

January 2014

## Baby without a Country: Determining Citizenship for Assisted Reproduction Children Born Overseas

Kristine S. Knaplund

Follow this and additional works at: <https://digitalcommons.du.edu/dlr>

---

### Recommended Citation

Kristine S. Knaplund, Baby without a Country: Determining Citizenship for Assisted Reproduction Children Born Overseas, 91 Denv. U. L. Rev. 335 (2014).

This Article is brought to you for free and open access by the Denver Law Review at Digital Commons @ DU. It has been accepted for inclusion in Denver Law Review by an authorized editor of Digital Commons @ DU. For more information, please contact [jennifer.cox@du.edu](mailto:jennifer.cox@du.edu), [dig-commons@du.edu](mailto:dig-commons@du.edu).

---

**Baby without a Country: Determining Citizenship for Assisted Reproduction  
Children Born Overseas**

# BABY WITHOUT A COUNTRY: DETERMINING CITIZENSHIP FOR ASSISTED REPRODUCTION CHILDREN BORN OVERSEAS

KRISTINE S. KNAPLUND<sup>†</sup>

## ABSTRACT

The United States has long followed the English common law view that citizenship can be attained at birth in two ways: by being born in the U.S. (*jus soli*) or by being born abroad as the child of a U.S. citizen (*jus sanguinis*). For a child born abroad to claim citizenship through *jus sanguinis*, the State Department for many years required proof of a blood relationship between the child and a U.S. citizen. While a genetic test serves this purpose for children conceived coitally, advances in assisted reproduction techniques (ART) that have separated the two functions of a birth mother—namely gestation and genetics—have greatly complicated the definition of parentage. In modern times this has led to unjust results, including the recent denial of U.S. citizenship to children born to American mothers who used donated eggs to conceive and give birth abroad. While the State Department has recently modified its regulations to allow the woman giving birth to claim maternity despite the lack of a genetic tie, in many cases it continues to use a parentage standard that dates back to 1952, when assisted reproduction techniques such as *in vitro* fertilization or the use of donated gametes had not yet been developed. This Article seeks to propose a workable solution to the question of citizenship for children born overseas to American parents via ART. It first explores the origins of *jus sanguinis* in Roman and English common law along with ancient and medieval views of conception and maternity, and examines three prevailing methods to determine parentage: the parturient test, genetic test, and parental intent test. Ultimately the Article recommends that the State Department acknowledge advances in ART, and the different ways children are nowadays conceived, by altering its *jus sanguinis* policy to allow several presumptions of parentage to apply.

---

<sup>†</sup> Professor of Law, Pepperdine University School of Law. The Author wishes to acknowledge the outstanding work of her research assistants, Scott Tarbell, Mia Getlin, and Jeffrey Bils, and research librarians Jennifer Allison and Alyssa Thurston. Thanks also go to the Dean's Summer Research Fund at Pepperdine School of Law and the participants in the Indiana School of Law Roundtable on Assisted Reproduction. © 2014 Kristine S. Knaplund.

## TABLE OF CONTENTS

INTRODUCTION.....	336
I. WHERE DO BABIES COME FROM? .....	339
<i>A. Greek and Roman Views of Parentage</i> .....	339
<i>B. Parentage Under English Common Law: Laying the Groundwork         for the United States</i> .....	340
II. U.S. CITIZENSHIP AND SCIENCE, 1790 TO THE 1950S .....	344
III. <i>JUS SANGUINIS</i> FROM 1952 TO THE PRESENT.....	349
IV. DETERMINING PARENTAGE FOR A CHILD CONCEIVED USING ART .....	353
CONCLUSION.....	366

## INTRODUCTION

The United States has long followed the English common law view that citizenship can be attained at birth in two ways: by being born in the United States (*jus soli*) or by being born abroad as the child of a U.S. citizen (*jus sanguinis*). The first, *jus soli*, is now part of the Fourteenth Amendment to the U.S. Constitution: “All persons born or naturalized in the United States, and subject to the jurisdiction thereof, are citizens of the United States and of the State wherein they reside.”<sup>1</sup> *Jus soli* theoretically does not inquire into the citizenship of the child’s parents; the relevant fact is that the birth takes place in the United States.<sup>2</sup> *Jus sanguinis*, in contrast, arises from the parent–child relationship. The State Department translates *jus sanguinis* as “the law of the bloodline,” citing it as a traditional “concept of Roman or civil law.”<sup>3</sup> By “natural parent,” the State Department usually means a blood relationship with a U.S. citizen: “It is not enough that the child is presumed to be the issue of the parents’ marriage by the laws of the jurisdiction where the child was born.”<sup>4</sup>

*Jus sanguinis*, involving proof of a blood relationship to one’s child, works well for children conceived the old fashioned way, through coitus—a blood test or DNA test will easily confirm the parentage of the child in the vast majority of cases. But the matter is far more complicated for those who have used donated sperm or ova to achieve a pregnancy;

---

1. U.S. CONST. amend. XIV, § 1.

2. Despite the language of the Fourteenth Amendment, Native Americans were not accorded birthright citizenship until 1924, on the theory that the Indian tribes were an independent sovereign and therefore not subject to the jurisdiction of the United States. John Rockwell Snowden et al., *American Indian Sovereignty and Naturalization: It’s a Race Thing*, 80 NEB. L. REV. 171, 182–83 (2001).

3. U.S. DEP’T OF STATE, FOREIGN AFFAIRS MANUAL, 7 FAM § 1111.a(2) (2012), available at <http://www.state.gov/documents/organization/86755.pdf>. The American Philosophical Society’s *Encyclopedic Dictionary of Roman Law* defines *jus (ius) sanguinis* as “[t]he rights of blood (blood ties = [cognatio]). They ‘cannot be destroyed by any civil law.’” 43 ADOLF BERGER, AM. PHILOSOPHICAL SOC’Y, ENCYCLOPEDIA OF ROMAN LAW pt. 2, at 533 (1953). *Cognatio* is defined as “[b]lood relationship.” *Id.* at 393.

4. U.S. DEP’T OF STATE, FOREIGN AFFAIRS MANUAL, 7 FAM § 1131.4-1.a (2010).

the man who intends to be the child's father, or the woman who will act as the child's mother, may lack a blood relationship to the child. In such a case, when donated gametes (sperm or ova) are used, the State Department always considers the child to be born out of wedlock, even if the intended parents are married, and until a recent change in the website, required proof of the blood or genetic relationship by clear and convincing evidence.<sup>5</sup>

A purely genetic connection to the child is sufficient to establish parentage in relatively few instances in American law. One is child support: even if the genetic father has had no contact with the child, and has done nothing to establish a relationship (or has even been prevented from knowing about the child), the genetic connection may be enough if no other presumed father is on the scene.<sup>6</sup> As Theresa Glennon notes, "The child support system for children born out of wedlock is based on the assumption that biological fatherhood is a sufficient basis for legal and financial responsibility for a child."<sup>7</sup> The rationale is that, once a man has engaged in a sexual relationship, he has a responsibility to provide for any children born out of that encounter.<sup>8</sup>

This Article explores a second instance in which the genetic connection is paramount: when an American citizen gives birth abroad. Over 7 million Americans live abroad, and more than 65 million travel abroad annually.<sup>9</sup> Some Americans are venturing abroad specifically for infertility treatments because of lower costs at foreign clinics and the willingness of clinics to treat older patients.<sup>10</sup> The result: in Fiscal Year 2012, the State Department "registered 64,991 overseas births to U.S. parents."<sup>11</sup> However, citizenship has recently been denied to the children of two American women who used anonymously donated gametes to con-

5. See *id.* § 1133.4-2; Scott Titshaw, *Sorry Ma'am, Your Baby Is an Alien: Outdated Immigration Rules and Assisted Reproductive Technology*, 12 FLA. COASTAL L. REV. 47, 122, 129-30 (2010) (illustrating the State Department's genetic essentialist approach to determining the citizenship of children conceived through assisted reproductive technology). The State Department recently changed its website to state that "a U.S. citizen mother must be either the genetic or the gestational and legal mother of the child at the time and place of the child's birth." U.S. Dep't of State, *Important Information for U.S. Citizens Considering the Use of Assisted Reproductive Technology (ART) Abroad*, TRAVEL.STATE.GOV, <http://travel.state.gov/content/travel/english/legal-considerations/us-citizenship-laws-policies/assisted-reproductive-technology.html> (last visited May 15, 2014).

