
Response

Exploring the Connections Between Adoption and IVF: Twibling Analyses

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For many years, conventional wisdom has embraced with little examination what I. Glenn Cohen and Daniel L. Chen dub “the substitution theory”—the claim that facilitating treatment for infertility, including subsidizing in vitro fertilization (IVF), decreases adoptions.¹ According to this arm-chair principle,² making IVF more affordable will attract to such medical interventions infertile adults who, in the absence of subsidies, would adopt children instead. In order to enhance the prospect that children awaiting placement will find adoptive homes, the argument proceeds, we should reject the call for insurance mandates to cover IVF.

In *Trading-Off Reproductive Technology and Adoption: Does Subsidizing IVF Decrease Adoption Rates and Should It Matter?* (the “Article”), Cohen and Chen venture well beyond the arm chair, closely interrogating the substitution theory both normatively and empirically. In the cheery conclusions that Cohen and Chen present, there is a strong normative case in favor of IVF insurance mandates and, as an empirical matter, a robust adoption rate can happily coexist along with sub-

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1. I. Glenn Cohen & Daniel L. Chen, *Trading-Off Reproductive Technology and Adoption: Does Subsidizing IVF Decrease Adoption Rates and Should It Matter?*, 95 MINN. L. REV. 485, 487 (2010).

2. *See id.* at 527, 536 (referencing arm-chair predictions and perspectives).

sidized IVF—given surprising evidence that the latter might well give a boost to the former.³

After a brief summary of their Article and its strengths, this Response to Cohen and Chen returns to the arm chair, where the substitution theory originated. To be more precise, we write from two different arm chairs, one occupied by a law professor whose work focuses on families, gender, and reproduction, and the other occupied by an economist whose work focuses on the economics of the family. Borrowing the name of the IVF-based familial arrangement most recently to attract popular attention, we call our analyses “twibling” because each has developed in a different disciplinary environment although both stem from a single source, Cohen and Chen’s Article, and we join them here, despite their contrasting styles and distinct personalities.⁴ From our respective vantage points, we explore some of the assumptions, value judgments, and contradictions that the authors overlook, emphasizing omissions we think deserve deeper examination.

Cohen and Chen first press the normative case for IVF subsidies; that is, insurance laws that require coverage of IVF. In this part, the authors make valuable contributions to the discourse, strengthening the theoretical scaffolding supporting increased access to IVF. They invoke authorities establishing that infertility constitutes a disability and that medical treatment for infertility promotes health,⁵ they argue that infertility should not be demoted to a “second-class” health need,⁶ and they grapple with the moral-theory challenges posed by weighing benefits to would-be IVF consumers against the hypothe-

3. *Id.* at 533, 553–54 (summarizing findings).

4. Melanie Thernstrom, *Meet the Twiblings*, N.Y. TIMES, Jan. 2, 2011, § 6 (Magazine), at 32–35, available at <http://www.nytimes.com/2011/01/02/magazine/02babymaking-t.html> (describing the author’s creation of two embryos from her husband’s sperm and one donor’s ova, with each embryo gestated simultaneously by a different “surrogate,” resulting in two children born within five days of the other and reared together by the author and her husband). Twiblings are not twins, but they are more than ordinary siblings, given their birth dates. After the *New York Times* coverage, the story also was broadcast on the Today Show and National Public Radio, among other media. See, e.g., *Talk of the Nation: Two Babies from Two Surrogates* (NPR broadcast Jan. 5, 2011), transcript available at 2011 WLNR 260133; *Today Show: Profile: Today’s Family* (NBC television broadcast Jan. 4, 2011), transcript available at 2011 WLNR 163198.

5. Cohen & Chen, *supra* note 1, at 501–02.

6. *Id.* at 515–17.

sized detriments to children awaiting adoption.⁷ They do assume—in our view, rather too readily—that establishing that a procedure promotes health suffices to make the case for public subsidies or mandates, without considering cost as well as benefit.

Turning next to the available empirical evidence, they investigate “the effect of state-level insurance mandates covering IVF on adoption rates.”⁸ Even in states with the most generous coverage, “complete mandates,”⁹ the substitution theory finds no support. Indeed, according to their initial findings, the data yield unexpected conclusions: complete mandates have a positive, statistically significant effect on non relative adoptions, adoptions from foster care, and the total measure of public and private adoptions from the pertinent data set; such mandates have a negative effect only on relative adoptions.¹⁰ As one way to make sense of these counter intuitive findings, Cohen and Chen propose the following possible story: perhaps mandates encourage the infertile to try IVF, which does not have high success rates but might reinforce the desire to have children; when medical intervention fails, these disappointed IVF patients then turn to adoption.¹¹

Cohen and Chen’s study has many strengths. We find it both provocative and rich with detail. We admire their effort to take seriously the substitution theory and subject it to close scrutiny. Certainly, those who study, teach, and research adoption and assisted reproduction know much more now than they did before Cohen and Chen undertook this important project.

Part I considers what an analysis based in family law can add to Cohen and Chen’s work. Part II applies economic analysis to the questions that the authors seek to answer. While applauding all that Cohen and Chen bring to the debate about the substitution theory, we conclude that arm-chair theorizing still has a valuable part to play.

7. *Id.* at 520–21.

8. *Id.* at 551.

9. *Id.* at 538 (defining the phrase). Cohen and Chen identify Massachusetts, Rhode Island, Illinois, and New Jersey as complete-mandate states. *Id.*

10. *Id.* at 553.

11. *Id.* at 564, 575; *see also id.* at 572 (elaborating upon another hypothesis, focusing on adoptions from foster care); *id.* at 576 (briefly offering alternative hypotheses resembling those explored *infra* in Part III).

I. A VIEW FROM FAMILY LAW

Cohen and Chen's investigation fails to confront a number of assumptions and first principles that would loom large for those who theorize about families and family law. These gaps concern the social meaning of both adoption and assisted reproduction as methods of creating legally recognized parent-child relationships, as well as the policy questions posed by these practices.¹² Notably, while shoring up the "theoretical foundation" for increasing access to IVF,¹³ Cohen and Chen leave largely unexamined the implications of their work for how IVF shapes our understanding of adoption, how adoption shapes our understanding of IVF, and the role of law in each of these constructions. They also neglect important questions about the place of genetics, reproductive autonomy, and gender equality in their approach.

