all true stories, plucked from dozens like them that litter the pages of newspapers, magazines, and books. They are all stories about the modern marvels of reproductive technology, but also, more subtly, about the failure to establish rules governing what has become a sizeable industry in the United States and abroad. This article attempts to describe how lawmakers can fill that gap to ensure quality and equity in the reproductive technology industry. It argues for curbing the excesses and unfairness inherent in a market that offers some people their only hope of a genetically related child. This article covers four broad topics: a survey of the market for assisted reproduction, or what is termed "the baby business;"<sup>12</sup> an overview of the problems emanating from this market; an argument about the relative lack of regulation in this area; and an examination of various regulatory and public policy approaches that could lead to a substantially better baby business.

## I. THE MARKET FOR ASSISTED REPRODUCTION: THE

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7. Roni Caryn Rabin, *As Demand for Donor Eggs Soars, High Prices Stir Ethical Concerns*, N.Y. TIMES, May 15, 2007, at F6.

8. *See id.*

9. *See* Lindsey Gruson, *When 'Mom' and 'Grandma' are One and the Same*, N.Y. TIMES, Feb. 16, 1993, at B1.

10. *Roman v. Roman*, 193 S.W.3d 40, 54–55 (Tex. App. 2006) (upholding an agreement between a couple providing for discarding their unused embryos in the event of a divorce); *see also Court Won't Hear Battle Over Embryos*, N.Y. TIMES (late edition), Aug. 26, 2007, at A20.

11. Amy Harmon, *Hello, I'm Your Sister. Our Father is Donor 150.*, N.Y. TIMES, Nov. 20, 2005, § 1, at 1.

12. *See generally* DEBORA L. SPAR, *THE BABY BUSINESS: HOW MONEY, SCIENCE, AND POLITICS DRIVE THE COMMERCE OF CONCEPTION* (2006) (describing how assisted reproduction has become a market driven industry).

## “BABY BUSINESS”

Assisted reproductive technology (“ART”) is one of the few markets in the world in which products and services are regularly exchanged for money—often very large amounts of money—where buyers and sellers on both sides of the exchange remain loath to acknowledge that they are engaged in a commercial transaction.<sup>13</sup> Such reluctance is understandable. First, there is an institutional taboo against recognizing the commercial nature of the baby business. Despite the flourishing market we describe below, the sale of reproductive components is technically forbidden in some states and frowned upon by professional organizations.<sup>14</sup> Second, on a more personal and compelling level, most babies are clearly “produced” outside the market—in the bedroom, for free, a product of love and not money. It is only for a small number of would-be producers that babies cost money.<sup>15</sup> Those who venture into the baby business, therefore, have good reason not to want to acknowledge the commercial side of their action: they, unlike most of their peers, cannot or choose not to produce a baby for free. Yet regardless of the language used or preferred, employing ART involves both commercial

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13. See *id.* at xiv; Claudia Dreifus, *An Economist Examines the Business of Fertility: A Conversation with Debora Spar*, N.Y. TIMES, Feb. 28, 2006, at F5.

14. *E.g.*, IND. CODE ANN. § 35-46-5-3 (LexisNexis Supp. 2008) (making it a Class C Felony when a person “knowingly or intentionally purchases or sells a human ovum, zygote, embryo, or fetus,” but providing exceptions for reimbursement for lost earnings, travel expenses, medical or hospital expenses, as well as recovery time compensation of up to \$3,000 for IVF, gamete intrafallopian transfer, or zygote intrafallopian transfer); LA. REV. STAT. ANN. § 9:122 (2008) (“The sale of a human ovum, fertilized human ovum, or human embryo is expressly prohibited.”); see Ethics Committee of the American Society for Reproductive Medicine, *Financial Compensation of Oocyte Donors*, 88 FERTILITY & STERILITY 305, 306 (2007) [hereinafter ASRM Guidelines for Oocyte Donor Compensation]:

As the Ethics Committee explains: Another ethical concern is that payment for oocytes implies that they are property or commodities, and thus devalues human life. Many people believe that payment to individuals for reproductive and other tissues is inconsistent with maintaining important values related to respect for human life and dignity. This view is reflected in state and federal laws prohibiting direct payment to individuals providing organs and tissues for transplantation.

See generally NAT’L CONF. OF STATE LEGISLATURES, STEM CELL RESEARCH (2008), <http://www.ncsl.org/programs/health/genetics/embfet.htm> (summarizing state laws regarding the use of human eggs and embryos).

15. See SPAR, *supra* note 12, at 1.

transactions and social effects. If we are to govern these transactions and effects as well as we should, we need to acknowledge that the market exists and understand how it works.

#### A. THE DEMAND SIDE

Currently, the demand side of the baby business comprises a wide variety of people, including infertile couples (approximately 15% of women and 10-15% of men),<sup>16</sup> same sex couples, genetically-at-risk couples or individuals,<sup>17</sup> single parents, gender selectors,<sup>18</sup> and fertile adopters. Interestingly, demand has remained high despite high costs<sup>19</sup> and is likely responsible for pushing prices even higher.<sup>20</sup> In economic terms, demand can be considered relatively inelastic because many people determined to have a child who is genetically related to them are willing to pay whatever it takes (or whatever they can) to conceive.<sup>21</sup> This is often true even if the patient knows he or she has a low chance of success.<sup>22</sup> Indeed, patients are frequently willing to pay nearly \$30,000 for a 10%

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16. See, e.g., *id.* at 235 n.1; Anjani Chandra & Elizabeth Hervey Stephen, *Impaired Fecundity in the United States: 1982-1995*, 30 FAM. PLAN. PERSP. 34, 36 (1998); see also CTRS. FOR DISEASE CONTROL AND PREVENTION, AM. SOC'Y FOR REPROD. MED. & SOC'Y FOR ASSISTED REPROD. TECH., 2005 ASSISTED REPRODUCTIVE TECHNOLOGY SUCCESS RATES: NATIONAL SUMMARY AND FERTILITY CLINIC REPORTS 31 (2007), <http://www.cdc.gov/art/ART2005/508PDF/2005ART508.pdf> [hereinafter 2005 ART REPORT] (describing different causes of infertility among people using reproductive technologies).

17. See *Embryonic Genetic Testing Is Boosting IVF Pregnancies*, BIO-MED., Nov. 11, 2005, <http://www.bio-medicine.org/medicine-news/Embryonic-Genetic-Testing-Is-Boosting-IVF-Pregnancies-5598-1/> (describing reasons why genetically-at-risk couples may use ART to avoid passing on a genetic abnormality or disease to their children).

18. See The Ethics Comm. of the Am. Soc'y of Reprod. Med., *Sex Selection and Preimplantation Genetic Diagnosis*, 72 FERTILITY & STERILITY 595, 595 (1999) (explaining the ART methods that may be used to preselect the gender of a child).

19. See Debora Spar & Anna Harrington, *Selling Stem Cell Science: How Markets Drive the Law Along the Technological Frontier*, 33 AM. J.L. & MED. 541, 553 (2007).

20. See, e.g., Rabin, *supra* note 7, at F6 (indicating the high demand for donor eggs has pushed prices up).

21. See SPAR, *supra* note 12, at 4.

22. See Judith F. Daar, *Regulating Reproductive Technologies: Panacea or Paper Tiger?*, 34 HOUS. L. REV. 609, 629-31 (1997).

chance of having a baby.<sup>23</sup>

In the future, demand is only likely to grow as more and more women postpone childbearing to have careers<sup>24</sup> and increasing numbers of individuals defy traditional norms of child-rearing by opting to have children alone or with same-sex partners.<sup>25</sup> Others will turn to reproductive technologies to avoid passing on genetic abnormalities or disease to their offspring,<sup>26</sup> or even to choose their children's gender.<sup>27</sup>

## B. THE SUPPLY SIDE

Meanwhile, the supply side is also growing apace, generating an increasingly high-tech sector where highly-trained physicians and laboratory personnel work in state-of-the-art clinics. The core technology in this area, IVF, involves using hormones to induce ovulation in a woman, taking the eggs produced and combining them with a man's sperm in a Petri dish, allowing them to grow for a few days, and then implanting the resulting embryos in the woman's uterus. Similar to IVF, but used much less frequently, are gamete intrafallopian transfer ("GIFT") and zygote intrafallopian transfer ("ZIFT"), which involve, respectively, placing the eggs and sperm directly in the fallopian tubes and putting a zygote (early stage embryo) into the fallopian tubes.<sup>28</sup>

Intracytoplasmic sperm injection ("ICSI"), meanwhile,

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23. Melinda B. Henne et al., *The Combined Effect of Age and Basal Follicle-Stimulating Hormone on the Cost of a Live Birth at Assisted Reproductive Technology*, 89 FERTILITY & STERILITY 104, 107 (2008).