6. Theresa Glennon, *Somebody's Child: Evaluating the Erosion of the Marital Presumption of Paternity*, 102 W. VA. L. REV. 547, 558 (2000).

7. *Id.*

8. *Id.*

9. BUREAU OF CONSULAR AFFAIRS, U.S. DEP'T OF STATE, WHO WE ARE AND WHAT WE DO: CONSULAR AFFAIRS BY THE NUMBERS (Jan. 2013), available at [http://travel.state.gov/pdf/ca\\_fact\\_sheet.pdf](http://travel.state.gov/pdf/ca_fact_sheet.pdf).

10. Heather Won Tesoriero, *Infertile Couples Head Overseas for Treatments—Clinics in Thailand, Canada, Israel Tout Cheaper In-Vitro; Checking up on Success Rates*, WALL ST. J., Feb. 19, 2008, at D1; M. Susan Wilson, *U.S. Women Crossing Globe for Fertility Help*, NBC NEWS.COM, <http://www.nbcnews.com/id/19100571/ns/health-pregnancy/t/us-women-crossing-globe-fertility-help> (last updated June 13, 2007, 09:47 EST).

11. BUREAU OF CONSULAR AFFAIRS, *supra* note 9.

ceive and give birth to a child: one in Israel<sup>12</sup> and one in Switzerland;<sup>13</sup> in a third case, the U.S. Embassy refused to recognize the birth mother as the child's mother because she had used donated eggs and given birth to the child in India.<sup>14</sup> At least in these cases each woman knew that the child to whom she had given birth was not genetically linked to her. The State Department warns travelers:

The Department is aware of cases of foreign fertility clinics that have substituted alternate donor sperm and eggs when the U.S. parents' genetic material turned out not to be viable. The undisclosed switch was revealed when the Post requested DNA tests as part of the process of documenting the child's citizenship for the purposes of issuing a passport. Such situations can have the unfortunate consequence of leaving children stateless.<sup>15</sup>

Part I of this Article discusses the origins of *jus sanguinis* in Roman and English common law, including ancient and medieval views of conception and maternity in determining the child's bloodline. Not surprisingly, these views differ significantly from those held today. Taking into account this scientific background, Part II discusses citizenship laws in early U.S. history and assumptions about who were the parents of a child, both in wedlock and out of wedlock. While the definition of paternity has always taken note of biology as well as a man's relationship to the birth mother, science began to play a more prominent role in the legal definition of parenthood once blood grouping and blood tests were available starting in the early 1900s. Part III then introduces the law of U.S. citizenship today, which in its main outlines is the same as first codified in 1952. The ability of DNA testing to positively identify the father in most cases, plus advances in assisted reproductive technology (ART) that separate the two functions of the birth mother—genetics and gestation—have greatly complicated the definition of parentage for children, but the State Department has, in large part, continued to use the same parentage

---

12. Sarah Elizabeth Richards, *Mother Country: The Perils of Getting an Assist Abroad on Having a Baby—for Americans and Foreigners Both*, SLATE (Mar. 27, 2012, 4:02 PM), [http://www.slate.com/articles/double\\_x/doublex/2012/03/fertility\\_tourism\\_the\\_perils\\_of\\_having\\_a\\_baby\\_abroad\\_with\\_assisted\\_reproduction\\_technology\\_.html](http://www.slate.com/articles/double_x/doublex/2012/03/fertility_tourism_the_perils_of_having_a_baby_abroad_with_assisted_reproduction_technology_.html).

13. Conversation with Congressman Eliot L. Engel of New York, U.S. House of Representatives (Aug. 2, 2012) (notes on file with author) (discussing how Congressman Engel's office successfully helped the constituent gain citizenship for her child in January 2013, just before the child's first birthday); Letter from Congressman Eliot L. Engel of New York, U.S. House of Representatives, to Hillary Clinton, Sec'y of State (July 10, 2012) (on file with author); E-mail from Brian Skretny, Legislative Dir., Office of Congressman Eliot Engel, to author (Jan. 25, 2013, 10:18 AM) (on file with author) (stating that child was granted citizenship prior to first birthday).

14. Jaya Menon, *In the Womb of Controversy*, TIMES INDIA (Jan. 25, 2010, 04:59 IST), [http://articles.timesofindia.indiatimes.com/2010-01-25/chennai/28133900\\_1\\_egg-donation-consulate-donor-eggs](http://articles.timesofindia.indiatimes.com/2010-01-25/chennai/28133900_1_egg-donation-consulate-donor-eggs). In such a case, where only the egg and not the sperm has been donated, the child may be able to obtain U.S. citizenship at birth if the father is a U.S. citizen. *Id.*

15. U.S. Dep't of State, *supra* note 5. The child born in Switzerland, for example, was officially stateless at birth because Switzerland does not recognize *jus soli*. Conversation with Congressman Eliot L. Engel of New York, U.S. House of Representatives (Aug. 2, 2012) (notes on file with author).

standard first detailed in 1952. Part IV examines and critiques three methods of identifying parentage to determine which should be used for children born abroad: the State Department's preferred method (genetics), the common law parturient test (the woman who gives birth is the mother), and the recently developed intent test (those who intend to raise the child are the parents). In Part V, the Article concludes that our citizenship rules for children born abroad must acknowledge the different ways in which children are conceived and develop definitions of parentage that will avoid the unjust results noted in this Article.

## I. WHERE DO BABIES COME FROM?

### A. Greek and Roman Views of Parentage

The ancient Greeks and Romans shared two competing views on the mother's role in creating a child but generally agreed that, whatever her contribution, it was less important than the man's.<sup>16</sup> Most Greeks and Romans followed the teachings of Aristotle,<sup>17</sup> who articulated the "one seed" theory in which the man provides the "movement and definition"<sup>18</sup> while the woman provides the nutriment.<sup>19</sup> Contributions by both male and female were necessary, in Aristotle's view, but "birth must take place in the female" because she "contains the matter out of which the product is fashioned."<sup>20</sup> While Aristotle acknowledged that women could become pregnant without experiencing orgasm, more often "the opposite is the case" since the orgasm provided a means to draw the semen into the uterus.<sup>21</sup> A second view among a minority of Greeks and Romans was based on Hippocrates, who propounded the "two-seed" theory.<sup>22</sup> In

---

16. See Nancy Tuana, *The Weaker Seed: The Sexist Bias of Reproductive Theory*, 3 HYPATIA 35, 41 (1988) ("Although such theorists [including Anaxagoras, Empedocles, Hippocrates, and Parmenides] gave woman a role in the creation of the form as well as the material of the fetus, they uniformly held that woman's contribution was weaker than that of man.").