A. ASSUMPTIONS ABOUT ADOPTION

One question that Cohen and Chen seek to answer, according to the title of their piece, is whether the substitution theory, if valid, "should . . . matter."¹⁴ For their challenge to this theory to have maximum traction, adoption must be a positive institution with benefits for individual children, society, or both. Otherwise, no one would care that IVF subsidies might decrease adoptions—the substitution theory would not matter. In pursuing this issue, however, Cohen and Chen treat domestic adoption and intercountry adoption quite differently, without any explanation.

Regarding intercountry adoption, Cohen and Chen concede a number of difficulties, including "exploitation or cultural theft,"¹⁵ that might make a decrease in such adoptions desirable. By contrast, they assume that domestic adoption is essentially beneficial and that a decrease should be avoided, never acknowledging the significant criticisms of the child welfare system and the practice of adoption within the United States. If domestic adoption turns out to be as problematic as they say intercountry adoption might well be, then at best they have made the case for IVF subsidies more onerous than it needs to be. At worst, they have gone to battle with a straw man.

12. See generally Susan Frelich Appleton, *Adoption in the Age of Reproductive Technology*, 2004 U. CHI. LEGAL F. 393.

13. Cohen & Chen, *supra* note 1, at 500.

14. *Id.* at 485.

15. *Id.* at 527.

Both historically and in the present day, the portrayal of domestic adoption as a humanitarian and altruistic practice has competed with darker accounts. Retrospective analyses of the “child rescue” philosophy of the era of the orphan trains and the wholesale break up of Native American families raise questions about social engineering and bias that, for some, still ring true today.¹⁶ Thus, for example, Dorothy Roberts contends that contemporary state intervention that makes many children available for adoption misunderstands and disrespects families of origin who do not conform to white, middle-class norms.¹⁷ Although the relationship between the child welfare system and adoption remains contested turf,¹⁸ Cohen and Chen do not acknowledge the debate.

Along similar lines, we can find in the case law and literature on domestic adoption reasons to question the voluntariness of birth parents’ consent to adoption, especially when the parent is a young, sexually active female¹⁹ or an unmarried father.²⁰ Adoption emerges from these cases as what historian Rickie Solinger would call evidence of the “choicelessness” of marginalized segments of our population²¹ and as a practice re-

16. See MARILYN IRVIN HOLT, *THE ORPHAN TRAINS: PLACING OUT IN AMERICA 183–87* (1992); Libby S. Adler, *The Meanings of Permanence: A Critical Analysis of the Adoption and Safe Families Act of 1997*, 38 HARV. J. ON LEGIS. 1, 13–20 (2001); Barbara Ann Atwood, *Achieving Permanency for American Indian and Alaska Native Children: Lessons from Tribal Traditions*, 37 CAP. U. L. REV. 239, 239 (2008).

17. See generally DOROTHY ROBERTS, *SHATTERED BONDS: THE COLOR OF CHILD WELFARE* (2002). The zeal with which some religious groups sought to remove children from Haiti after the recent earthquake evoke similar contentions, providing another illustration of a problem that Cohen and Chen apparently do not appreciate. See, e.g., Marc Lacey, *Haiti Charges Americans with Child Abduction*, N.Y. TIMES, Feb. 5, 2010, at A1, available at 2010 WLNR 2459443.

18. See, e.g., Sarah Ramsey, *Fixing Foster Care or Reducing Child Poverty: The Pew Commission Recommendations and the Transracial Adoption Debate*, 66 MONT. L. REV. 21, 21–22 (2005).

19. See, e.g., *In re Adoption of D.N.T.*, 843 So. 2d 690 (Miss. 2003) (upholding an unmarried minor mother’s consent to adoption, despite her attempt to revoke consent and claims that prospective adoptive parents pressured her); ANN FESSLER, *THE GIRLS WHO WENT AWAY: THE HIDDEN HISTORY OF WOMEN WHO SURRENDERED CHILDREN FOR ADOPTION IN THE DECADES BEFORE ROE V. WADE* (2006).

20. One can find a number of recent cases in Utah. E.g., *O’Dea v. Olea*, 217 P.3d 704 (Utah 2009); *E.G. v. C.C.D.*, 233 P.3d 517, 522–23 (Utah Ct. App. 2010); *N.T. v. Doe*, 199 P.3d 368 (Utah Ct. App. 2008).

21. RICKIE SOLINGER, *BEGGARS AND CHOOSERS: HOW THE POLITICS OF CHOICE SHAPES ADOPTION, ABORTION, AND WELFARE IN THE UNITED STATES* 67 (2001).

flecting official preferences for certain family settings over others.²² Perhaps, then, adoption skeptics would applaud increased access to IVF if it reduced the “demand” side of what some conceptualize as the market for adoptive children,²³ in turn decreasing state intervention in families of origin and promoting support for such families to remain intact.

This critique does not mean we should abolish adoption, even if that is the position championed by some radical birth parent support groups.²⁴ Rather, the point is to situate Cohen and Chen’s assumptions about domestic adoption in a more nuanced context and to invite a closer look at whether the substitution theory should matter—and why.

B. CONSTRUCTIONS OF ADOPTION AND IVF

Despite critiques of adoption, law and popular culture commonly share the assumptions of Cohen and Chen, viewing adoption through a humanitarian lens that depicts selfless adults welcoming parentless children into their homes and hearts. The notion of adoption as an advantageous and valuable practice, designed to protect and advance the interests of children (rather than of adults seeking to become parents), contrasts with the popular understanding of assisted reproduction, including IVF, whose users are often depicted as self-indulgent²⁵ shoppers for “designer babies”²⁶ or “insta-famil[ies].”²⁷ The notorious “Octomom” stands out as a carica-

22. See JULIE BEREBITSKY, *LIKE OUR VERY OWN: ADOPTION AND THE CHANGING CULTURE OF MOTHERHOOD 1851–1950*, at 5–6 (2000).

23. E.g., ROBERTS, *supra* note 17, at 166–67; Kimberly D. Krawiec, *Altruism and Intermediation in the Market for Babies*, 66 WASH & LEE L. REV. 203, 247–50 (2009).