24. See Linda J. Heffner, *Advanced Maternal Age—How Old is Too Old?* 351 NEW ENG. J. MED. 1927, 1927 (2004). Heffner explains:

The past decade has seen a remarkable shift in the demographics of childbearing in the United States. The number of first births per 1000 women 35 to 39 years of age increased by 36 percent between 1991 and 2001, and the rate among women 40 to 44 years of age leaped by a remarkable 70 percent. In 2002, 263 births were reported in women between 50 and 54 years of age.

25. See Linda Villarosa, *Once-Invisible Sperm Donors Get to Meet the Family*, N.Y. TIMES, May 21, 2002, at F5 (indicating that single mothers and lesbians are a growing clientele at sperm banks).

26. See *Embryonic Genetic Testing Is Boosting IVF Pregnancies*, *supra* note 17.

27. See Denise Grady, *Girl or Boy? As Fertility Technology Advances, So Does an Ethical Debate*, N.Y. TIMES, Feb. 6, 2007, at F5.

28. 2005 ART REPORT, *supra* note 16, at 39 (describing that GIFT and ZIFT are used infrequently, comprising 0.1% and 0.2% of ART procedures respectively).

which was developed as a treatment for male infertility, involves the direct insertion of an individual sperm into the ovum. First used successfully in Belgium in 1992, ICSI today accounts for 60% of IVF procedures and is increasingly used even when there is no male-factor infertility.<sup>29</sup>

Other related technologies have increased the options available on the supply side, including cryopreservation (egg or embryo freezing), egg donation, and surrogacy.<sup>30</sup> In 2005, frozen non-donor embryos comprised 15.3 percent, or 20,657, of the ART cycles performed in the United States, while frozen donor embryos accounted for 4.1 percent, or 5,541, of the cycles.<sup>31</sup> Donor eggs were used in 12 percent of all cycles—mostly, we can presume, for older women whose own eggs were less healthy.<sup>32</sup> Surrogacy, by contrast, which was used in only one percent of ART cycles in 2005,<sup>33</sup> is a method preferred by women who can produce eggs but not carry a pregnancy to term and by gay men who want to have a genetically related child. Finally, in embryo adoption, a slightly less expensive option, couples donate leftover embryos to other infertile couples.<sup>34</sup>

### C. THE MARKET

When one combines the supply side, which is being driven largely though not entirely by technological developments, with the demand side, which has arguably existed since time immemorial, the result is a market.<sup>35</sup> In ten years, from 1996 to 2005, the number of ART cycles performed in the United States more than doubled, as did the number of babies born from the process.<sup>36</sup> Figures from 2005 indicate that there were 134,260 cycles of IVF<sup>37</sup> in that year with an average cost of \$12,400 for one IVF cycle and 38,910 live births that resulted from IVF.<sup>38</sup> In addition, Americans spent over \$80 million on

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29. *See id.* at 39–41.

30. *See id.* at 54.

31. *See id.* at 14.

32. *See id.* at 56.

33. *See id.* at 52.

34. *See* Sheryl Gay Stolberg, *Some See New Route to Adoption in Clinics Full of Frozen Embryos*, N.Y. TIMES, Feb. 25, 2001, § 1, at 1.

35. *See generally* SPAR, *supra* note 12, at 1–30.

36. 2005 ART REPORT, *supra* note 16, at 61.

37. *See id.* at 12.

38. *See id.*; American Society of Reproductive Medicine, Frequently Asked Questions about Infertility, <http://www.asrm.org/Patients/faqs.html#Q6> (last

16,161 transfers of donor eggs,<sup>39</sup> at an average cost of \$3,000 to \$5,000 per “harvest.”<sup>40</sup> Some small portion of these eggs—known colloquially as “Ivy League” or “designer” eggs—fetched in the range of \$25,000 to \$50,000.<sup>41</sup> Sperm, by contrast, generally sold for \$200–\$300.<sup>42</sup>

Adding these figures together to estimate the total market size is difficult. However, if the figures for 2005 showing IVF averaging roughly \$12,400 per cycle hold true, the arithmetic suggests that assisted reproduction in the United States is at least a \$1.7 billion market before even considering sperm sales, high-end eggs, legal fees, surrogacy, or adoption. Admittedly, this is not a huge market. Global revenues for bottled water, by way of comparison, are \$100 billion,<sup>43</sup> with nearly \$15 billion in the United States alone in 2006.<sup>44</sup> However, the baby market is still a very real market and most certainly a commercial enterprise. Furthermore, it is a unique and important market because of what is being bought and sold: the promise of a child.

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visited Oct. 31, 2008); *see also* Henne et al., *supra* note 23, at 106 (indicating that the cost of a fresh cycle in the U.S. in 2005 was between \$10,803 and \$15,317); Mary Duenwald, *After 25 Years, New Ideas in the Prenatal Test Tube*, N.Y. TIMES, July 15, 2003, at F5 (estimating IVF costs between \$10,000 and \$15,000 per cycle).

39. 2005 ART REPORT, *supra* note 16, at 56 (arriving at the \$80 million figure for spending on donor eggs by multiplying the number of donor egg cycles by an estimated average cost of \$5,000 per egg).

40. *See* Sharon N. Covington & William E. Gibbons, *What is Happening to the Price of Eggs?*, 87 FERTILITY & STERILITY 1001, 1002 (2007) (stating that the average compensation of egg donors, based on a survey of clinics, was \$4,216, ranging from a low of \$1,500 to a high of \$15,000); Carlene Hempel, *Golden Eggs*, BOSTON GLOBE MAG., Jun. 25, 2006, at 19 (stating that some egg donors receive \$5,000 for their first donation); *see also* ASRM Guidelines for Oocyte Donor Compensation, *supra* note 14, at 308 (recommending compensation between \$5,000 and \$10,000).

41. *See* Covington & Gibbons, *supra* note 40, at 1001; Gina Kolata, *\$50,000 Offered to Tall, Smart Egg Donor*, N.Y. TIMES, Mar. 3, 1999, at A10; *see also* Dreifus, *supra* note 13, at F5.

42. SPAR, *supra* note 12, at 37.

43. EMILY ARNOLD & JANET LARSEN, EARTH POLICY INST., BOTTLED Water: Pouring Resources Down the Drain (2006), <http://www.earth-policy.org/Updates/2006/Update51.htm>; *see also* Tom Standage, Op-Ed., *Take it Straight from the Tap*, L.A. TIMES, Aug. 7, 2007, at A15.

44. Charles Fishman, *Message in a Bottle*, FAST COMPANY MAG. (2007), available at <http://www.fastcompany.com/magazine/117/features-message-in-a-bottle.html>; *see also* Allison Van Dusen, *Health in a Bottle?*, FORBES, Apr. 30, 2007, [http://www.forbes.com/health/2007/04/28/water-health-bottled-forbeslife-cx\\_avd\\_0430bottled.html](http://www.forbes.com/health/2007/04/28/water-health-bottled-forbeslife-cx_avd_0430bottled.html) (spending on bottled water was \$10 billion in 2005).



As noted earlier, however, most people in this market do not like to dwell or even comment upon its commercial side. Orphaned children are never sold (either legally or linguistically). Instead, they are matched with their “forever” families.<sup>45</sup> Sperm and eggs are “donated” even when they cost tens of thousands of dollars,<sup>46</sup> and surrogate mothers lend their wombs to help infertile couples.<sup>47</sup>

However, the semantics in this area do not transform the underlying reality. When parents purchase eggs or sperm, when they contract with surrogates, when they choose a child to adopt or an embryo to transfer, they are doing business. Intermediaries are making money in all of these transactions, and children are being acquired and exchanged through market mechanisms.

Furthermore, the law is unquestionably being shaped by semantics as well. As one court pointed out, “semantical distinctions are significant in this context, because language defines legal status and can limit legal rights.”<sup>48</sup> Consider Massachusetts, for example, where it is criminal to sell embryos or gametes for research, but perfectly legal to “donate” them for reproductive purposes.<sup>49</sup>

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45. Cf. Laura Mansnerus, *A Lucrative Industry Booms on the Side*, N.Y. TIMES, Oct. 26, 1998, at A16 (“As the adoption industry grows . . . peripheral services have multiplied.”).

46. See Gina Kolata, *Clinics Selling Embryos Made for ‘Adoption’*, N.Y. TIMES, Nov. 23, 1997, § 1, at 1; see also ASRM Guidelines for Oocyte Donor Compensation, *supra* note 14, at 306. The ASRM guidelines state:

Compensation based on a reasonable assessment of the time, inconvenience, and discomfort associated with oocyte retrieval can and should be distinguished from payment for the oocytes themselves. Payment based on such an assessment is also consistent with employment and other situations in which individuals are compensated for activities demanding time, stress, physical effort, and risk.

47. Krittivas Mukherjee, *Rent-a-Womb in India Fuels Surrogate Motherhood Debate*, REUTERS, Feb. 5, 2007, <http://www.reuters.com/article/inDepthNews/idUSDEL29873520070205>.

48. *Davis v. Davis*, 842 S.W.2d 588, 592 (Tenn. 1992).