17. VERN L. BULLOUGH, SCIENCE IN THE BEDROOM: A HISTORY OF SEX RESEARCH 12-13 (1994). Aristotle lived from 384 to 322 B.C. *Aristotle (384-322 B.C.E.)*, INTERNET ENCYCLOPEDIA PHIL., <http://www.iep.utm.edu/aristot/> (last visited Mar. 25, 2014).

18. ARISTOTLE, ARISTOTLE DE PARTIBUS ANIMALIUM I AND DE GENERATIONE ANIMALIUM I 51, 54 (D. M. Balme trans., Oxford Univ. Press 1992).

19. *Id.* at 50.

20. *Id.* at 54.

21. THOMAS LAQUEUR, MAKING SEX: BODY AND GENDER FROM THE GREEKS TO FREUD 48 (1990) (quoting ARISTOTLE, ON THE GENERATION OF ANIMALS bk. 2 ch. 4 § 739a[20]-[35]). Others wrote that orgasm was a sign of conception: the physician to Justinian believed that women who were raped were sterile, "while those 'in love conceive very often.'" *Id.* at 49 (quoting AETIOS OF AMIDA: THE GYNAECOLOGY AND OBSTETRICS OF THE VI CENTURY, A.D. 36 (James V. Ricci trans., 1950)). That debate has resurfaced today with the remarks of Representative Todd Akin that rape rarely results in pregnancy because "[i]f it's a legitimate rape, the female body has ways to try to shut the whole thing down." Lori Moore, *The Statement and the Reaction*, N.Y. TIMES, Aug. 21, 2012, at A13 (internal quotation mark omitted).

22. BULLOUGH, *supra* note 17, at 12-13; see also Yii-Jan Singh, *Semen, Philosophy, and Paul*, 4 J. PHIL. & SCRIPTURE 32, 35 n.14 (2007), available at <http://www.philosophyandscripture.org/Issue4-2/Singh.pdf> (referencing the two-seed theory). Hippocrates lived from 450 to 380 B.C. Michael Boylan, *Hippocrates (c.450-c.380 B.C.E.)*, INTERNET ENCYCLOPEDIA PHIL., <http://www.iep.utm.edu/hippocra/> (last visited Mar. 25, 2014). Galen lived from 130 to 200 C.E. and "was one of the most prominent ancient physicians." Michael Boylan,

Hippocrates' view, both the man and the woman produced sperm which then mixed together to create a child

just as though one were to mix together beeswax and suet, using a larger quantity of the suet than of the beeswax, and melt them together over a fire. While the mixture is still fluid, the prevailing character of the mixture is not apparent: only after it solidifies can it be seen that the suet prevails quantitatively over the wax. And it is just the same with the male and female forms of the sperm.<sup>23</sup>

As early as the sixth century, Justinian's *Corpus Juris Civilis* asserted that "the mother is certain" (*mater semper certa est*);<sup>24</sup> the issue was identifying the father. Roman law allowed the husband to dispute paternity of a child borne by his wife, but in a limited way: Once the wife gave notice to her husband that she was pregnant, his role was "then either to send guards or to give notice to her that she is not pregnant by him . . . . [U]nless he sends guards or replies giving her notice she is not pregnant by him, the husband is compelled to acknowledge the offspring."<sup>25</sup> The guards were "[p]robably . . . meant to prevent a changeling child from being passed off as the" husband's child.<sup>26</sup> Thus, in some cases in ancient Rome, a child might lack a blood relationship to a man designated as his father because he was married to the woman who gave birth.

### *B. Parentage Under English Common Law: Laying the Groundwork for the United States*

As with the Romans and the Greeks, English common law emphasized the role of the male in conception. St. Thomas Aquinas<sup>27</sup> supported the Aristotelian view that man's seed provided the form, while the wom-

*Galen (130–200 C.E.)*, INTERNET ENCYCLOPEDIA PHIL., <http://www.iep.utm.edu/galen/> (last visited Mar. 25, 2014).

23. LAQUEUR, *supra* note 21, at 39 (quoting HIPPOCRATES & IAIN M. LONIE, THE HIPPOCRATIC TREATISES "ON GENERATION," "ON THE NATURE OF THE CHILD," "DISEASES IV": A COMMENTARY 3–4 (1981)).

24. Cindy L. Baldassi, *Mater Est Quam Gestatio Demonstrat: A Cautionary Tale* 3 (June 27, 2007) (unnumbered working paper, Univ. of B.C. Faculty of Law Working Papers Series) (quoting GEORGE BLAXLAND, CODEX LEGUM ANGLICANARUM: OR, A DIGEST OF PRINCIPLES OF ENGLISH LAW, ARRANGED IN THE ORDER OF THE CODE NAPOLEON 292 (1903)) (citing 1 THE DIGEST OF JUSTINIAN 44 (Alan Watson ed., 1985)), available at <http://ssrn.com/abstract=927147>. Justinian, born in 482 A.D., reigned from 527 to 565. Sarah Brooks, *The Byzantine State Under Justinian I (Justinian the Great)*, METROPOLITAN MUSEUM ART, [http://www.metmuseum.org/toah/hd/just/hd\\_just.htm](http://www.metmuseum.org/toah/hd/just/hd_just.htm) (last updated Apr. 2009).

25. BRUCE W. FRIER & THOMAS A.J. MCGINN, A CASEBOOK ON ROMAN FAMILY LAW 105 (2004).

26. *Id.*

27. St. Thomas was born in 1225 and died in 1274 A.D. Ralph McNemy & John O'Callaghan, *Saint Thomas Aquinas*, STAN. ENCYCLOPEDIA PHIL., <http://plato.stanford.edu/entries/aquinas/> (last updated Sept. 30, 2009); *Thomas Aquinas (1225–1274)*, INTERNET ENCYCLOPEDIA PHIL. (May 6, 2009), <http://www.iep.utm.edu/aquinas/>.



an supplied the “corporeal matter.”<sup>28</sup> In the seventeenth century, the two-seed theory re-emerged in midwife manuals. While most still believed that the woman’s role in creating the child was solely passive, Nicholas Culpeper<sup>29</sup> revived interest in Hippocrates’ two-seed theory by propounding the “radical” idea that the woman contributed with an egg.<sup>30</sup> In Culpeper’s view, “the woman spends her seed as well as the man, and both are united to make conception.”<sup>31</sup> Another English writer at the time, Jane Sharp, likewise believed that the woman released her seed in orgasm, uniting with the male seed to become pregnant.<sup>32</sup> Later in the seventeenth century a new theory emerged: the preformation doctrine, which held that the embryo contained a complete miniature person who was nourished in the uterus in order to grow.<sup>33</sup> Debate ensued over whether this miniature person was contained in man’s semen (animalculism) or woman’s egg (ovism).<sup>34</sup> In the 1670s Leeuwenhoek<sup>35</sup> sided with animalculism by using a crude microscope to observe that semen contained millions of animalcules,<sup>36</sup> which he termed spermatozoa.<sup>37</sup> “Echoing centuries of tradition, Leeuwenhoek insisted that the nourishment of the masculine seed was the sole function of the female.”<sup>38</sup> In 1694 Hartsoeker published a drawing of a drop of sperm containing a tiny person, representing what he believed was contained in the semen.<sup>39</sup>

---

28. Tuana, *supra* note 16, at 46 (quoting THOMAS AQUINAS, *SUMMA THEOLOGICA* I:98:2 (Fathers of the English Dominican Provinces trans., 1947)) (internal quotation mark omitted).