24. See, e.g., Lucinda Franks, *The War for Baby Clausen*, NEW YORKER, Mar. 22, 1993, at 56, 58–61 (describing the position of Concerned United Birthparents (CUB)).

25. See *Letters*, N.Y. TIMES, Dec. 14, 2008, § 6 (Magazine), at 16–17, available at http://www.nytimes.com/2008/12/14/magazine/14letters-t-HERBODYMYBAB_LETTERS.html?scp=3&sq=alex%20her%20body%20my%20baby&st=cse (responding to Alex Kuczynski, *Her Body, My Baby*, N.Y. TIMES, Nov. 8, 2008, at 42 (Magazine), available at 2008 WLNR 22925338).

26. See Michael J. Sandel, *The Case Against Perfection: What’s Wrong with Designer Children, Bionic Athletes, and Genetic Engineering*, ATLANTIC, Apr. 2004, at 50, 51; see also Katherine M. Franke, *Theorizing Yes: An Essay on Feminism, Law, and Desire*, 101 COLUM. L. REV. 181, 190 (2001) (exposing how personal and selfish reasons often motivate human reproduction).

27. See *The Futuristic Insta-Family*, N.Y. TIMES, Dec. 28, 2010, § 6 (Magazine), available at <http://www.nytimes.com/interactive/2010/12/22/magazine/20101222-twiblings-audio.html?ref=assistedreproductivetechnology> (inviting

ture of this depiction—reckless, narcissistic, and consuming more than her fair share of resources.²⁸

Against this background, one particular IVF-based practice—and its proponents’ terminology—stand out: “embryo adoption.”²⁹ Cohen and Chen do not discuss this practice,³⁰ in which unused embryos created by others are transferred for gestation to an intended mother. President George W. Bush, among others, has promoted embryo adoption,³¹ with the word choice meant to signal the same sort of selfless, loving embrace of an orphan that we usually associate with “infant adoption” or “child adoption,” thereby deflecting the popular understanding of IVF patients.³²

Despite the rhetoric, however, embryo adoption is not an adoption at all, but in reality a high-tech medical intervention that bypasses many of the difficulties that more traditional adoptions are thought to present. What are the comparative difficulties of traditional adoption? They include some of the considerations that Cohen and Chen mention, including adopters’ preferences for children of a certain age or race. They also include some of the complications that come with age, such as a past history of disrupted relationships and foster care. Even an

comments to Thernstrom, *supra* note 4); *see also* Jody Lynée Madeira, Common Misconceptions: Reconciling Legal Constructions of Women in the Infertility and Abortion Contexts 2–3 (Mar. 5, 2010) (unpublished manuscript) (on file with authors) (citing criticisms of those who use ART).

28. Josephine Johnston, *Judging Octomom*, 30 HASTINGS CTR. REP. 23, 24 (2009) (questioning whether fertility doctors should follow unwise preferences of their patients); *cf.* Kimberly Krawiec, *Why We Should Ignore the “Octomom”*, 104 NW. U. L. REV. COLLOQUY 120, 120 (“Few familiar with the story of Nadya Suleman—a single, low-income, California mother of six who recently gave birth to octuplets conceived through in vitro fertilization (IVF)—do not instinctively react with outrage.”).

29. Paul C. Redman II & Lauren Fielder Redman, *Seeking a Better Solution for the Disposition of Frozen Embryos: Is Embryo Adoption the Answer?*, 35 TULSA L.J. 583, 587–89 (2000); *see also* Karin A. Moore, *Embryo Adoption: The Legal and Moral Challenges*, 1 U. ST. THOMAS J.L. & PUB. POL’Y 100, 106–08 (2007) (explaining embryo adoption and its use); Molly Miller, Note, *Embryo Adoption: The Solution to an Ambiguous Intent Standard*, 94 MINN. L. REV. 869 (2010) (describing embryo adoption).

30. As noted below, they treat IVF as a method of achieving genetic reproduction only. *See infra* notes 42–52 and accompanying text.

31. *See* Sarah Blustein, *Embryo Adoption*, N.Y. TIMES, Dec. 11, 2005, § 6 (Magazine), available at 2005 WLNR 19895218.

32. Many prefer the term “embryo donation.” *See* Charles P. Kindregan, Jr. & Maureen McBrien, *Embryo Donation: Unresolved Issues in the Transfer of Surplus Cryopreserved Embryos*, 49 VILL. L. REV. 169, 174–75 (2004). This locution portrays the progenitors, rather than the recipients, as the selfless, generous, and empathy-motivated actors.

adopted newborn has a prenatal history. By contrast, embryo adopters can start to exercise control during gestation, limiting exposure to harmful substances and ensuring the benefits of good prenatal care. Finally, given the enhanced bargaining power of birth parents occasioned by the “shortage” of healthy white infants available for adoption,³³ traditional adoptions are increasingly likely to be “open” or at least to entail the maintenance of some ties between the adoptee and the birth family, in turn making parenthood via adoption less a replica of biological parenthood than its own distinctive and complicated set of relationships.