49. MASS. ANN. LAWS ch. 111L, § 8 (LexisNexis 2008). The law states: [n]o person shall knowingly and for valuable consideration purchase, sell, transfer or otherwise obtain human embryos, gametes or cadaveric tissue for research purposes. Nothing in this section shall prohibit a person from banking or donating their gametes for personal future use, or from donating their gametes to another person or from donating their gametes for research. Nothing in this chapter shall prohibit or regulate the use of in vitro fertilization for reproductive purposes.

As people—as parents—we do not like to think of children as economic or legal objects, or to consider ourselves as paying for something that is truly priceless. As the legal scholar Margaret Jane Radin has argued, “Conceiving of any child in market rhetoric wrongs personhood.”<sup>50</sup> What we argue is that we *have* to acknowledge the deeply commercial nature of assisted reproduction. Because if we do not acknowledge its commercial nature and instead treat this realm as a purely private, intimate, and emotional endeavor, we risk making serious policy mistakes.

## II. PROBLEMS WITH THE “BABY BUSINESS”

After describing the market for reproductive technologies, we now describe six major problems that emanate from the current state of the baby market. These are price, inequity, the absence of property rights, identity, health risks, and potential societal costs.

### A. PRICE

Perhaps the most conspicuous feature of the baby business is the high cost of assisted reproductive services. Indeed, ART has become a big business in the United States precisely because it costs so much.<sup>51</sup> Each cycle costs more than \$10,000,<sup>52</sup> and it frequently takes multiple cycles to achieve pregnancy, with success rates decreasing with each try.<sup>53</sup> Studies have found that the average cost per successful delivery for IVF ranges between \$66,667 for the first cycle to \$114,286 by the sixth.<sup>54</sup> In this market, however, average costs do not tell us too much, since success rates vary so widely by patient-specific factors, especially age.<sup>55</sup> For women with low success rates (below 10 percent or 15 percent) for example, the cost of producing a baby goes up to well over \$100,000

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50. Margaret Jane Radin, *Market-Inalienability*, 100 HARV. L. REV. 1849, 1927 (1987).

51. See Henne et. al., *supra* note 23, at 104.

52. *Id.* at 106.

53. 2005 ART REPORT, *supra* note 16, at 36–37.

54. See e.g., Peter J. Neumann et al., *The Cost of a Successful Delivery with in Vitro Fertilization*, 331 NEW ENG. J. MED. 239, 239–43 (1994).

55. See Bradley J. Van Voorhis, *In Vitro Fertilization*, 356 NEW ENG. J. MED. 379, 380 (2008) (“The effect of a woman’s age on the outcomes of IVF with her own eggs is striking.”).

(depending on the price per cycle).<sup>56</sup> Costs per cycle are also higher when a donor egg is used, because, as noted above, donated eggs generally cost between \$3,000 and \$5,000. An average cycle with a donor egg is then estimated to cost between \$15,000 and \$25,000, meaning that the cost per live birth (using a 51 percent success rate) runs between \$29,411 and \$49,020.<sup>57</sup>

#### B. INEQUITY

Inevitably, such high costs result in inequity, since only a fortunate few can afford to spend \$50,000, much less \$100,000, in order to have a chance at a baby.<sup>58</sup> Many couples are forced out of the baby business from the outset, and many more find themselves burdened by the huge expenses they accumulate on the way to parenthood or exhaustion. While some non-profit groups like the InterNational Council for Infertility Information Dissemination (INCIID) are tackling the issue of inequity by providing IVF scholarships for those in need and others like RESOLVE are fighting for more expansive insurance coverage, ART in the United States remains largely the province of the rich, or at least the well-to-do. Poor, infertile people suffer twice as a result, first from the inability to conceive for free and then from the unaffordability of assisted reproduction.

Theoretically, this kind of inherent inequity could be deemed unconstitutional if the right to procreate is protected by the Constitution. To date, the Supreme Court has not directly addressed the right to procreate by IVF.<sup>59</sup> However, in a case about the right to the use of contraceptives, the Court has indicated that the right to procreate (or not to) is protected: "If the right of privacy means anything, it is the right of the *individual*, married or single, to be free from unwarranted governmental intrusion into matters so fundamentally

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56. Henne, *supra* note 23.

57. *Id.* at 109 (estimating cost of donor egg cycle based on Internet search). Cycles with donor eggs, on average, have higher success rates (about 50%) which are not dependent on the age of the woman undergoing IVF. Van Voorhis, *supra* note 55, at 382.

58. See Tarun Jain & Mark D. Hornstein, *To Pay or Not to Pay*, 80 FERTILITY & STERILITY 27, 27 (2003) ("Because of this high out-of-pocket cost, many financially constrained infertile couples are excluded from access to this care.").

59. See *Davis v. Davis*, 842 S.W.2d 588, 601 (Tenn. 1992).

affecting a person as the decision whether to bear or beget a child.”<sup>60</sup> Such statements have led scholars like John Robertson to conclude that there may be a constitutionally protected right to procreate and that this right may extend to the use of new reproductive technologies.<sup>61</sup>

To be sure, a right to procreate does not necessarily translate into a right to have the cost of reproductive technologies covered by the state. For example, in *Maier v. Roe*, the Supreme Court held that the right to an abortion did not include the right to state funding for it.<sup>62</sup> The Court wrote:

The Constitution imposes no obligation on the States to pay the pregnancy-related medical expenses of indigent women, or indeed to pay any of the medical expenses of indigents . . . . An indigent woman who desires an abortion suffers no disadvantage as a consequence of Connecticut’s decision to fund childbirth; she continues as before to be dependent on private sources for the service she desires. The State may have made childbirth a more attractive alternative, thereby influencing the woman’s decision, but it has imposed no restriction on access to abortions that was not already there. The indigency that may make it difficult—and in some cases, perhaps, impossible—for some women to have abortions is neither created nor in any way affected by the Connecticut regulation.<sup>63</sup>

Still, even if the costs of ART are not deemed worthy of state funding, the current inequities in this market seem well worthy of state concern.

Meanwhile, rather than addressing these inequities, the current system of insurance coverage in the United States actually serves to exacerbate them.<sup>64</sup> At the time of this

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60. *Eisenstadt v. Baird*, 405 U.S. 438, 453 (1972).

61. See John A. Robertson, *Procreative Liberty and the Control of Conception, Pregnancy, and Childbirth*, 69 VA. L. REV. 405, 428–29 (1983). Robertson states:

There is a strong argument that married persons do have a right to engage in noncoital, collaborative arrangements to overcome infertility. An infertile couple’s interest in genetic continuity, in gestating and giving birth, and in rearing the offspring is identical to the interest of a fertile couple . . . . An interpretation extending the right to procreate to noncoital and collaborative reproduction will have significant practical effects. It will give fertile or infertile married persons the legal right (subject, of course, to regulations that serve compelling state interests) to make reproduction a collaborative enterprise. This right will include the ability to contract with others for their sperm, ovum, uterus, or child and the ability to forge an agreement for assigning the entitlements and duties that affect the child.

62. *Maier v. Roe*, 432 U.S. 464, 474 (1977).

63. *Id.* at 469, 474.

64. See JESSICA ARONS, *FUTURE CHOICES ASSISTED REPRODUCTIVE*

writing, only fourteen states required some form of coverage of ART.<sup>65</sup> Of these states, moreover, only twelve require coverage of infertility services, while the remaining two only require that insurance companies offer coverage.<sup>66</sup> Further, of the twelve states that mandate coverage, only ten mandate coverage of IVF.<sup>67</sup> California and New York, for example, explicitly allow IVF to be excluded from coverage,<sup>68</sup> and New York further limits coverage to women who are on Medicaid, uninsured, or have purchased individual insurance policies.<sup>69</sup> California and Connecticut laws, along with those of several other states, allow religious employers to exempt coverage of infertility services not consistent with their beliefs.<sup>70</sup> In addition, Hawaii

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TECHNOLOGIES AND THE LAW 8 (2007) (“For most people then, having health insurance coverage of some or all infertility treatments may make the difference between accessing those services or not.”); *see also* Jain & Hornstein, *supra* note 58, at 29 (“Nationally mandated health insurance coverage for infertility services, including IVF, will provide equal access and care to all couples with infertility.”).

65. The fourteen states which cover infertility services include Arkansas, California, Connecticut, Hawaii, Illinois, Maryland, Massachusetts, Montana, New Jersey, New York, Ohio, Rhode Island, Texas, and West Virginia. AM. SOC’Y FOR REPROD. MED., STATE INFERTILITY INSURANCE LAWS (2008), <http://www.asrm.org/Patients/insur.html>; INT’L COUNCIL ON INFERTILITY INFO. DISSEMINATION, STATES MANDATING INFERTILITY INSURANCE COVERAGE (2004), <http://inciid.org/article.php?id=275>. For a good summary of the state laws on infertility, *see* ARONS, *supra* note 64, at 8–11.

66. *See* ARONS, *supra* note 64, at 10.