29. Nicholas Culpeper, an English physician (1616–1654), published his *A Directory for Midwives* in 1651 to revive the two-seed theory. See Dylan Warren Davis, *Nicholas Culpeper: Herbalist of the People*, SKYSCRIPT.CO.UK (Jan. 2005), <http://www.skyscript.co.uk/culpeper.html>.

30. Olav Thulesius, *Nicholas Culpeper, Father of English Midwifery*, 87 J. ROYAL SOC’Y MED. 552, 554 (1994).

31. *Id.*

32. Elaine Hobby, “*Secrets of the Female Sex*”: Jane Sharp, *the Reproductive Female Body, and Early Modern Midwifery Manuals*, 8 WOMEN’S WRITING 201, 202–03 (2001). Jane Sharp, a midwife for over thirty years, was one of the first women to publish a book on her profession: *The Midwives Book: Or, the Whole Art of Midwifry Discovered* was published in 1671. *Id.* at 201, 209.

33. Ava Chamberlain, *The Immaculate Ovum: Jonathan Edwards and the Construction of the Female Body*, 57 WM. & MARY Q. 289, 298 (2000).

34. *Id.* at 298–99.

35. Antony van Leeuwenhoek was a fabric maker who built his own microscopes to be the first to observe bacteria and other organisms. *Antony van Leeuwenhoek (1632–1723)*, U. CAL. MUSEUM PALEONTOLOGY, [www.ucmp.berkeley.edu/history/leeuwenhoek.html](http://www.ucmp.berkeley.edu/history/leeuwenhoek.html) (last visited Mar. 26, 2014).

36. LAQUEUR, *supra* note 21, at 171.

37. BULLOUGH, *supra* note 17, at 15.

38. Tuana, *supra* note 16, at 53.

39. *Id.* at 54. Nicolaas Hartsoeker (1656–1725) published the pencil sketch in *Essai de Dioptrique* in 1694. Cera R. Lawrence, *Nicolaas Hartsoeker*, EMBRYO PROJECT ENCYCLOPEDIA, <http://embryo.asu.edu/pages/nicolaas-hartsoeker> (last modified Sept. 25, 2013).



This material is reproduced with permission of John Wiley & Sons, Inc. and also appears in Nancy Tuana's article *The Weaker Seed: The Sexist Bias of Reproductive Theory*.<sup>40</sup>

---

40. Tuana, *supra* note 16, at 54.

A century later, Erasmus Darwin (grandfather of Charles Darwin)<sup>41</sup> stated that the man supplied the form of the embryo, while the woman provided the oxygen and the food.<sup>42</sup> Astute observers wondered why some children strongly resembled their mothers, if in fact only the father provided the blueprint, but science had an answer for that as well: a concave impression that resembles the woman is in the “little nich[e] of the ova of women,” creating a mold to form the face of the child.<sup>43</sup>

As the science developed on conception and parentage, England had several ways to determine citizenship at birth. As early as 1351, a statute allowed children born abroad to English parents to be considered natural-born English subjects, adhering to the principle of *jus sanguinis*.<sup>44</sup> After King James VI of Scotland became King James I of England in 1603, the question arose whether children born in Scotland after the “union of the crowns” were English citizens.<sup>45</sup> The decision in *Calvin’s Case* in 1608 by the King’s Bench, Common Pleas justices, the Lord Chancellor, and the barons of the Exchequer—fourteen judges in all—was that they were, thus confirming *jus soli* in English law.<sup>46</sup> Those born in Scotland before 1603, such as Calvin’s parents, were still Scottish subjects, not English.<sup>47</sup> Thus, *Calvin’s Case* expressed the common law view that the place of birth, regardless of one’s blood, could be a factor in determining citizenship. As Sir Edward Coke, Chief Justice of the Common Pleas, held,

Every one born within the dominions of the King of England, whether here or in his colonies or dependencies, being under the protection of—therefore, according to our common law, owes allegiance to—the King and is subject to all the duties and entitled to enjoy all the rights and liberties of an Englishman.<sup>48</sup>

---

41. *Erasmus Darwin (1731–1802)*, U. CAL. MUSEUM PALEONTOLOGY, [www.ucmp.berkeley.edu/history/Edarwin.html](http://www.ucmp.berkeley.edu/history/Edarwin.html) (last visited Mar. 26, 2014). His book, *Zoonomia, or, The Laws of Organic Life* (1794–1796), suggested a theory of evolution that his grandson later fully developed. *Id.*

42. Tuana, *supra* note 16, at 55.

43. *Id.* at 56 (quoting 3 JEAN ASTRUC, A TREATISE ON THE DISEASES OF WOMEN 47–48 (1762)).

44. Polly J. Price, *Natural Law and Birthright Citizenship in Calvin’s Case (1608)*, 9 YALE J.L. & HUMAN. 73, 83 (1997) (citing De Natis Ultra Mare, 1350, 25 Edw. 3, c. 2 (Eng.)).

45. *Id.* at 80.

46. *Id.* at 80–83.

47. *Id.* at 82–83.

48. *Id.* (quoting HERBERT BROOM, CONSTITUTIONAL LAW VIEWED IN RELATION TO COMMON LAW, AND EXEMPLIFIED BY CASES 31 (George L. Denman, 2d ed. 1885)). The United Kingdom continued to recognize *jus soli* until 1981. See Naturalization Act, 1870, 33 & 34 Vict., c. 14, § 4 (Eng.); British Nationality Act, 1948, 11 & 12 Geo. 6, c. 56, § 4 (Eng.). The British Nationality Act of 1981 changed the law by requiring that one of the child’s parents be a British citizen even though the child was born on British soil. British Nationality Act, 1981, c. 61, §§ 1, 3 (Eng.).

## II. U.S. CITIZENSHIP AND SCIENCE, 1790 TO THE 1950S

When the United States was first formed, the definition of citizenship was left to the individual states.<sup>49</sup> Thomas Jefferson, then-Governor of Virginia, crafted a statute enacted by his state in 1779 determining that "all white persons born within the territory of this commonwealth" would be citizens.<sup>50</sup> In 1787, the U.S. Constitution granted Congress the authority "[t]o establish an uniform Rule of Naturalization,"<sup>51</sup> which was exercised by the first Congress at its Second Session in 1790.<sup>52</sup> The 1790 Act, in addition to allowing "any alien" who was "a free white person" to apply for citizenship after residing here for two years, provided:

[T]he children of citizens of the United States, that may be born beyond sea, or out of the limits of the United States, shall be considered as natural born citizens: *Provided*, That the right of citizenship shall not descend to persons whose fathers have never been resident in the United States . . . .<sup>53</sup>

In 1795, the 1790 Act was repealed and replaced by a similar provision to provide citizenship for children born abroad.<sup>54</sup> At that time, when Congress first considered citizenship for those born abroad, it was not possible for the birth mother to be anything other than the genetic mother of the child. Whatever her role—whether she contributed some of the seed for the child or merely nourished and housed a preformed child—she was the mother because she had given birth. The "ancient" Latin maxim translated as "the mother is demonstrated by gestation" was coined in 1983,<sup>55</sup> but until the advent of *in vitro* fertilization in the twentieth century, the definition of maternity was universally accepted. In any event, the mother of a child born abroad could not transmit citizenship at birth to her child. Like the 1790 and 1795 statutes, citizenship laws enacted in 1802<sup>56</sup> and 1855<sup>57</sup> required the child's father to be a resident of

49. Price, *supra* note 44, at 141. See also *United States v. Wong Kim Ark*, 169 U.S. 649, 655 (1898) ("The [C]onstitution does not, in words, say who shall be natural-born citizens. Resort must be had elsewhere to ascertain that.") (quoting *Minor v. Happersett*, 88 U.S. 162, 167 (1874)) (internal quotation marks omitted)).