So-called embryo adoption not only avoids such difficulties but, at least in this country, it and similar practices flourish in a largely laissez-faire zone. While adopters must usually satisfy legal requirements, including home studies and judicial approval, IVF and other forms of assisted reproduction belong to the discretion and choices of consumers and those whose assistance they obtain, from medical practitioners, to intermediaries, to lawyers, to genetic donors or sellers—generally with little explicit regulation by the state. The “fertility industry” is big business both here and internationally; the strong legal and social policies against commodifying children mean that we do not have (or should not have) an “adoption industry” that can compete.³⁴

When Cohen and Chen decry the difficulty of identifying a “neutral position” for government to take as between *encouraging* adoption versus IVF, they consider only explicit subsidies.³⁵ They overlook all the protective restrictions and other legal “red tape” that arguably discourage adoption but not IVF, as well as the business practices that promote IVF. They do not spell out what factors are included in their consideration, as a possible control variable, of “how adoption-friendly each state [in the study] was.”³⁶ Notwithstanding their empirical findings that adoption fares well even with subsidized IVF, their focus on the goal that each of these paths to parenthood is intended to reach (a child to rear) overlooks significant distinctions in the *processes* themselves, processes that might well affect pre-

33. See Cohen & Chen, *supra* note 1, at 497.

34. Kimberly Krawiec exposes how this anticommodification policy applies asymmetrically, benefiting intermediaries and disadvantaging birth parents. Krawiec, *supra* note 23, at 250–51.

35. Cohen & Chen, *supra* note 1, at 512 (identifying a “baseline problem”).

36. *Id.* at 544 n.204.

ferences and choices. Put differently, law imposes burdens on those who adopt but not those who use IVF, even if IVF requires onerous medical procedures.

As these observations suggest, understood against IVF, adoption emerges as altruistic and child-centered, but difficult and complicated, with both procedural and substantive legal entanglements to navigate and little respect for privacy. At the same time, our understanding of adoption constructs a view of assisted reproduction, including IVF, as self-regarding and expensive but free from burdensome regulation. Particularly with the contemporary medicalization of childbirth, IVF emerges as a much closer approximation of sexual reproduction, with its presumptive shield of constitutional privacy, compared to adoption. The practice known as embryo adoption offers the best of both worlds: the rhetorical satisfaction of performing a humanitarian act coupled with the privacy and control offered by assisted reproduction.

Cohen and Chen ignore these constructions, saying nothing to challenge the common understanding of adoption as a “second choice” or even “last resort” path to parenthood. Indeed, in explaining their findings, they hypothesize that prospective parents will try IVF before turning to adoption.³⁷ They do not address the possibility that improvement in IVF success rates might follow from increased use as a result of subsidies, in turn producing still more “substitutions.” Yet, even if the data now provide no empirical support for the substitution theory, it does not follow that Cohen and Chen will have put to rest this theory and its premises. The ranking of IVF ahead of adoption has a life of its own, regardless of the evidence. Thus, one can find this treatment of the options not only in the scholarly literature³⁸ and in qualitative data,³⁹ but in the popular consciousness as well.⁴⁰ From our arm-chair perspective, providing greater support for IVF would be likely to strengthen this common understanding of adoption as a “last resort”—even if the substitution theory is only a myth.

37. See *supra* note 11 and accompanying text.

38. ELIZABETH BARTHOLET, FAMILY BONDS: ADOPTION, INFERTILITY, AND THE NEW WORLD OF CHILD PRODUCTION 30–35 (1999); see also JOHN A. ROBERTSON, CHILDREN OF CHOICE: FREEDOM AND THE NEW REPRODUCTIVE TECHNOLOGIES 277 n.27 (1994).

39. Cohen & Chen, *supra* note 1, at 573.

40. See, e.g., Julie Robicaux, *IVF Versus Adoption: Why ‘Just Adopt’ Is Not the Answer*, TODAYMOMS (Dec. 7, 2010, 12:23 PM), http://moms.today.com/_news/2010/12/07/5605590-ivf-versus-adoption-why-just-adopt-is-not-the-answer.

C. THE PLACE OF GENETICS

The example of embryo adoption stands out as important for still another reason. Cohen and Chen treat IVF largely as a means of facilitating *genetic* reproduction. That is, they assume that the IVF procedures covered by insurance mandates will entail only those that allow the intended parents to have children conceived from their own genetic materials, rather than using gametes from donors. So, for example, they discuss IVF's benefits in the context of expressed preferences for genetic over adopted children⁴¹ and insurance mandates as enabling genetic reproduction⁴²—with implications for the understanding of adoption as “second choice.” They allude to what they call “radical feminist critiques of IVF” by those who question IVF's “problematic expressive effect of reinforcing the centrality of biological ties for family.”⁴³ Their empirical study contains numerous references to “Nondonor IVF cycles,”⁴⁴ although occasionally they do not identify the source of the genetic material and sometimes their reasoning implies that they probably contemplate the use of donated genetic material.⁴⁵

No doubt, much IVF use tracks the pattern that Cohen and Chen assume, with preembryos that are conceived in vitro for transfer to the uterus of the genetic mother, who intends to rear the child(ren) with the man who is also the genetic father. Yet, as the example of so-called embryo adoption illustrates, the radically transformative—and much more intellectually interesting—power of IVF lies in its ability to separate once-unified aspects of parentage and to challenge traditional models by recognizing new family forms, such as children with three parents, with no father, with two mothers, or with no mother.⁴⁶ Given such possibilities as egg donation and gesta-

41. Cohen & Chen, *supra* note 1, at 517–18.

42. *Id.* at 519–20.

43. *Id.* at 506.

44. *Id.* at 544 tbl.2, 555 tbl.4. *But see id.* at 556 tbl.5.

45. *See id.* at 567 (regarding adopters' age, with its implications for donor eggs).

46. *See, e.g.,* K.M. v. E.G., 117 P.3d 673, 675 (Cal. 2005) (holding that both the woman providing ova to lesbian partner and the partner who bore child via IVF are the child's parents); *In re Roberto d.B.*, 923 A.2d 115, 126 (Md. 2007) (holding that birth certificate may list father only, when neither gestational carrier nor ovum donor wishes recognition as mother); *cf. Jacob v. Shultz-Jacob*, 923 A.2d 473, 482 (Pa. Super. Ct. 2007) (rejecting, in context of involved sperm donor and lesbian couple, lower court's holding that recognizing three legal parents “would create an untenable situation”).

tional surrogacy—not to mention more well-established and user-friendly options such as donor insemination—genetic reproduction and traditional adoption mark out two ends of a continuum, with many different collaborations and combinations in between.⁴⁷

As Elizabeth Bartholet has written, adoption's regulatory structure sends a message of suspicion and distrust of those who would seek to parent "someone else's child."⁴⁸ Yet, IVF permits arrangements that disrupt the very idea of "someone else's child." Many authorities have responded to collaborative reproduction by recognizing as legal parents the intended parents, regardless of the source of genetic material.⁴⁹ Hence, such legal parents are rearing "their own child" although donors provided the sperm and/or ova.