67. *See* NAT’L CONFERENCE OF STATE LEGISLATURES, STATE LAWS RELATED TO INSURANCE COVERAGE FOR INFERTILITY TREATMENT (Oct. 2008), <http://www.ncsl.org/programs/health/50infert.htm>.

68. *See* CAL. INS. CODE § 10119.6(a) (West 2005) (“On and after January 1, 1990, every insurer issuing, renewing, or amending a policy of disability insurance which covers hospital, medical, or surgical expenses on a group basis shall offer coverage of infertility treatment, except in vitro fertilization . . . .”); N.Y. INS. LAW § 3221(k)(6)(C)(v) (McKinney Supp. 2008) (“Coverage shall not be required to include the diagnosis and treatment of infertility in connection with: (I) in vitro fertilization, gamete intrafallopian tube transfers or zygote intrafallopian tube transfers . . . .”); NAT’L CONFERENCE OF STATE LEGISLATURES, *supra* note 69.

69. *See* N.Y. INS. LAW § 3221; Richard Pérez-Peña, *State Will Require Coverage of Treatment for Infertility*, N.Y. TIMES, May 17, 2002, at B4.

70. *See* CAL. INS. CODE § 10119.6(d) (“Nothing in this section shall be construed to require any employer that is a religious organization to offer coverage for forms of treatment of infertility in a manner inconsistent with the religious organization’s religious and ethical principles.”); CONN. GEN. STAT. ANN. § 38a-509(c)(1) (West 2007) (“Any insurance company, hospital or medical service corporation, or health care center may issue to a religious employer an individual health insurance policy that excludes coverage for methods of diagnosis and treatment of infertility that are contrary to the

provides for a one-time only IVF benefit with conditions, including that the wife's eggs must be fertilized by her husband's sperm and that the couple must have a five-year history of infertility.<sup>71</sup> Coverage is therefore sketchy at best, even in those states that offer it in some form. This despite a 1995 study estimating that covering infertility would only raise annual insurance premiums for all subscribers by about three dollars per month.<sup>72</sup>

### C. ABSENCE OF PROPERTY RIGHTS

Another major problem plaguing the baby business is the absence of property rights, especially with respect to the disposition of frozen embryos created by a married couple that later separates or divorces, or where one or both spouses dies.<sup>73</sup> This section discusses case law and statutes that address property rights with respect to embryos.<sup>74</sup>

Courts have been the refuge of last resort in this area, called upon to answer such questions as whether a woman should be allowed to implant or donate embryos made with her eggs and her ex-husband's sperm against his will. At first glance, contract law seems like an easy solution, allowing a couple to decide what should happen to their embryos in the event of divorce. However, courts have ruled differently concerning contracts for the disposition of embryos, reflecting an absence of agreed-upon standards.

In the 1992 case of *Davis v. Davis*,<sup>75</sup> the first case regarding rights to excess embryos, the Supreme Court of

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religious employer's bona fide religious tenets."); see also ARONS, *supra* note 64, at 9, 42 n.45 (seven states' laws contain an exemption for religious organizations).

71. HAW. REV. STAT. § 431:10A-116.5 (Supp. 2007).

72. Peter J. Neumann, *Should Health Insurance Cover IVF? Issues and Options*, 22 J. HEALTH POL. POL'Y & LAW 1215, 1219 (1997).

73. See, e.g., *A.Z. v. B.Z.*, 725 N.E.2d 1051, 1055 (Mass. 2000) ("While IVF has been available for over two decades and has been the focus of much academic commentary, there is little law on the enforceability of agreements concerning the disposition of frozen preembryos.").

74. Property rights involving embryos is the major issue in the field. There are clearly other issues like the rights of gamete donors and surrogacy donors that will not be addressed in detail here. For example, some states provide that oocyte donors are not legal parents. See, e.g., OKLA. STAT. ANN. tit. 10, § 554 (West 2007). In addition, courts in a number of states have addressed surrogacy contracts. See, e.g., *R.R. v. M.H.*, 689 N.E.2d 790 (Mass. 1998); *In re Baby M*, 537 A.2d 1227 (N.J. 1988).

75. *Davis v. Davis*, 842 S.W.2d 588 (Tenn. 1992).

Tennessee held that Junior Davis's right not to have genetic children outweighed the rights of his ex-wife to donate their embryos.<sup>76</sup> When the couple divorced, Mary Sue Davis initially sought to have the frozen embryos implanted to become pregnant; by the time the case reached the state's high court, however, she was remarried and wanted to donate them.<sup>77</sup> Her ex-husband Junior, however, opposed both uses of the seven frozen embryos left in storage at the Knoxville Fertility Clinic.<sup>78</sup> The couple did not have a contract beforehand, nor did Tennessee have a relevant statute.<sup>79</sup> There was likewise no case law to guide the court.<sup>80</sup> The court first decided that preembryos were not persons, nor were they property; rather, they were entitled to "special respect because of their potential for human life."<sup>81</sup> The court then determined that contracts on such matters are enforceable.<sup>82</sup>

Since *Davis*, however, other courts have come out differently on whether related contracts are enforceable.<sup>83</sup> In *Kass v. Kass*,<sup>84</sup> for example, the New York Court of Appeals held that Maureen and Steven Kass's contract providing for donating embryos for research was controlling, even though Maureen sought to use them to achieve pregnancy after the

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76. *Id.* at 604. The *Davis* court stated that courts should look to the wishes of the man and woman first, then any prior agreement, before engaging in an interest-balancing test to determine the disposition of embryos. *See id.*; *see also* J.B. v. M.B., 783 A.2d 707, 717, 720 (N.J. 2001) (finding that the wife's right not to procreate outweighed the husband's right to use their frozen embryos, and that the seven frozen embryos should be destroyed).

77. *Davis*, 842 S.W.2d at 589–90.

78. *Id.* at 590.

79. *Id.* at 590, 592. The court noted that Louisiana was the only state that had a statute that addressed the disposition of frozen embryos, stating that they could not be intentionally destroyed and that property right disputes should be resolved in the "best interest" of the frozen embryo. *Id.* at 590 n.1.

80. *Id.* at 590 & n.2.

81. *Id.* at 597.

82. *See id.*

83. *Compare* *Kass v. Kass*, 696 N.E.2d 174, 175, 181 (N.Y. 1998), *and* *Roman v. Roman*, 193 S.W.3d 40, 54–55 (Tex. App. 2006) (upholding an agreement between the a couple providing for discarding their unused embryos in the event of a divorce), *with* *A.Z. v. B.Z.*, 725 N.E.2d 1051, 1056 (Mass. 2000) (holding that the consent form only defined "the donors' relationship as a unit with the clinic" and was not a binding agreement between them in the event of a disagreement as to the disposition of the frozen preembryos).

84. *Kass*, 696 N.E.2d at 174.

couple's divorce.<sup>85</sup> Two years later in 2000, however, the Supreme Judicial Court of Massachusetts held a contract regarding embryo disposition unenforceable; the contract provided that in the event of a separation, the wife could implant the leftover embryos.<sup>86</sup> While the court found the contract unenforceable on several grounds, it also stated, crucially, that, even if the contract were a valid one, "we would not enforce an agreement that would compel one donor to become a parent against his or her will."<sup>87</sup> Courts so far are unwilling to enforce contracts that result in a person procreating against his or her will.

Other states, meanwhile, have passed laws that specifically address the disposition of embryos.<sup>88</sup> In 1986, for example, Louisiana passed legislation stating that "[a]n in vitro fertilized human ovum exists as a juridical person," meaning it has the right to sue and be sued, that it is a separate entity from the medical facility it is stored at, and it is not property of the man or woman whose gametes created it.<sup>89</sup> A Florida statute enacted in 1993, by contrast, requires a written

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85. *See id.* at 180 ("Agreements between progenitors, or gamete donors, regarding disposition of their pre-zygotes should generally be presumed valid and binding, and enforced in any dispute between them. Indeed, parties should be encouraged in advance, before embarking on IVF and cryopreservation, to think through possible contingencies and carefully specify their wishes in writing.") (citations omitted); *see also Roman*, 193 S.W.3d at 54–55; *Litowitz v. Litowitz*, 48 P.3d 261, 271 (Wash. 2002) (upholding a contract which provided that cryopreserved embryos be destroyed five years after their creation)..

86. *A.Z.*, 725 N.E.2d at 1054, 1056.

87. *See id.* at 1056–58. The court stated that "forced procreation is not an area amenable to judicial enforcement."

88. Indeed, in one case, the court wrote that it anticipated "that the issue will ultimately be resolved by the Texas Legislature." *Roman*, 193 S.W.3d at 44 & n.6.