50. James Brown Scott, *Nationality: Jus Soli or Jus Sanguinis*, 24 AM. J. INT'L L. 58, 62 (1930) (referring to the Act of May 3, 1779, ch. 55, 1882 Va. Acts 129).

51. See U.S. CONST. art. I, § 8, cl. 4.

52. *Rogers v. Bellei*, 401 U.S. 815, 823 (1971).

53. Act of Mar. 26, 1790, ch. 3, 1 Stat. 103, 103-04 (creating uniform rules for naturalization).

54. Act of Jan. 29, 1795, ch. 20, 1 Stat. 414, 414-15 (establishing uniform rules for naturalization). The 1795 Act deleted the reference to a child "born beyond sea," but was otherwise nearly identical to the 1790 Act in requiring the child's father to be a resident of the United States. Compare *id.* § 3 ("[T]he children of citizens of the United States, born out of the limits and jurisdiction of the United States, shall be considered as citizens of the United States."), with Act of Mar. 26, 1790, § 1 ("[T]he children of citizens of the United States, that may be born beyond sea, or out of the limits of the United States, shall be considered as natural born citizens.").

55. Baldassi, *supra* note 24, at 6 (quoting U.S. CONGRESS, OFFICE OF TECH. ASSESSMENT, INFERTILITY: MEDICAL AND SOCIAL CHOICES 282 (1988)) (internal quotation marks omitted).

56. Act of Apr. 14, 1802, ch. 28, 2 Stat. 153. The Naturalization Act of 1802 provided that "the children of persons who now are, or have been citizens of the United States, shall, though born

the United States but made no mention of the mother.<sup>58</sup> In 1907, Congress mandated that when a woman married a non-U.S. citizen, she lost her U.S. citizenship.<sup>59</sup> The U.S. Supreme Court upheld the statute's application to a woman who never resided abroad with her alien (British) husband on the grounds that "[t]he identity of husband and wife is an ancient principle of our jurisprudence."<sup>60</sup> The 1907 Act was later narrowed by the 1922 Cable Act to automatically strip the wife of U.S. citizenship only in cases where she married an alien ineligible for citizenship,<sup>61</sup> thus allowing many U.S. citizens with alien husbands to retain their citizenship. Still, the foreign-born children of a U.S. mother and an alien father were not eligible for citizenship at birth until 1934 when Congress amended the statute to include a child "whose father *or mother or both* at the time of the birth of such child is a citizen of the United States" and to require either the citizen father or the citizen mother to reside in the United States before "the birth of such child."<sup>62</sup> As one commentator noted, as of the 1934 Act:

[T]he foreign born children of a Chinese or Japanese woman born in the United States would now be American. This is by way of sex equality, however, not racial equality since previously the children of no American woman, whatever her race, were American by virtue of her nationality. Even under the present law if the native born American woman of Japanese or Chinese decent were to have children born abroad by a husband racially ineligible to become a United States citizen it is not clear that they would have American nationality or be entitled to enter the United States.<sup>63</sup>

Thus, in early U.S. history, and until 1934, the critical question in determining citizenship for a child born abroad was the identity of the child's father. If the mother was married, her husband was presumed to

---

out of the limits and jurisdiction of the United States, be considered as citizens of the United States: *Provided*, that the right of citizenship shall not descend to persons whose fathers have never resided within the United States." *Id.* § 4.

57. Act of Feb. 10, 1855, ch. 71, 10 Stat. 604. An article published in 1853 had pointed out that, by the terms of the April 1802 law, only parents who were U.S. citizens on or before April 14, 1802, could transmit U.S. citizenship to their children born abroad. *The Alienage of the United States*, 2 AM. L. REG. 193, 193 (1854); see also *Weedin v. Chin Bow*, 274 U.S. 657, 663–64 (1927) (discussing Binney's analysis of the 1802 law and the citizenship of children born abroad). The 1855 Act corrected this glitch by allowing persons "whose fathers were or shall be at the time of their birth citizens of the United States" to transmit citizenship to their children born abroad. See § 1, 10 Stat. at 604.

58. *Miller v. Albright*, 523 U.S. 420, 461–62 (1998) (Ginsburg, J., dissenting) (discussing statutes determining citizenship for a child based upon the father's residence).

59. Act of Mar. 2, 1907, ch. 2534, § 3, 34 Stat. 1228, 1229.

60. *Mackenzie v. Hare*, 239 U.S. 299, 311 (1915).

61. Act of Sept. 22, 1922, ch. 411, § 3, 42 Stat. 1021, 1022. An alien ineligible for citizenship referred to "the statutory exclusion of Asians from immigration eligibility." Kristin A. Collins, *A Short History of Sex and Citizenship: The Historians' Amicus Brief in Flores-Villar v. United States*, 91 B.U. L. REV. 1485, 1492 (2011).

62. Act of May 24, 1934, ch. 344, § 1, 48 Stat. 797, 797 (emphasis added).

63. Lester B. Orfield, *The Citizenship Act of 1934*, 2 U. CHI. L. REV. 99, 116 (1934).

be the father—a principle followed in Roman times<sup>64</sup> and in English common law.<sup>65</sup> If the mother was unmarried, the child had no legally declared father or mother from whom to inherit<sup>66</sup> and could not claim U.S. citizenship through either parent. Children born abroad to a U.S. father and an alien secondary wife in a polygamous marriage, for example, were considered illegitimate and thus ineligible for *jus sanguinis*.<sup>67</sup>

Even with the marital presumption, an element of biology had long been part of the paternity determination. As early as the 1700s, the English common law provided that if the husband was “beyond the seas” at the relevant time, for example, he could challenge a finding that he was the father.<sup>68</sup> Science took a long time to ascertain when the “relevant time” was, however. Fluger demonstrated in 1861 that menstruation ceased in women whose ovaries were removed, and speculated “that menstruation and ovulation occurred simultaneously.”<sup>69</sup> As late as the 1890s, American doctors were still unsure how ovulation was triggered and its connection to menstruation;<sup>70</sup> the relationship of hormones to ovulation was not detailed until the 1930s.<sup>71</sup> Thus, evidence to include or exclude a particular man as the father consisted of testimony regarding access to the woman, but until the 1930s, such testimony focused on the wrong time: the period of menstruation rather than ovulation.

The advent of blood testing provided a scientific means to identify, initially, who was *not* the father. In 1901, Dr. Karl Landsteiner announced his theories on blood groups, along with the suggestion that the groupings could be used in cases of disputed paternity, and in 1909 classified human blood into the groups still used today: A, B, AB, and O.<sup>72</sup> These new tests could only be used to *exclude* a man as the father.<sup>73</sup> For example, if the mother’s blood was group A and the child’s blood was

64. See 1 THE DIGEST OF JUSTINIAN, *supra* note 24, at 44; Baldassi, *supra* note 24, at 3.

65. See 2 WILLIAM BLACKSTONE, COMMENTARIES ON THE LAWS OF ENGLAND 446 (14th ed. 1803).

66. See *id.* at 444. “A [child born out of wedlock] was *filius nullius*, the child of no one, and could inherit from neither father nor mother.” JESSE DUKEMINIER & ROBERT H. SITKOFF, WILLS, TRUSTS, AND ESTATES 110 (9th ed. 2013).