Even if such legal parents never entirely lose sight of the missing genetic ties to their children,⁵⁰ IVF and its variations offer the opportunity to return to an earlier, apparently less-complicated practice of parenting "someone else's child" in which secrecy about the child's origins prevailed, in which "passing" as a biological family stood out as an explicit objective,⁵¹ and in which one could easily avoid ongoing contact with

47. Appleton, *supra* note 12, at 410–21.

48. BARTHOLET, *supra* note 38, at 69.

49. *E.g.*, *In re Marriage of Buzzanca*, 72 Cal. Rptr. 2d 280, 293 (Cal. Ct. App. 1998) ("Even though [not] biologically related to [the child], they are still her lawful parents given their initiating role as the intended parents in her conception and birth."); *Raftopol v. Ramey*, No. 18482, 2011 WL 169409, at *14 (Conn. 2011) (holding that "intended parents who are parties to a valid gestational agreement acquire parental status . . . without respect to their biological relationship to the children"); *In re C.K.G.*, 173 S.W.3d 714, 730 (Tenn. 2005) (recognizing genetic father and gestator without a genetic relationship as legal parents on equal footing, based on their intent to be resulting children's legal father and mother, respectively); UNIF. PARENTAGE ACT § 702 cmt. (amended 2002), 9B U.L.A. 355 (Supp. 2010) ("If a married woman bears a child of assisted reproduction used a donor's sperm, the donor will not be the father in any event. Her husband will be the father unless and until the husband's lack of consent to the assisted reproduction is proven . . ."); see Marjorie Maguire Shultz, *Reproductive Technology and Intent-Based Parenthood: An Opportunity for Gender Neutrality*, 1990 WIS. L. REV. 297, 322–23 (proposing this approach).

50. See Peggy Orenstein, *Your Gamete, Myself*, N.Y. TIMES, July 15, 2007, § 6 (Magazine), at 34, 37, available at 2007 WLNR 13468586.

51. *E.g.*, *Harnicher v. Univ. of Utah Med. Ctr.*, 962 P.2d 67, 72 (Utah 1998) ("As a result of their fertility treatment, the [plaintiffs] became the parents of three normal, healthy children whom the couple suggest do not look as much like [their nonbiological father] as different children might have and whose blood type could not be descended from his. This result thwarted the couple's intention to believe and represent that the triplets are [his] biological

the child's genetic parents. Of course, today this "golden age" of adoption evokes many criticisms, including some that spill over into the discourse of assisted reproduction. Thus, for example, current calls for ensuring that children conceived collaboratively can exercise a "right to know" their genetic parents parallel efforts in the 1990s to open sealed adoption files to interested adoptees.⁵²

D. THE PLACE OF REPRODUCTIVE AUTONOMY AND GENDER EQUALITY

In making a case for increased access to infertility treatments, Cohen and Chen join authorities who have recognized procreation as an important value and define it expansively to include situations when its exercise requires medical intervention and contributions from others, such as genetic donors⁵³—and members of the insurance pool. Such authorities commonly trace this value to language used by the Supreme Court in contraception and abortion cases, which recognize reproduction as a highly personal choice. The autonomy to decide "whether to bear or beget a child"⁵⁴ suggests that one should have the freedom to procreate and to avoid procreation alike.

Yet in attempting to provide stronger theoretical support for IVF subsidies, Cohen and Chen depart from this equipoise that would accord the same respect to both choices. By portraying infertility as a health impairment ("deviations [from] species-typical normal functioning"⁵⁵), Cohen and Chen naturalize conception, pregnancy, childbirth, and repronormativity itself.⁵⁶ Although this move helps them arrive at their narrow norma-

children.").

52. *E.g.*, Elizabeth Siberry Chestney, Note, *The Right to Know One's Genetic Origin: Can, Should, or Must a State that Extends This Right to Adoptees Extend an Analogous Right to Children Conceived with Donor Gametes?*, 80 TEX. L. REV. 365, 374–84 (2001); 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.

53. *See, e.g.*, *Lifchez v. Hartigan*, 735 F. Supp. 1361, 1376–77 (N.D. Ill. 1990) (recognizing embryo transfer and chorionic villi sampling specifically, in addition to other procedures noted throughout opinion, as constitutionally protected reproductive choices); ROBERTSON, *supra* note 38, at 22–23, 32–42; *cf.* Cohen & Chen, *supra* note 1, at 502 n.83 (exploring expansion of the argument to include "dysfertile" single individuals and same-sex couples).

54. *Roe v. Wade*, 410 U.S. 113, 169–70 (1973) (Stewart, J., concurring); *Eisenstadt v. Baird*, 405 U.S. 438, 453 (1972).

55. Cohen & Chen, *supra* note 1, at 517.

56. *See* Franke, *supra* note 26, at 183–97.

tive destination, this notion of “normal functioning” undercuts arguments for insurance subsidies for contraception, which have encountered some notable pushback in recent times.⁵⁷ And, of course, the legal status of abortion, not to mention abortion subsidies, remains highly contested.⁵⁸

These are serious problems for women that extend well beyond what Cohen and Chen describe as “radical feminist critiques of IVF.”⁵⁹ Strengthening the theoretical foundation for access to IVF, without attending to questions of contraception and abortion, profoundly threatens gender equality, which even liberal feminism embraces.⁶⁰ That some women want assistance in becoming pregnant at some particular moments⁶¹ does not diminish the interests of women who would (sometimes or always) avoid pregnancy.