89. LA. REV. STAT. ANN. §§ 9:123–126 (2008). Section 9:126 of the statute provides:

An in vitro fertilized human ovum is a biological human being which is not the property of the physician which acts as an agent of fertilization, or the facility which employs him or the donors of the sperm and ovum. If the in vitro fertilization patients express their identity, then their rights as parents as provided under the Louisiana Civil Code will be preserved. If the in vitro fertilization patients fail to express their identity, then the physician shall be deemed to be temporary guardian of the in vitro fertilized human ovum until adoptive implantation can occur. A court in the parish where the in vitro fertilized ovum is located may appoint a curator, upon motion of the in vitro fertilization patients, their heirs, or physicians who caused in vitro fertilization to be performed, to protect the in vitro fertilized human ovum's rights.



agreement providing for the disposition of eggs, sperm, and preembryos in the event of divorce, death, or other unforeseen circumstances.<sup>90</sup>

At the moment, therefore, there is little consensus in the United States about the legal status of the embryo. The reason for this gap is obvious—any national attempt to define the embryo would run headlong into the perilous debate over abortion. Yet in the absence of such a conversation, business is being conducted without any underlying agreement about property rights, and courts are forced to make Solomonian decisions without the benefits of an underlying law.

#### D. IDENTITY

The great benefit of assisted reproduction technology is that it has allowed millions of people to become parents in new ways, combining their own genetic material with that of donors. One of the main problems created as a result, however, is that the children who result from these technologies often have no knowledge, or only partial knowledge, of their genetic origins. And as these children age into adulthood, it appears that they, like legions of adopted children before them, are eager to learn of their genetic origins and angry that this information is denied them. Or as Katrina Clark, born of sperm donation, wrote in the *Washington Post*:

The children born of these transactions are people, too . . . . I'm here to tell you that emotionally, many of us are not keeping up. We didn't ask to be born into this situation, with its limitations and confusion. It's hypocritical of parents and medical professionals to assume that biological roots won't matter to the "products" of the cryobanks' service, when the longing for a biological relationship is what brings customers to the banks in the first place. We offspring are recognizing the right that was stripped from us at birth—the right to know who both our parents are . . . . That was when the emptiness came over me. I realized that I am, in a sense, a freak. I really, truly would never have a dad. I finally understood what it meant to be donor-conceived, and I hated it.<sup>91</sup>

Katrina's situation speaks to more than a personal longing for identity. It raises the key issue of rights: the right to personal information; the right to medical information; and the

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90. FLA. STAT. ANN. § 742.17 (West 2005).

91. Katrina Clark, *Who's Your Daddy?: Mine Was an Anonymous Sperm Donor. That Made Me Mad. So I Decided to Find Him.*, WASH. POST, Dec. 17, 2006, at B1–B5.

right, perhaps, to a father. Under the current system of assisted reproduction, the rights of the prospective parent predominate. Parents contract for the services they desire, and providers essentially treat them as a delicate hybrid of patient and customer. What is lost in this equation is the product—the child—that results. Do these children have any rights that trump those of their parents? Can they demand access to their genetic parents' medical information? Can they track their genetic siblings and ensure, at a minimum, that they do not procreate with them? At the moment, the law offers few answers. Yet as these children grow in number and age, they will demand, as they should, some form of redress.

#### E. HEALTH RISKS

Although the health risks of assisted reproduction are apparently minimal, there has nevertheless been a conspicuous dearth of studies examining the risks to mothers, egg donors, and children.<sup>92</sup> Part of the reason for this gap may simply be time: ART has only been around, after all, for thirty years.<sup>93</sup> Yet one study from 2002 found that children conceived with ICSI and IVF were more than twice as likely as normally-conceived children to have a major birth defect.<sup>94</sup> Another

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92. See generally PRESIDENT'S COUNCIL ON BIOETHICS, REPRODUCTION AND RESPONSIBILITY: THE REGULATION OF NEW BIOTECHNOLOGIES 175–76, 194 (2004), available at [http://www.bioethics.gov/reports/reproductionandresponsibility/\\_pcbe\\_final\\_reproduction\\_and\\_responsibility.pdf](http://www.bioethics.gov/reports/reproductionandresponsibility/_pcbe_final_reproduction_and_responsibility.pdf) (calling for long-term study of the health effects).

93. See *id.* at 38 (noting that the oldest person conceived from assisted reproductive technologies is in her mid-twenties); Van Voorhis, *supra* note 55, at 383 (“Epidemiologic studies to date have been limited in many cases by small samples and by the fact that most women who have undergone IVF have not yet reached the age of peak cancer incidence; nevertheless, these studies have generally been reassuring.”).

94. Michèle Hansen et al., *The Risk of Major Birth Defects after Intracytoplasmic Sperm Injection and in Vitro Fertilization*, 346 NEW ENG. J. MED. 725, 729 (2002) (“The increase in the risk of a major birth defect associated with assisted conception remained significant when only singleton or term singleton infants were considered, as well as after adjustment for maternal age and parity, the sex of the infant, and correlation between siblings.”); see also Allen A. Mitchell, *Infertility Treatment—More Risks and Challenges*, 346 NEW ENG. J. MED. 769, 769 (2002). Mitchell writes:

The use of assisted reproductive technology appears roughly to double the risk of having a term singleton with low birth weight or a child with a major birth defect. However, the majority of couples who require assistance with reproduction will not be affected, since according to these studies, the likelihood of having a term singleton

found they were twice as likely to have a low-birth weight.<sup>95</sup>

Studies have also shown that ovarian stimulation—of both egg donors and IVF patients—can occasionally result in a dangerous form of hyperstimulation that, in very rare cases, can lead to death.<sup>96</sup> Questions also lurk regarding the effect of egg donation on the donor's fertility and on possible links to breast or gynecological cancers.<sup>97</sup> Egg donors may even be at increased risk for infertility as a result of the hormones and procedures.<sup>98</sup>

Moreover, even if ART itself does not heighten the risk of birth defects, ART as it is currently practiced leads to a large increase in multiple pregnancies, which incontrovertibly contributes to dangerous pregnancies and higher-risk births.<sup>99</sup> In traditional pregnancies, multiple births occur about 3 percent of the time.<sup>100</sup> By contrast, ART procedures as recently as 2005 led to a more than 30 percent incidence of twins or higher-order births.<sup>101</sup> The causation is clear. Because women (and perhaps their doctors) are anxious for a given cycle of

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infant of normal birth weight is about 94 percent, and the likelihood of having an infant who is free of major defects is about 91 percent.

95. Laura A. Schieve et al., *Low and Very Low Birth Weight in Infants Conceived with Use of Assisted Reproductive Technology*, 346 NEW ENG. J. MED. 731, 731, 734 (2002).

96. Rabin, *supra* note 7. *But see* Van Voorhis, *supra* note 55, at 383: [t]he ovarian hyperstimulation syndrome is a short-term consequence of gonadotropin stimulation and early pregnancy. This syndrome, which occurs in less than 5% of IVF cycles, consists of ovarian swelling, pelvic pain, and hemodynamic fluid shifts, often accompanied by ascites. The disorder almost always resolves after several weeks, although in rare cases, death due to thromboembolism has been reported.

97. *See* Mary Anne Rossing et al., *Ovarian Tumors in a Cohort of Infertile Women*, 331 NEW ENG. J. MED. 771, 771 (1994); Hempel, *supra* note 40, at 21; Rabin, *supra* note 7; RUTH FARRELL ET AL., GENETICS & PUB. POLICY CTR., IVF, EGG DONATION, AND WOMEN'S HEALTH 4–5 (2006), [http://www.dnapolicy.org/resources/IVF\\_Egg\\_Donation\\_Womens\\_Health\\_final.pdf](http://www.dnapolicy.org/resources/IVF_Egg_Donation_Womens_Health_final.pdf); *see also* Debora Spar, *The Egg Trade—Making Sense of the Market for Human Oocytes*, 356 NEW ENG. J. MED. 1289, 1290 (2007) (calling for long-term studies of the effect of ovarian stimulation on egg donors).

98. *See* ASRM Guidelines for Oocyte Donor Compensation, *supra* note 14.

99. *See* Ctrs. for Disease Control and Prevention, *Contribution of Assisted Reproductive Technology and Ovulation-Inducing Drugs to Triplet and Higher-Order Multiple Birth—United States, 1980–1997*, 49 MORBIDITY & MORTALITY WKLY. REP. 535, 535–38 (2000), *available at* <http://www.cdc.gov/mmwr/PDF/wk/mm4924.pdf>.

100. 2005 ART Report, *supra* note 16, at 22.

101. *Id.*

treatment to lead to a live birth, multiple embryos are often implanted at the same time.<sup>102</sup> Indeed, in 2005, more than 47 percent of IVF cycles performed in the United States involved the implantation of three or more embryos.<sup>103</sup>

In many of these cases, some or all of the embryos failed to develop either into fetuses or live children. Yet, ironically, when multiple embryo transfer is successful, in the sense that all the embryos survive, it also poses stark health risks for these embryos, including premature birth, low-birth weight, and an increased likelihood of birth defects or even death.<sup>104</sup> Well aware of these risks, the American Society for Reproductive Medicine (ASRM) recommends that its members not transfer more than two embryos to any woman under the age of thirty-five.<sup>105</sup> The law in this area, however, remains mute, and there is no legal penalty for doctors who choose to ignore the ASRM's recommendations.