67. See *Mason ex rel. Chin Suey v. Tillinghast*, 26 F.2d 588, 588–89 (1st Cir. 1928); *Ng Suey Hi v. Weedon*, 21 F.2d 801, 801–02 (9th Cir. 1927).

68. Glennon, *supra* note 6, at 562–63; accord James O. Pearson, Jr., Annotation, *Proof of Husband’s Impotency or Sterility as Rebutting Presumption of Legitimacy*, 84 A.L.R.3d 495 (1978) (discussing cases where presumptive fathers disputed paternity presumptions).

69. BULLOUGH, *supra* note 17, at 27.

70. *Id.*

71. LAQUEUR, *supra* note 21, at 9. Before then, “standard medical-advice books recommended that to avoid conception women should have intercourse during the middle of their menstrual cycles, during days twelve through sixteen, now known as the period of *maximum fertility*.” *Id.*

72. Karl Landsteiner—Biographical, NOBELPRIZE.ORG, [http://www.nobelprize.org/nobel\\_prizes/medicine/laureates/1930/landsteiner-bio.html](http://www.nobelprize.org/nobel_prizes/medicine/laureates/1930/landsteiner-bio.html) (last visited Mar. 26, 2014).

73. William Edward Taay, *Blood Tests to Negative Paternity*, 23 MARQ. L. REV. 126, 126 (1939) (citing *State v. Wright*, 17 N.E.2d 428, 431 (Ohio Ct. App. 1938), *rev’d*, 20 N.E.2d 229 (Ohio 1939)) (discussing the use of blood-grouping tests).

group B, the father must have group B in his blood, and thus a father in group O would be excluded.<sup>74</sup> Although these blood tests were widely accepted in paternity cases in Europe in the late 1920s,<sup>75</sup> American courts were much more reluctant to consider them, even after Dr. Landsteiner won the Nobel Prize in Medicine in 1930 for this work.<sup>76</sup> U.S. courts struggled with three issues regarding the tests in the 1930s and 1940s: (1) whether the science was sufficiently established to admit the evidence; (2) if the evidence was admitted, how much weight it should be given; and (3) if a party refused to consent to a blood test, whether the court had the power to order it. The Supreme Court of South Dakota held in 1933 that the trial judge's refusal to order the mother and child to submit to a blood test was not an abuse of discretion because "it insufficiently appears that the validity of the proposed test meets with such generally accepted recognition as a scientific fact among medical men as to say that it constituted an abuse of discretion for a court of justice to refuse to take cognizance thereof. . . ."<sup>77</sup> Demonstrating how quickly the court's view of the science was changing, the same court clarified its decision in 1936, stating:

[I]t is our considered opinion that the reliability of the blood test is definitively, and indeed unanimously, established as a matter of expert scientific opinion entertained by authorities in the field, and we think the time has undoubtedly arrived when the results of such tests, made by competent persons and properly offered in evidence, should be deemed admissible in a court of justice whenever paternity is in issue.<sup>78</sup>

Nevertheless, the court found no error in the trial court's refusal to order blood tests in 1931 because "the literature of the topic of the scientific reliability of the blood test (at least the body of such literature available in the English language) is, for the most part, subsequent to that date."<sup>79</sup>

Even after courts ruled the evidence was admissible, and science agreed that the blood test could definitively exclude someone as a par-

---

74. See, e.g., *Arais v. Kalensnikoff*, 74 P.2d 1043, 1045 (Cal. 1937) ("According to the Mendelian law of inheritance, this blood individuality is an hereditary characteristic which passes from parent to child, and no agglutinating substance can appear in the blood of a child which is not present in the blood of one of its parents. According to the testimony of the physician in this case, the blood of the child 'contains the agglutinogen B which is not present in the blood of the mother and therefore must have been present in the blood of the father'; but the blood of the defendant does not contain this element. . . . [T]herefore . . . the defendant cannot be the father." (citation omitted)); *Commonwealth v. Zammarelli*, 17 Pa. D. & C. 229, 230 (1931).

75. *In re Swahn's Will*, 285 N.Y.S. 234, 236 (Sur. Ct. 1936) (finding credible evidence "that blood-grouping tests are commonly accepted as admissible evidence on questions of paternity in the courts of Germany, Austria, Denmark, Sweden, Italy, Russia, Poland, Japan, and England" with "over 5,000 instances . . . between 1926 and 1929" in continental Europe).

76. *Karl Landsteiner—Biographical*, *supra* note 72.

77. *State v. Damm (Damm I)*, 252 N.W. 7, 12 (S.D. 1933), *aff'd*, 266 N.W. 667 (S.D. 1936).

78. *State v. Damm (Damm II)*, 266 N.W. 667, 668 (S.D. 1936).

79. *Id.* at 671.

ent,<sup>80</sup> triers of fact were not always persuaded by the expert testimony. The Supreme Court of California upheld a decision that the defendant was the father despite blood test evidence that excluded him, stating that the trial court appropriately weighed "the testimony of the mother and her witnesses on the one hand and the evidence of the defendant, including the blood test, on the other."<sup>81</sup> One of the most famous cases involved the actor Charlie Chaplin. Despite a stipulation from the mother and her attorney that the paternity case would be dismissed with prejudice should the blood test exclude Chaplin as the father, and a subsequent test that did so exclude him, the jury's verdict of paternity was upheld.<sup>82</sup>

Once courts decided the tests were admissible, a further problem remained: did courts have the inherent power to order a reluctant party to submit to the test? An early decision in New York holding that a court had such power was unanimously reversed,<sup>83</sup> prompting the New York legislature to enact a statute in 1935 to grant such power to a court "[w]herever it shall be relevant to the prosecution or defense of an action."<sup>84</sup> Similar statutes were enacted in Wisconsin in 1937,<sup>85</sup> New Jersey in 1939,<sup>86</sup> and Ohio in 1940.<sup>87</sup> In the absence of a specific blood test statute, some courts found "an inherent power to order [a] physical examination" without a specific statute.<sup>88</sup> A federal court interpreted Federal Rule of Civil Procedure 35, which generally allowed a court to order a physical examination if the condition is in controversy, to extend to a blood test.<sup>89</sup> The Uniform Act on Blood Tests to Determine Paternity, proposed in 1952, provided a solution to these questions, but was adopted by very

---

80. While most of the cases involved paternity, the tests could also be used to determine maternity. Ludvig Hektoen, *Biologic Tests for Medicolegal Purposes*, 199 NEW ENG. J. MED. 120, 126 (1928) (two women both claimed to be the mother of a child).

81. *Arais v. Kalensnikoff*, 74 P.2d 1043, 1047 (Cal. 1937).

82. *Berry v. Chaplin*, 169 P.2d 442, 449-52 (Cal. Dist. Ct. App. 1946).

83. *Beuschel v. Manowitz*, 271 N.Y.S. 277, 280-82 (Sup. Ct. 1934), *rev'd*, 272 N.Y.S. 165 (App. Div. 1934).