II. A VIEW FROM ECONOMICS

Can IVF mandates cause a large increase in IVF usage while also causing an increase or having no effect on adoption demand? The “substitution theory,” an arm-chair theory postulating that IVF mandates cause a decrease in adoption demand, draws support from hazy recollections of Economics 101. But economic theory does not predict the effect of IVF mandates on adoption demand. Although arm-chair theorizing is no substitute for empirical analysis, theorizing, properly done, does clarify the conditions under which IVF mandates will cause either an increase, no change, or a decrease in adoption demand. A proper analysis of the effect of IVF mandates re-

57. *E.g.*, *In re Union Pac. R.R. Emp’t Practices Litig.*, 479 F.3d 936, 943 (8th Cir. 2007) (rejecting argument that employers must cover contraception just as preventative treatments for other medical conditions); Ricardo Alonso-Zaldivar, *Labeling Birth Control “Preventive Medicine” Could Make Contraception Free for US Women*, CHI. TRIB., Oct. 31, 2010 (citing critics’ descriptions of pregnancy as a healthy condition and contraception as a lifestyle choice); Erik Eckholm, *Budget Feud Ropes in Planned Parenthood*, N.Y. TIMES, Feb. 18, 2011 at A16, available at 2011 WLNR 3234099 (noting House of Representatives proposal to eliminate all aid for family planning).

58. *E.g.*, Robert Pear, *Push for Stricter Abortion Limits Is Expected in House*, N.Y. TIMES, Dec. 12, 2010, at A34, available at 2010 WLNR 2456897 (predicting effort to ban federal subsidy payments to health insurance plans that cover abortion).

59. Cohen & Chen, *supra* note 1, at 506.

60. *See, e.g.*, Ruth Bader Ginsburg, *Some Thoughts on Autonomy and Equality in Relation to Roe v. Wade*, 63 N.C. L. REV. 375 (1985); Sylvia A. Law, *Rethinking Sex and the Constitution*, 132 U. PA. L. REV. 955 (1984).

61. *See* Madeira, *supra* note 27.

quires us to recognize that infertile couples are heterogeneous in their resources and their preferences and, hence, heterogeneous in their responses to IVF mandates. The analysis itself, however, is somewhat subtle.

A simple example illustrates the need to distinguish among couples on the basis of how they would behave in the absence of IVF mandates and how they would respond to such mandates. Although a proper analysis requires us to distinguish among seven types of couples, we begin by illustrating the need to distinguish among different types of couples by considering only two:⁶²

- infertile couples that with or without IVF mandates would try IVF and, if it failed, would then try to adopt, and
- infertile couples that without IVF mandates would try neither IVF nor adoption, but with mandates would try IVF and, if it failed, would not try to adopt.

The effect of IVF mandates on adoption demand depends on several factors including the number of couples of each type, the extent to which couples of each type increase their usage of IVF, and the success rates of IVF. This dependence is clear if we consider the extreme and unlikely cases in which the increase in IVF usage comes entirely from couples of one type or the other. Suppose first that the increase in IVF usage comes entirely from couples that, with or without mandates, would try IVF and, if it failed, would then try to adopt. For these couples, IVF mandates lead to more IVF cycles and, to the extent that these additional cycles are successful, to a decrease in adoption demand. This scenario is consistent with substitution theory: IVF mandates reduce adoption demand.

Now suppose instead that the increase in IVF usage comes entirely from couples that, absent the mandates, would try neither IVF nor adoption. In this case, there is no change in adoption demand: for these couples, adoption demand was zero without IVF mandates and remains zero with mandates.

This example, with only two types of couples, demonstrates that IVF mandates can cause a large increase in IVF usage while having no effect on adoption demand. More generally, it demonstrates that the effect of IVF mandates on adoption demand depends on which couples increase their usage of IVF. In a proper analysis, one that recognizes seven types of couples, IVF mandates that cause large increases in IVF usage are

62. We address the others below. See *infra* text accompanying notes 66–67.

compatible with increases in adoption demand as well as with no change or decreases in adoption demand.

It is sometimes possible to infer which types of couples increase their use of IVF from the effect of IVF mandates on adoption demand. In our example of a society consisting of the two types of infertile couples, suppose we observe that IVF mandates have a large effect on IVF utilization but no effect on adoption demand. Then we can conclude that the increase in IVF utilization comes entirely from the infertile couples that would not otherwise adopt.⁶³ In our example, any increased use of IVF by the other type of infertile couples (i.e., couples that, in the absence of mandates, would try IVF and, if it failed, would try to adopt) would cause a decrease in adoption demand. And that, of course, would contradict our assumption that we observed IVF mandates to have no effect on adoption demand.

We analyze decisions regarding IVF and adoption as a two-stage game: at the first stage, couples try (or do not try) IVF; at the second stage, couples try (or do not try) to adopt.⁶⁴ A “strategy” is a plan specifying an action at the first stage (i.e., whether or not to try IVF) and an action at the second stage (i.e., whether or not to try to adopt). The second-stage action may depend on the outcome of the first stage (i.e., whether IVF is successful). For example, a possible strategy is to try IVF at the first stage and (1) if IVF fails, try to adopt at the second stage and (2) if IVF succeeds, do not try to adopt at the second stage. Each couple has two strategies, one they would choose without IVF mandates and one they would choose with mandates. A couple’s type is defined by its pair of strategies.

We simplify the analysis by making five assumptions. First, we assume that couples want to have exactly one additional child, so couples that succeed with IVF do not try to adopt another child. Second, we assume that couples that both try IVF and try to adopt will try IVF before trying to adopt. This timing assumption rules out couples simultaneously trying IVF and adoption; it also rules out couples trying to adopt and, if adoption fails, trying IVF. Third, we assume that IVF mandates make IVF free; that is, couples trying IVF incur no out-of-pocket costs (e.g., insurance co-pays). Fourth, we assume that trying to adopt is expensive and that, because of the cost,

63. This conclusion depends on the implicit assumption that, for both types of couples, additional IVF cycles lead to at least some additional births.

64. This is a “game against nature” rather than against a rational, calculating opponent.

some infertile couples do not try to adopt. Fifth, we assume that additional IVF cycles lead to at least some additional births.⁶⁵ These simplifying assumptions enable us to see more clearly the effects of IVF mandates on adoption demand.