#### F. POTENTIAL COSTS TO SOCIETY

Currently, convention holds that the costs of assisted reproduction are entirely private: prospective parents pay out of pocket for what they want and can afford. In many instances, though, the costs of their decisions are also being borne by the rest of us, through such channels as higher labor and delivery costs (for complicated pregnancies), higher neonatal costs (for babies born prematurely as a result of multiple pregnancies), and possibly even higher educational costs as children who were born prematurely or at below-normal weights enter the public school system.<sup>106</sup> The average cost of treating a premature infant, for example, is \$58,000—a sum that is now simply absorbed by hospitals or insurance companies and rolled into the escalating costs of health care.<sup>107</sup>

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102. *See id.* at 45.

103. *Id.* at 44.

104. *Id.* at 22–23 (premature birth); *id.* at 24 (low-birth weight). *But see id.* at 70 (indicating that the percentage of multiple births conceived as a result of assisted reproduction has decreased over the past ten years).

105. Practice Comm. of the Soc'y for Assisted Reprod. Tech. & the Practice Comm. of the Am. Soc'y for Reprod. Med., *Guidelines on Number of Embryos Transferred*, 86 FERTILITY & STERILITY S51, S51 (2006).

106. *See* Jane E. Allen, *Puzzling Rise in Early Births*, L.A. TIMES, Jan. 20, 2003, at F1.

107. *See id.*; *see also* Antoinette Martin, *Multiple Births: A Wake-up Call*, N.Y. TIMES, Feb. 8, 1996, at C1 (noting that thirty-five percent of the cost is borne by Medicare and Medicaid); *cf.* Lars Noah, *Assisted Reproductive*

This cost is well above the \$4,300 typically required to cover the costs of a newborn.<sup>108</sup> Premature births are also on the rise: in 2005, 12.7 percent of births were preterm, an increase of 9 percent over 2000 and 20 percent since 1990.<sup>109</sup> Over the longer term, meanwhile, if it turns out that the use of hormones in reproductive technologies leads to a heightened risk of certain cancers or a higher incidence of next-generation infertility, these costs, too, will become part of the nation's ongoing health care burden.

Other potential costs of ART are social rather than financial. Both egg donors and surrogates, for instance, are frequently women of limited means who agree to "help couples create a family" in exchange for relatively large sums of money.<sup>110</sup> Do these commercial relationships constitute exploitation? Though it is hard to say for sure, feminist scholars certainly think so.<sup>111</sup> The basic facts of both

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*Technologies and the Pitfalls of Unregulated Biomedical Innovation*, 55 FLA. L. REV. 603, 626 (2003) ("Fertility clinics do not absorb the additional expenses incurred with multifetal pregnancies, which can be substantial, while they would lose business if their pregnancy success rates declined significantly.").

108. Tim Bonfield, *March of Dimes Targeting Early Births*, CINCINNATI ENQUIRER, Feb. 3, 2003, available at [http://www.enquirer.com/editions/2003/02/03/loc\\_marchofdimes03.html](http://www.enquirer.com/editions/2003/02/03/loc_marchofdimes03.html).

109. Joyce A. Martin et al., *Births: Final Data for 2005*, 56 NAT'L VITAL STAT. REP. 1, 3, 20 (2007), available at [http://www.cdc.gov/nchs/data/nvsr/nvsr56/nvsr56\\_06.pdf](http://www.cdc.gov/nchs/data/nvsr/nvsr56/nvsr56_06.pdf).

110. See ASRM Guidelines for Oocyte Donor Compensation, *supra* note 14 ("Both monetary compensation and oocyte sharing create the possibility of undue inducement and exploitation in the oocyte donation process. Women may agree to provide oocytes in response to financial need."); Kritivas Mukherjee, *Rent-a-Womb in India Fuels Surrogate Motherhood Debate*, REUTERS, Feb. 5, 2007, <http://www.reuters.com/article/inDepthNews/idUSDEL29873520070205> (calling surrogacy an "exploitation of the poor by the rich").

111. See GENA COREA, *THE MOTHER MACHINE 2* (1985) ("Just as the patriarchal state now finds it acceptable to market parts of a woman's body (breast, vagina, buttocks) for sexual purposes in prostitution and the larger sex industry, so it will soon find it reasonable to market other parts of a woman (womb, ovaries, egg) for reproductive purposes."); JANICE G. RAYMOND, *WOMEN AS WOMBS* 81 (1993). She writes:

Most so-called surrogates arrive in court from a background of economic disadvantage or dead-endedness . . . . A legal recognition of male dominance, thus a legal recognition of the ways in which women have been channeled into surrogacy and motherhood at any cost to themselves, is a necessary legal precondition to women's equality. Rights are related to actual social relations, and it is male-dominant relations that are definitive in the legal area—the man's

relationships are clear. Egg donation is neither easy nor pleasant: the procedure involves using hormones to induce ovulation and extracting eggs for use in IVF. It can cause pain, bloating, diarrhea, and nausea. Yet egg agencies sometimes receive hundreds of applications each month,<sup>112</sup> and feature hundreds of women who receive, on average, about \$5,000 for their labors.<sup>113</sup> Most of these donors fit a common profile, coming, as one recent news article reported, from:

“[C]ollege towns, where the perfect specimens—young, SAT-tested women deep in debt—can be recruited through school newspaper ads, websites like craigslist, and photocopied fliers stapled to trees. The ads probably won’t mention the medical and psychological screenings. Or the injections of hormones. Or the suctioning. They will mention families in need. And they will promise cash.”<sup>114</sup>

Meanwhile, the price of a surrogate is so high in the United States (around \$50,000) that some couples are turning to women in less developed countries like India, where wombs can be rented for as little as \$10,000–\$12,000.<sup>115</sup> “For the surrogates—usually lower middleclass housewives—money is the primary motivator.”<sup>116</sup> One such woman, Jyoti Dave, rented her womb to provide food for her family after her husband lost his limbs in an accident.<sup>117</sup>

Reasonable people can likely disagree about the societal costs of such arrangements. However, practices like egg

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relation to his sperm, his money, his wife, and the women who may serve as surrogate wives, that is, as surrogate breeders.

Julie Murphy, *Egg Farming and Women’s Future*, in *TEST-TUBE WOMEN: WHAT FUTURE FOR MOTHERHOOD?* 68, 73 (Rita Arditti et al. eds., 1989) (“Through egg farming, women can be divided into two groups: egg donors and embryo recipients . . . . Two reproductive classes of women can degrade women as ‘parts’ of ‘reproductive bodies’ and diminish our chances of obtaining reproductive rights for all women.”).

112. Rene Almeling, *Selling Genes, Selling Gender: Egg Agencies, Sperm Banks, and the Medical Market in Genetic Material*, 72 *AM. SOC. REV.* 319, 326, 328 (2007) (noting that a particular egg agency received more than a hundred applications per day, and both agencies studied reject more than eighty percent of the applications); The Egg Donor Program, Welcome to the Egg Donor Program, <http://www.eggdonation.com/recipient-parents/RecipientParents.php> (last visited Oct. 4, 2008) (indicating that the agency receives more than 400 applications per month).

113. See, e.g., Egg Donation, Inc., <http://www.eggdonor.com> (last visited Oct. 4, 2008) (stating that their egg donor database contains more than 600 of the “most exceptional and diverse” donors).

114. Hempel, *supra* note 40, at 19–20.

115. Mukherjee, *supra* note 110.

116. *Id.*

117. *Id.*

donation and surrogacy should, at a minimum, not be seen simply as the commercial or personal decisions of private individuals. Instead, insofar as they touch upon social concerns—concerns about exploitation, or commodification, or the sale of women’s bodies—they need to be embedded in a broader discussion about societal costs and benefits.

### III. SUGGESTIONS FOR POLICY AND LEGAL CHANGE

Frequently, participants in the baby business will argue that there is nothing that can, or should, be done to address these problems, either because the problems (like the absence of property rights or inequity) are too intractable, or because any legislative solutions could well bring about an even worse state of affairs.<sup>118</sup> Some people worry about the politicization of medical decisions or about the consequences of any open debate on the legal status of the embryo.<sup>119</sup> Others believe that private regulation has succeeded thus far.<sup>120</sup>

From the outside, meanwhile, some critics argue that the entire area of assisted reproduction is morally wrong and that, in the words of the Protestant ethicist Paul Ramsey, “[m]en ought not to play God before they learn to be men, and after they have learned to be men they will not play God.”<sup>121</sup>

We respectfully disagree with these objections because there are policies that could be put in place to govern the baby business—policies that would not eliminate the trade or even unduly constrain it, but would make it work better for all of the parties involved: parents, doctors, donors, and most importantly, the children who are conceived through assisted reproduction and the society that receives them. This section presents some specific recommendations along these lines.

#### A. PROVIDE PATIENTS, EGG DONORS, AND SURROGATES WITH

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118. See generally Daar, *supra* note 22.