84. See *In re Swahn's Will*, 285 N.Y.S. 234, 237-38 (Sur. Ct. 1936) (quoting section 306-a of the New York Civil Practice Act) (internal quotation mark omitted).

85. WIS. STAT. § 325.23 (1937); see also *Beach v. Beach*, 114 F.2d 479, 480 n.4 (D.C. Cir. 1940) (identifying Wisconsin's statute as an example of a state law authorizing courts to order blood tests to determine paternity when relevant).

86. N.J. STAT. ANN. § 2:99-3 to -4 (West 1939); see also *Beach*, 114 F.2d at 480 n.4 (identifying New Jersey's statute as an example of a state law authorizing courts to order blood tests to determine paternity when relevant).

87. OHIO REV. CODE ANN. § 12122.1 to .2 (West 1940); see also *Beach*, 114 F.2d at 480 n.4 (identifying Ohio's statute as an example of a state law authorizing courts to order blood tests to determine paternity when relevant).

88. See, e.g., *Damm II*, 266 N.W. 667, 670 (S.D. 1936) ("Though the cases are not entirely in accord, it is distinctly the majority view that the courts have an inherent power to order physical examination even in the absence of statute.").

89. See, e.g., *Beach*, 114 F.2d at 481 (holding that Fed. R. Civ. P. 35(a), which allows a court to order a mental or physical examination of a party in an action in which such condition is in controversy, gives a court authority to order a party to submit to a blood test).



few states in the 1950s and 1960s.<sup>90</sup> Section 1 of the Uniform Act empowered the court to “order the mother, child[,] and alleged father” to undergo blood tests in any civil action “in which paternity [wa]s a relevant fact.”<sup>91</sup> Section 4 declared that, if all the experts concluded that the alleged father was not the father of the child, “the question of paternity shall be resolved accordingly.”<sup>92</sup> If the blood tests did not exclude the father, the court exercised its discretion on whether to admit the evidence because the test was capable of excluding only 50% of the male population as a potential parent.<sup>93</sup>

### III. *JUS SANGUINIS* FROM 1952 TO THE PRESENT

In 1952, Congress enacted the Immigration and Nationality Act (INA), which remains in large part the law today.<sup>94</sup> The Act gave the Secretary of State the responsibility to administer and enforce the law “relating to . . . the determination of nationality of a person not in the United States.”<sup>95</sup> The INA required a blood relationship to transmit citizenship from a U.S. citizen father to a child born out of wedlock abroad.<sup>96</sup> At that time, blood tests were admissible in many American courts to exclude a man as the possible father of the child, but other evidence was needed to establish paternity.<sup>97</sup> Nineteen states adopted the 1973 Uniform Parentage Act,<sup>98</sup> which provided for blood tests in Section 11 and governed the admissibility of the results in a paternity action in Section 12.<sup>99</sup> However, it was not until the development of the human leukocyte antigen (HLA) test in the late 1970s, and then DNA tests, that the parent could be determined solely by science in the vast majority of cases. HLA tests, which examined tissue for various antigen markers, increased the reliability of the results, especially when used in conjunction with blood tests, to exclude over ninety-one percent of all non-

---

90. A. Frederick Harris, *Some Observations on the Un-Uniform Act on Blood Tests to Determine Paternity*, 9 VILL. L. REV. 59 app. at 76 (1963). California, New Hampshire, Oregon, Pennsylvania, Utah, and Michigan initially adopted the 1952 Act. *Id.* at 59 n.2. California, Louisiana, New Hampshire, Oregon, and Pennsylvania currently have versions of the Uniform Act. CAL. FAM. CODE §§ 7550–58 (West 2013); LA. REV. STAT. ANN. §§ 9:396–398.2 (2013); N.H. REV. STAT. ANN. §§ 522:1–9 (2013); OR. REV. STAT. ANN. §§ 109.250–.264 (West 2013); 23 PA. CONS. STAT. § 5104 (2013).

91. Harris, *supra* note 90, app. at 76.

92. *Id.*

93. Kevin L. Petrasic, Note, *Cutchember v. Payne: Approaching Perfection in Paternity Testing*, 34 CATH. U. L. REV. 227, 231–32 (1984).

94. See U.S. DEP'T OF STATE, FOREIGN AFFAIRS MANUAL, 7 FAM §§ 1133.1–.3 (2010).

95. Immigration and Nationality Act of 1952 (INA), ch. 477, § 104, 66 Stat. 163, 174 (current version at 8 U.S.C. § 1104(a)(3) (2012)).

96. *Id.* § 309, 66 Stat. 163, 238.

97. Glennon, *supra* note 6, at 556.

98. *Why States Should Adopt UPA*, UNIFORM L. COMMISSION, <http://uniformlaws.org/Narrative.aspx?title=Why%20States%20Should%20Adopt%20UPA> (last visited May 15, 2014).

99. *Parentage Act Summary*, UNIFORM L. COMMISSION, <http://uniformlaws.org/ActSummary.aspx?title=Parentage%20Act> (last visited Mar. 27, 2014).

fathers.<sup>100</sup> In the late 1980s, DNA tests allowed courts to determine the probability of paternity at a rate over ninety-nine percent.<sup>101</sup>

Because the birth mother was always the genetic mother until the advent of *in vitro* fertilization in 1978,<sup>102</sup> determining maternity was simple. Courts routinely noted that there was no problem establishing maternity; the difficulty was always paternity.<sup>103</sup> For children conceived without assisted reproduction, American courts and statutes typically determine paternity by first ascertaining whether the birth mother is married; if she is, then her husband is the presumed father.<sup>104</sup> Several states allow the husband a brief window of time to dispute his paternity before it becomes conclusive,<sup>105</sup> while others impose generous or no time limits on the presumed father's right to rebut.<sup>106</sup> To preserve family harmony, a

100. Petrasic, *supra* note 93, at 233–34.

101. Glennon, *supra* note 6, at 555–56.

102. In vitro fertilization (IVF) involves surgically removing the eggs from a woman and combining them with the sperm in the lab to form a preembryo; the preembryo is then implanted in a woman's uterus. In 1978, doctors in the United Kingdom announced the first successful birth of a child after using IVF. 1978: 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 Mar. 27, 2014).

103. *E.g.*, Soos v. Superior Court, 897 P.2d 1356, 1362 (Ariz. Ct. App. 1994) (Gerber, J., concurring) (stating that the issue of maternity "seems to present no great practical problem because maternal identity always seems to be a given fact"); Lohman v. Carnahan, 963 So. 2d 985, 988 (Fla. Dist. Ct. App. 2007) ("For centuries, the law developed on the assumption that a mother's parentage was certain, but a father's connection to a child could be open to doubt."). *But see* Charles P. Kindregan, Jr., *Considering Mom: Maternity and the Model Act Governing Assisted Reproductive Technology*, 17 AM. U. J. GENDER SOC. POL'Y & L. 601, 603–04 (2009) (recognizing that assisted reproductive technology may complicate maternity determinations).