We classify infertile couples into four mutually exclusive groups on the basis of the strategies they choose in the absence of IVF mandates. We denote these strategies by IA^o , XA^o , IX^o , and XX^o . The first letter, an I or an X, indicates trying or not trying IVF at the first stage; the second letter, an A or an X, indicates trying or not trying to adopt at the second stage. The superscript o indicates that these strategies are those that couples choose in the absence of IVF mandates. What IA^o couples have in common is their strategy, not their observable actions. All IA^o couples begin by trying IVF, all of them would respond in the same way if IVF succeeds (they would not try to adopt), and all of them would respond in the same way if IVF fails (they would try to adopt). Strategies are defined in terms of hypothetical behavior. For example, the distinction between the IA^o and IX^o couples manifests itself in behavior only if IVF fails; if IVF succeeds, their observable behavior is identical. To summarize, in the absence of IVF mandates, our assumptions imply that infertile couples fall into one of four mutually exclusive groups:

IA^o	try IVF and, if it fails, try to adopt
XA^o	do not try IVF, try to adopt
IX^o	try IVF and, if it fails, do not try to adopt
XX^o	do not try IVF; do not try to adopt

At the cost of introducing some notational clutter, we could refine our classification of IA^o couples by distinguishing among those that would try to adopt after one failed IVF cycle (I_1A^o), those that would try to adopt after two failed cycles, (I_2A^o), etc. For our purposes, however, a more refined classification is unnecessary provided we recognize that IVF mandates may cause IA^o and IX^o couples to undergo more IVF cycles than they would in the absence of mandates. For both IA^o and IX^o couples, these additional cycles lead to at least some additional births. For IA^o couples, additional births decrease adoption demand. For IX^o

65. We do not assume that the probability of success is the same for all types of couples, or that it remains the same for additional cycles.

couples, additional births have no effect on adoption demand: their adoption demand, with and without mandates, is zero.

IVF mandates have three distinct effects. First, consider couples that were going to try IVF in the absence of mandates (IA^o and IX^o couples). These couples may respond to IVF mandates by undergoing more cycles than they would without mandates. Although we do not treat increases in the number of cycles by these couples as a different strategy, we must recognize their effect on adoption demand. Because additional IVF cycles result in more births, they cause a reduction in adoption demand by couples whose second-stage action was to try to adopt if IVF failed. Couples that in the absence of mandates would try IVF have no incentive to not try IVF (i.e., to change an I to an X), or to reduce the number of IVF cycles they undergo.

Second, consider couples that were not going to try IVF in the absence of mandates, XA^o and XX^o couples. These couples may respond to IVF mandates by trying IVF at the first stage (i.e., by changing their first stage action from an X to an I). This is a predictable response to the fall in the price of IVF: couples that did not try IVF because of its high cost will now try IVF, while couples that did not try IVF for personal, religious, or ideological reasons will not. The XA^o couples that try IVF and for which IVF is successful will reduce their adoption demand. The XA^o couples that try IVF and for which IVF fails will adopt. The XX^o couples that try IVF have no effect on adoption demand: their adoption demand, with and without mandates, is zero.⁶⁶

Third, consider couples whose strategy was to try IVF and, if it failed, not to try to adopt (IX^o couples). For these couples, IVF mandates free up the money they would otherwise have spent on IVF. Some of these couples will save this windfall for their retirement, others will spend it on new cars, and others will spend it on adoption—that is, they will change their second-stage action from X to A. All of these responses to IVF mandates are, in the jargon of economics, “income effects.” Thus, an increase in adoption demand is a predictable response by some of the IX^o couples that, in the absence of mandates, did not try to adopt because of the cost. Some of these resource-

66. Cohen and Chen suggest that undergoing failed IVF cycles may change couples' preferences in favor of adoption, but it seems equally plausible that undergoing failed IVF cycles may change couples' preferences against adoption. In any case, they cite no supporting evidence.

constrained IX° couples now become IA couples: they try IVF and, if it fails, they try to adopt. These are the couples that increase their adoption demand.

We use the arrow symbol to relate couples' strategies without IVF mandates to their strategies with IVF mandates. For example, $\{XA^{\circ} \rightarrow IA\}$ indicates XA° couples that, with mandates, try IVF and if IVF fails, try to adopt; $\{XA^{\circ} \rightarrow XA\}$ indicates XA° couples that, with mandates, do not change their strategy—they do not try IVF and they try to adopt.

Our analysis implies that with IVF mandates couples may choose the same strategy they chose without mandates or they may choose a different strategy. If they choose a different strategy, however, our analysis implies that there is at most one different strategy that is plausible for each couple, given the strategy they choose without mandates. We associate a pair of strategies with each couple: the strategy they would choose without IVF mandates and the strategy they would choose with mandates. There are four possible strategies with mandates and four possible strategies without mandates. Combinatorics teaches that there are sixteen mathematically possible strategy pairs. Our analysis, however, implies that only seven of these sixteen strategy pairs are plausible, and we classify couples into types based on these seven strategy pairs. The table below lists the seven couple types, identified by their strategy pairs, and the implications of each for adoption demand.

COUPLE TYPE	IMPLICATIONS FOR ADOPTION DEMAND
$\{IA^{\circ} \rightarrow IA\}$	decrease
$\{XA^{\circ} \rightarrow XA\}$	no effect
$\{XA^{\circ} \rightarrow IA\}$	decrease
$\{IX^{\circ} \rightarrow IX\}$	no effect
$\{IX^{\circ} \rightarrow IA\}$	increase
$\{XX^{\circ} \rightarrow XX\}$	no effect
$\{XX^{\circ} \rightarrow IX\}$	no effect

The next four paragraphs explain the strategy pairs and their implications for adoption demand; readers who feel sufficiently comfortable with the analysis can skip these four paragraphs.