119. See George J. Annas & Sherman Elias, *Politics, Morals and Embryos: Can Bioethics in the U.S. Rise Above Politics?* 431 NATURE 19, 19–20 (2004); see also JANE MAIENSCHIN, WHOSE VIEW OF LIFE? 5 (2003) (“Our political acceptance of this technology shows that our society has a range of reasonable views of when a life actually begins. The problem is how to accommodate all these different and competing views.”).

120. Rick Weiss, *Fertility Innovation or Exploitation?*, WASH. POST, Feb. 9, 1998, at A1.

121. PAUL RAMSEY, FABRICATED MAN: THE ETHICS OF GENETIC CONTROL 138 (1970).

## ACCESSIBLE AND RELIABLE INFORMATION

This first recommendation is straightforward and should, in our opinion, be non-controversial. It is simply to demand that all providers in the baby business supply their patients with basic information regarding the risks of any procedures they are planning to undergo; the *relevant* success rates (i.e., not the average rates of IVF success over all ages if the patient is forty-two, but the rates of success for forty-two-year-olds);<sup>122</sup> and the estimated costs. Ideally, patients also need to be informed about all their available options.<sup>123</sup> The 1992 Fertility Clinic Success Rate and Certification Act (FCSRCA) went a long way toward reaching this policy objective, but we need to go further still.<sup>124</sup> Under FCSRCA, clinics report their data by type of procedure (IVF, GIFT, ZIFT), by cause of infertility, by age (younger than 35, 35–37, 38–40, 41–42), and by type of cycle (using fresh or frozen non-donor or fresh or frozen donor eggs).<sup>125</sup> What FCSRCA lacks, however, is any mechanism for prodding clinics to share their information directly with patients and, more importantly, any means of penalizing those clinics that do not report.

Massachusetts provides a good example of how a state can use legislation to address such concerns. Since the 2005 passage of “An Act Enhancing Regenerative Medicine in the Commonwealth,” the Massachusetts Department of Public Health must provide physicians and other health care providers with documents to supply their infertility patients who undergo *in vitro*. These include:

an informational pamphlet, describing the procedure by which an egg is extracted from the patient, including all short and long-term potential health impacts of the procedure on the patient, any drugs or devices to be used, including whether they have received approval from the United States Food and Drug Administration, the risks involved, any discomfort and side effects that may be experienced, any alternatives which the patient may have and their attendant risks and benefits, medical treatment available to the patient should

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122. See 2005 ART REPORT, *supra* note 16, at 26–27 (indicating declining success rates as age increases).

123. See Daar, *supra* note 22, at 630 (“Patient understanding about the techniques of treatment are [sic] at odds with their expectations of such treatment, one possible consequence may be inappropriate or over utilization of fertility therapy.”).

124. See, e.g., Reporting of Pregnancy Success Rates From Assisted Reproductive Technology Programs, 65 Fed. Reg. 53,310, 53,312 (Sept. 1, 2000).

125. 2005 ART REPORT, *supra* note 16, at 78.



complications arise, and that the particular treatment may involve currently unforeseeable risks to the patient, embryo or fetus. A physician or other health care provider treating a woman with a procedure by which an egg is intended to be extracted shall provide the patient with this pamphlet or a legible copy thereof, and provide any other treatment information which may be specific to the patient's treatment . . . .<sup>126</sup>

The Centers for Disease Control and Prevention seems to agree with the Massachusetts approach, noting recently that consumers in search of fertility treatment would like more information than they currently receive.<sup>127</sup> Women in particular need to be more aware of the age-specific success rates of treatment, since age remains the single most important factor in determining a woman's likelihood of achieving a successful pregnancy.<sup>128</sup> A forty-year-old woman using her own eggs, for example, has a 23 percent chance of becoming pregnant in a given cycle of IVF, and a 16 percent chance of giving birth to a live child.<sup>129</sup> A forty-five-year old woman, by contrast, has only a 2.5 percent chance of pregnancy and less than a 1 percent chance of a live birth.<sup>130</sup> Women of all ages, moreover, need to understand how success rates vary by clinic and why an apparently low success rate could actually indicate that a particular clinic is agreeing to work with higher-risk patients, rather than boosting its statistics by only accepting those patients who are most likely to conceive.<sup>131</sup>

It is therefore paramount that clinics provide patients with all of the relevant information, and that government entities play a small but crucial role in prompting clinics to comply.<sup>132</sup>

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126. MASS. ANN. LAWS ch. 111L, § 4(a)(1) (LexisNexis 2005). The statute also requires informed consent. § 4(a)(2).

127. Reporting of Pregnancy Success Rates from Assisted Reproductive Technology Programs, 65 Fed. Reg. at 53,312 (2000). It notes:

[i]ndeed, many providers and consumers have asked us to collect and report even more information than is currently included in the reporting system. Many providers have expressed concern that without consideration for many patient treatment factors the report will misrepresent clinic success rates. Of course, consumers are also very interested in a thorough and complete analysis, which will help in their goal of making an informed decision about ART.

128. 2005 ART REPORT, *supra* note 16, at 26–27, 30.

129. *Id.* at 27.

130. *Id.*

131. See Gina Kolata, *Fertility, Inc.: Clinics Race to Lure Clients*, N.Y. TIMES, Jan. 1, 2002, at F1.

132. See Daar, *supra* note 22, at 629 (stating that if a “patient[s] understanding about the techniques of treatment are [sic] at odds with their

## B. PERFORM STUDIES OF THE LONG-TERM RISK OF ART

In addition to providing patients with the information that is currently available about IVF and other treatments, we also need to encourage the generation of further information about the long-term risks of ART—to mothers and egg donors and children—and then to reduce these risks as much as possible.<sup>133</sup> For instance, it appears that male children born from ICSI, a very popular procedure in which a single sperm is injected directly into the egg, have higher than average levels of infertility and certain types of cancer.<sup>134</sup> Some studies have also suggested that there are possibly long-term effects from hormone exposure including breast, ovarian, and even uterine cancer.<sup>135</sup> As more and more women are exposed to these hormones, and as the children born from IVF-induced pregnancies reach adulthood and their own child-bearing years, we need to ensure that any possible long-term risks of IVF treatment are well tracked and studied.

In the meantime, we already know that the greatest risk to a pregnant mother or *in utero* child is a multiple pregnancy.<sup>136</sup> Fifty percent of twins are born prematurely, as are 90 percent of triplets and nearly all higher-order births.<sup>137</sup> Twins are six times more likely to suffer from cerebral palsy, and triplets are twenty times more likely.<sup>138</sup> One out of every fifteen twins dies before their first birthday, as does one of every five triplets.<sup>139</sup>

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expectations of such treatment, one possible consequence may be inappropriate or over utilization of fertility therapy”).

133. See *supra* notes 92–105 and accompanying text; see also PRESIDENT’S COUNCIL ON BIOETHICS, *supra* note 92, at 194 (calling for more long-term study of ART); cf. Mitchell, *supra* note 94 (stating that two studies that were published in 2002 “will help infertile couples to evaluate the risks they and their offspring might face if they choose to use assisted reproductive technology”).

134. Jennifer J. Kurinuk, *Safety Issues in Assisted Reproduction*, 18 HUM. REPROD. 925, 927 (2003), available at <http://humrep.oxfordjournals.org/cgi/reprint/18/5/925?maxtoshow=&HITS=10&hits=10&RESULTFORMAT=1&title=ICSI&andorexacttitle=and&andorexacttitleabs=and&fulltext=cancer&andorexactfulltext=and&searchid=1&FIRSTINDEX=0&sortspec=relevance&resourcetype=HWCIT>.

135. See Helen Pearson, *Health Effects of Egg Donation May Take Decades to Emerge*, 442 NATURE 607, 607–08 (2006).

136. See *supra* notes 99–105 and accompanying text.

137. AM. SOC’Y FOR REPROD. MED., PATIENT FACT SHEET: COMPLICATIONS OF MULTIPLE GESTATION (2008), [http://www.asrm.org/Patients/FactSheets/complications\\_multiplebirths.pdf](http://www.asrm.org/Patients/FactSheets/complications_multiplebirths.pdf).

138. LIZA MUNDY, EVERYTHING CONCEIVABLE 217 (2007).

139. See *id.*

As a result of these risks, emerging regulation in Europe prohibits doctors from transferring more than two embryos at a time and strongly recommends single embryo transfer (“SET”). In the United States, by contrast, there are only private guidelines issued by the ASRM,<sup>140</sup> and there is no mechanism to ensure long-term studies of the effects of fertility treatments on both the women who receive them and the children born as a result.