The IA° couples may utilize more IVF cycles than they would without mandates. To the extent that these additional

cycles result in additional births, adoption demand by IA^o couples will decrease.⁶⁷

Some XA^o couples respond to IVF mandates by choosing the same strategy as before, while others respond by trying IVF. Those that try IVF become IA couples and, for some of these couples, IVF will fail while for others it will succeed. Those couples for which IVF fails will try to adopt, while those for which IVF succeeds will not try to adopt. This implies that adoption demand by XA^o couples will decrease because, in the absence of IVF mandates, all XA^o couples would try to adopt.⁶⁸

Some IX^o couples respond to IVF mandates by remaining IX couples, others by becoming IA couples. On balance, this increases adoption demand. The intuition is straightforward. Although some of the IX^o couples would not choose to adopt even if adoption were free, other IX^o couples choose this strategy because they cannot afford to try both IVF and adoption. Without IVF mandates and faced with a choice between IVF and adoption, the IX^o couples chose IVF.⁶⁹ The IVF mandate allows IX^o couples that would like to try IVF to do so: if IVF fails, they try to adopt.⁷⁰ We do not claim that all IX^o couples for which IVF fails will try to adopt; some IX^o couples would not try to adopt even if adoption were free.⁷¹ Because the IX^o couples did not adopt in the absence of mandates, IVF mandates cannot reduce their adoption demand. Some IX^o couples utilize more IVF cycles with the mandates than they would have without the mandates, so the number of IX^o couples for which IVF is successful will increase. Other IX^o couples will undergo the same number of cycles as they would without IVF mandates. Although couples for which IVF is successful would not adopt, they do not reduce their adoption demand because, absent mandates, no IX^o couples would adopt. Hence, the increase in adoption demand comes from the {IX^o → IA} couples for which IVF fails. Without IVF mandates, couples that want IVF would

67. IVF mandates provide no incentive for IA^o couples to choose a different strategy. Some IA^o couples will undergo more IVF cycles, but we do not treat an increase in the number of cycles as a different strategy.

68. IVF mandates provide no motive for XA^o couples to become IX or XX couples.

69. Faced with the same alternatives, other couples chose to try to adopt rather than to try IVF and thus are XA^o couples.

70. In the case of XA^o couples, IVF mandates cause a decrease in adoptions.

71. Similarly, even if mandates made IVF free, not all XA^o couples will try IVF; some couples find IVF unacceptable for personal, religious, or ideological reasons.

have to pay for IVF; with IVF mandates, couples do not have to pay for IVF and the reduction in the cost of IVF creates an income effect. Some couples for which IVF fails will use the money they would otherwise have spent on IVF trying to adopt. IVF mandates give IX° couples no reason to change the I to an X.

The XX° couples (i.e., couples that in the absence of mandates would not try IVF and would not try to adopt) may, with the mandate, either remain XX or become IX couples (i.e., they may try IVF and, if IVF fails, not try to adopt). If an XX° couple tries IVF and fails, the couple's situation at the end of the first stage is the same as it would have been in the absence of mandates; hence, the couple has no more reason to adopt with IVF mandates than it did without IVF mandates. Thus XX° couples, regardless of whether they remain XX couples or become IX couples, would not adopt. IVF mandates do not reduce adoption demand because, without IVF mandates, none of the XX° couples would adopt. With and without IVF mandates, the adoption demand of the XX° couples is zero.

A population's response to IVF mandates depends on the number of couples of each type and the magnitudes of the couples' responses. More specifically, a population's response is a weighted sum of the responses of the seven types of couples, where the weights are the number of couples of each type.

Accepting Cohen and Chen's empirical claim that IVF mandates cause an increase in adoption demand, our two-stage game shows how this can occur. From the table, we see that only the $\{IX^{\circ} \rightarrow IA\}$ couples respond to IVF mandates by increasing their adoption demand. Four types of couples— $\{XA^{\circ} \rightarrow XA\}$, $\{IX^{\circ} \rightarrow IX\}$, $\{XX^{\circ} \rightarrow XX\}$, $\{XX^{\circ} \rightarrow IX\}$ —respond to IVF mandates by not changing their adoption demand. Three of these four types have zero adoption demand with and without IVF mandates. The fourth type, the $\{XA^{\circ} \rightarrow XA\}$ couples, do not undergo IVF even when mandates make it free and to try to adopt, even though it is costly; hence, IVF subsidies have no effect on their adoption demand. The two remaining types, the $\{IA^{\circ} \rightarrow IA\}$ and $\{XA^{\circ} \rightarrow IA\}$ couples, respond to IVF mandates by reducing their adoption demand, just as substitution theory predicts.

A population's response to IVF mandates depends, then, on the magnitude of the increase in adoption demand from the $\{IX^{\circ} \rightarrow IA\}$ couples and the magnitude of the decrease from the $\{IA^{\circ} \rightarrow IA\}$ and $\{XA^{\circ} \rightarrow IA\}$ couples. Cohen and Chen's empirical finding that IVF mandates increase adoption demand implies that the increases in adoption demand from the $\{IX^{\circ} \rightarrow IA\}$

couples swamps the reduction from the $\{IA^o \rightarrow IA\}$ and $\{XA^o \rightarrow IA\}$ couples. Our two-stage game shows how IVF mandates can lead to large increases in IVF utilization while having no effect or a positive effect on adoption demand.

CONCLUSION

In *Trading-Off Reproductive Technology and Adoption: Does Subsidizing IVF Decrease Adoption Rates and Should It Matter?*,⁷² Cohen and Chen venture beyond the arm chair to examine the relationship between IVF mandates and adoption demand. Their two-part approach first joins the policy debate on this topic and then addresses the issue empirically. Our twibling analyses reply to both parts. We show that arm-chair theorizing, properly done, can illuminate the relationship between IVF mandates and adoption demand. Such theorizing demonstrates why Cohen and Chen's principal empirical result, that IVF mandates appear to increase adoption demand, is not paradoxical. A different kind of arm-chair theorizing enables us to situate the tradeoff that Cohen and Chen examine in the wider context of family law, including the values, insights, and concerns found in scholarship about family law. Yet, arm-chair theorizing, even when properly done, complements investigations like Cohen and Chen's; it does not provide a substitute for such work.

72. Cohen & Chen, *supra* note 1.