### C. ESTABLISH A FORMAL SYSTEM FOR RECORDING DONOR IDENTITIES

Our third recommendation is to establish a formal system for recording the identities of egg, sperm, and embryo donors. Currently we are making precisely the same mistake with children born of ART that we did with earlier generations of adopted children.<sup>141</sup> Specifically, we are presuming that these children will not want to know their genetic origins. Yet much of the evidence—both from the world of adoption and from the first generation of children (now adults) born of donated sperm—suggests precisely the opposite.<sup>142</sup> Individuals want to know from whom they came. They may not want to maintain any kind of emotional relationship with their birth mother, with their sperm donor, or with the woman who provided the egg from which they sprang, but they want to know, and we as a society owe it to them to provide that information.

Increasingly, sperm banks are starting to move toward tracking donor contact information.<sup>143</sup> In 1983, the Sperm Bank of California in Berkeley became the first to institute “donor identification release,” which allows offspring, upon turning eighteen, to contact the sperm bank to receive donor information.<sup>144</sup> Other sperm banks have subsequently followed suit, and some have moved even more aggressively to enable offspring to contact their donors.<sup>145</sup> Furthermore, after a fifteen-year-old boy conceived from sperm donation tracked

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140. Practice Comm. of the Soc’y for Assisted Reprod. Tech. & the Practice Comm. of the Am. Soc’y for Reprod. Med., *supra* note 105.

141. *See supra* note 91 and accompanying text.

142. *See, e.g.*, Peggy Orenstein, *Looking for a Donor to Call Dad*, N.Y. TIMES, June 18, 1995, § 6 (Magazine), at 28.

143. *See Villarosa, supra* note 25.

144. *See id.*

145. *See id.*

down his father after paying FamilyTreeDNA.com \$289 for genetic matching services, it is not clear how long donor anonymity can be guaranteed anyway.<sup>146</sup> Recognizing these problems, the United Kingdom has recently passed legislation enabling offspring who are eighteen years or older to contact gamete donors,<sup>147</sup> and Australia's National Health and Medical Research Council has adopted ethical guidelines mandating open donation.<sup>148</sup> In the United States, similar requirements may well cause the price of sperm to rise, since fewer men are interested in being "known donors."<sup>149</sup> Given the desperation of many donor children to know their genetic origins, however, it seems a price well worth paying.<sup>150</sup>

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146. See Alison Motluk, *Tracing Dad Online; One Teenager's Detective Work has Shown that Promises of Anonymity for Sperm Donors may now be Worthless*, NEW SCIENTIST, Nov. 5, 2005, at 6.

147. See Human Fertilisation and Embryology Authority (Disclosure of Donor Information) Regulations, 2004, S.I. 1511, Reg. 2, ¶ 3 (U.K.) (requiring that the Authority provide adult donor-conceived applicants with information as to the donor identity provided by donors to clinics after March 31, 2005). See generally Olga Craig, *Where Have All the Donors Gone?*, SUNDAY TELEGRAPH (London), Apr. 30, 2006, at 21 (describing a severe shortage of sperm donors in the U.K. as a result of the new legislation eliminating donors' anonymity); Mark Henderson, *Sperm Donor Figures Rising Despite Loss of Anonymity*, TIMES (London), May 4, 2007, at 32, (describing an increase in the number of sperm donors in the U.K. since the passage of the new legislation); *Making Babies: Will a New UK Law Stop People From Donating Eggs and Sperm?*, NEW SCIENTIST, Mar. 12, 2005, at 3 [hereinafter *Making Babies*] (discussing the potential chilling effect of the new legislation on gamete donation).

148. AUSTRAL. HEALTH ETHICS COMM., NAT'L HEALTH & MED. RES COUNCIL, ETHICAL GUIDELINES ON THE USE OF ASSISTED REPRODUCTIVE TECHNOLOGY IN CLINICAL PRACTICE AND RESEARCH 16 (2004), [http://www.nhmrc.gov.au/publications/synopses/\\_files/e56.pdf](http://www.nhmrc.gov.au/publications/synopses/_files/e56.pdf) ("Persons conceived using ART procedures are entitled to know their genetic parents. Clinics must not use donated gametes in reproduction procedures unless the donor has consented to the release of identifying information about himself or herself to the persons conceived using his or her gametes."). See generally June Carbone & Paige Gottheim, *Markets, Subsidies, Regulation, and Trust: Building Ethical Understandings into the Market for Fertility Services*, 9 J. GENDER RACE & JUST. 509, 538-42 (2006) (comparing Australian and U.S. fertility services laws and discussing a shortage in sperm donors in Australia since the enactment of open donation guidelines); Carly Crawford, *Desperate Couples Buy Sperm Online*, N. TERRITORY NEWS (Australia), July 16, 2007, at 7 (describing a trend of Australian couples buying sperm from anonymous online donors since the enactment of open donation guidelines); Barbie Dutter, *Australian Sperm Donors Get Right to Contact Offspring*, SUNDAY TELEGRAPH (London), July 2, 2006, at 31.

149. See Carbone & Gottheim, *supra* note 148, at 517; cf. Craig, *supra* note 147; *Making Babies*, *supra* note 147.

150. Cf. Amy Harmon, *supra* note 11.

## D. TREAT ART AS A MEDICAL SERVICE COVERED BY INSURANCE

Our final recommendation is the most complicated, since it involves engaging with the delicate and uncomfortable balance between the costs and benefits of assisted reproduction. If we in the United States truly want to address the inequities described earlier, we could move closer to the European model, treating infertility as a medical condition and incorporating it into our health care system. Such an inclusion would, admittedly, be expensive. It would also, perhaps more critically, force us to define what kinds of fertility treatments make sense, just as we already define which cancer treatments or hip replacement surgeries make sense in any given case.<sup>151</sup> In practice, bringing insurance companies or other impersonal providers into the equation would force a distinction between cases of infertility, for example, between the twenty-seven-year-old wife with blocked fallopian tubes, who would most likely qualify for several cycles of IVF treatment, and the single fifty-three-year old recovering cocaine addict and ex-felon, who would not.<sup>152</sup> Moreover, insurance coverage could provide teeth to certain standards, mandating that coverage be provided only for clinics that report according to federal law or adhere strictly to professional guidelines.<sup>153</sup> Coverage could also be structured to disallow or to provide disincentives for risky procedures such as multiple embryo transfer.<sup>154</sup>

Most critically, bringing the admittedly harsh calculus of

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151. See *supra* notes 64–72 and accompanying text.

152. See *supra* notes 66–71 and accompanying text; see also Henne, *supra* note 23, at 104 (“In countries where ART services are included in national health care plans, the economic implications of the increased use of ART services make it imperative to determine which couples are likely to benefit from these services to judiciously allocate resources.”).

153. See CONN. GEN. STAT. ANN. § 38a–509(b)(6) (West 2007) (permitting insurance companies to require “infertility treatment or procedures be performed at facilities that conform to the standards and guidelines developed by the American Society of Reproductive Medicine or the Society of Reproductive Endocrinology and Infertility.”); Haw. Rev. Stat. § 431:10A-116.5(a)(6) (Supp. 2007) (mandating coverage only for IVF procedures “performed at medical facilities that conform to the American College of Obstetric and Gynecology guidelines for in vitro fertilization clinics or to the American Society for Reproductive Medicine minimal standards for programs of in vitro fertilization.”).

154. See Meredith A. Reynolds et al., *Does Insurance Coverage Decrease the Risk for Multiple Births Associated with Assisted Reproductive Technology?*, 80 FERTILITY & STERILITY 16, 17–21 (2003).

costs and benefits into the baby trade would allow us to launch a broader discussion about the societal impact of this trade. It would encourage us to debate where and under what circumstances we, as a society, want to subsidize a person's ability to procreate and where and under what (presumably very small) circumstances we do not. It would also provide for us a means of bringing the interests of the child into a process that is now oddly parent-focused and to consider the public costs of a uniquely private endeavor.

#### IV. CONCLUSION

Once we recognize that the baby business is, indeed, a business, it becomes easier to see where important policy choices are necessary and where the intimacy of private decisions must nevertheless leave room for the public policies that address the societal implications of those decisions. In particular, assisted reproduction raises concerns related to the safety of women and children; to the identity of conceived children; to the equity with which various individuals have access to treatment, and thus to the potential to parent. None of these concerns are, in actuality, particularly difficult to address through policy channels. Safety risks, for example, can be mitigated by providing complete and mandatory information to all egg donors and IVF patients and by requiring better record keeping and follow-up studies of both women and children affected by assisted reproduction. Identity issues could be easily (although perhaps somewhat more painfully) addressed by establishing donor registries and by allowing the adult children of donor conception to access information on their genetic parents. Finally, even the intractable-sounding issue of equity could be addressed by providing insurance coverage for some well-defined set of fertility treatments and by incorporating the option of adoption into the equation as well.

Like its more natural counterpart, assisted reproduction will always remain a private realm, marked by massively personal decisions and intimate, sometimes tragic results. Yet the private nature of procreation does not rob it of its social implications or, in the case of assisted reproduction, of its decidedly commercial nature. Accordingly, public policy in the United States needs to approach this new market with open eyes, recognizing it for what it is, and implementing regulation that allows it to evolve along the safest, kindest, and most beneficial path.