104. *E.g.*, ARIZ. REV. STAT. ANN. § 25-814 (2013); GA. CODE ANN. § 19-7-20 (2013); HAW. REV. STAT. § 584-4 (2013); KAN. STAT. ANN. § 23-2208 (2013); UTAH CODE ANN. § 78B-15-204 (West 2013). This marital presumption may apply to a same-sex married couple in a state that recognizes such marriages. In *Della Corte v. Ramirez*, the court held that because Della Corte (the birth mother) and Ramirez were married when the child was born and Ramirez had consented to the procedure, Ramirez was the child's legal parent pursuant to a Massachusetts law stating that "[a]ny child born to a married woman as a result of artificial insemination with the consent of her husband, shall be considered the legitimate child of the mother and such husband." 961 N.E.2d 601, 602–03 (Mass. App. Ct. 2012) (emphasis omitted) (quoting MASS. GEN. LAWS ch. 46, § 4B (2012)) (internal quotation marks omitted). The court wrote, "We do not read 'husband' to exclude same-sex married couples, but determine that same-sex married partners are similarly situated to heterosexual couples in these circumstances." *Della Corte*, 961 N.E.2d at 603.

105. In California and Delaware, for example, the husband has two years to challenge the presumption of paternity. CAL. FAM. CODE § 7541 (West 2013); DEL. CODE ANN. tit. 13, § 8-607 (2013); *In re Paulson*, No. CS99-03153, 2006 Del. Fam. Ct. LEXIS 281, at \*30–31 (Del. Fam. Ct. Sept. 15, 2006) (referencing Delaware's presumed paternity statute). In Louisiana, the husband has one year from the day he "learns or should have learned of the birth of the child," unless the husband and wife lived separate and apart for the 300 days preceding the birth. LA. CIV. CODE ANN. art. 189 (2013). Similarly, the District of Columbia provides two years to rebut the presumption unless the presumed father did not live with the mother for the 300 days preceding the birth and did not openly hold out the child as his own. D.C. CODE § 16-2342 (2012).

106. *E.g.*, ALA. CODE § 26-17-607(a) (2013); ARIZ. REV. STAT. ANN. § 25-814 (2013); COLO. REV. STAT. § 19-4-105 (2013); GA. CODE ANN. § 19-7-20 (2013); HAW. REV. STAT. § 584-4 (2013); KAN. STAT. ANN. § 23-2209 (2013) (a child or a person on behalf of the child can bring an action any time if the relationship is presumed, but if not, a child or a person on behalf of the child can bring an action "at any time until three years after the child reaches the age of majority"); ME. REV. STAT. ANN. tit. 19-A, § 1562 (2013); MD. CODE ANN., FAM. LAW § 5-1027 (West 2013); UTAH

man who believes he is the genetic father but is not married to the mother has no standing to assert his parenthood in many states.<sup>107</sup> Thus, in some cases genetics is trumped by the marital presumption for paternity.

If the birth mother is not married, genetics play a wider role in determining paternity, although they still might not be conclusive. In a typical statute, the genetic father can claim paternity by participating in the child's life.<sup>108</sup> DNA alone is not enough; the man must act as the child's parent in some way.<sup>109</sup> As the United States Supreme Court observed in *Lehr v. Robertson*<sup>110</sup>:

The significance of the biological connection is that it offers the natural father an opportunity that no other male possesses to develop a relationship with his offspring. If he grasps that opportunity and accepts some measure of responsibility for the child's future, he may enjoy the blessings of the parent-child relationship and make uniquely valuable contributions to the child's development. If he fails to do so, the Federal Constitution will not automatically compel a state to listen to his opinion of where the child's best interests lie.<sup>111</sup>

In 1978, when the first child was born using *in vitro* fertilization, maternity became an issue as well. Now that doctors were removing a

CODE ANN. § 78B-15-607 (West 2013) (presumption for child of marriage may be rebutted at any time prior to filing action for divorce or in pleadings for divorce).

107. *E.g.*, *P.G. v. G.H.*, 857 So. 2d 823, 825, 830 (Ala. Civ. App. 2002) (holding that despite DNA test establishing ninety-nine percent probability that G.H., not the birth mother's husband, was the child's father, G.H. lacked standing to assert paternity as long as birth mother's husband maintained that he was father of her child); *Rodney F. v. Karen M.*, 71 Cal. Rptr. 2d 399, 402-03 (Cal. Ct. App. 1998) (holding that Karen M.'s husband, not Rodney F., was the "presumed father" of the child born to Karen M., a married woman, and thus Robert F. had no standing to sue for paternity); *J.S. v. S.M.M.*, 67 So. 3d 1231, 1233 (Fla. Dist. Ct. App. 2011) (S.M.M. could not challenge paternity of husband when child born to wife of intact marriage); *Barnes v. Jeudevine*, 718 N.W.2d 311, 315-16 (Mich. 2006) (affidavit of parentage and birth certificate naming former boyfriend as child's father did not rebut presumption that birth mother's husband was father; boyfriend had no standing to assert paternity); Susan Frelich Appleton, *Presuming Women: Revisiting the Presumption of Legitimacy in the Same-Sex Couples Era*, 86 B. U. L. REV. 227, 236 n.37 (2006) (identifying a few states that allow a man to challenge a husband's status as father, but noting that, "[n]onetheless, procedural doctrines of finality, such as issue preclusion and collateral estoppel, prevent genetics-based challenges to adjudicated determinations of the husband's presumed paternity").

108. *E.g.*, UNIF. PARENTAGE ACT § 4(a) (1973) ("A man is presumed to the natural father of a child if: . . . (4) while the child is under the age of majority, he receives the child into his home and openly holds out the child as his natural child . . ."); UNIF. PARENTAGE ACT § 204(a) (2002) ("A man is presumed to be the father of a child if: . . . (5) for the first two years of the child's life, he resided in the same household with the child and openly held out the child as his own").

109. *Caban v. Mohammed*, 441 U.S. 380, 389, 392 (1979) (holding that a state statute that allowed unwed mothers, but not unwed fathers, a veto over the adoption of the couple's children violated the Equal Protection Clause of the U.S. Constitution, but noting, however, that "[i]n those cases where the father never has come forward to participate in the rearing of his child, nothing in the Equal Protection Clause precludes the State from withholding from him the privilege of vetoing the adoption of that child"); *Quilloin v. Walcott*, 434 U.S. 246, 254 n.14, 255-56 (1978) (holding that adoption of a child did not violate the genetic father's due process and equal protection rights because, for eleven years between the child's birth and the adoption petition, the man had not legitimized the child and did not have custody).

110. 463 U.S. 248 (1983).

111. *Id.* at 262 (footnote omitted).

woman's eggs and fertilizing them in the lab, the woman who gave birth might not be the genetic mother: She could be using eggs donated from another woman, or she could be a gestational carrier. Rather than assume that the woman who gave birth was the mother, the State Department required the woman to have a blood relationship to the child as well, even if she was married to the child's genetic father.<sup>112</sup> "The laws on acquisition of U.S. citizenship through a parent have always contemplated the existence of a blood relation between the child and the parent(s) through whom citizenship is claimed,"<sup>113</sup> the Department of State Foreign Affairs Manual asserts. Thus, even if the child is born in wedlock and presumed to be the issue of that marriage, "This presumption [of parentage] is not determinative in citizenship cases . . . because an actual blood relationship to a U.S. citizen parent is required."<sup>114</sup> The Ninth Circuit has rejected the State Department's interpretation in two cases that did not involve ART, holding that a child was entitled to U.S. citizenship even though the child lacked a genetic tie to the U.S.-citizen parent.<sup>115</sup> Others have criticized the State Department's interpretation of the Act, arguing that it goes beyond the language of the statute.<sup>116</sup>

In late 2013, the State Department quietly amended its website to recognize giving birth as a means to prove maternity.<sup>117</sup> With this change, the State Department reflected language in recent U.S. Supreme Court cases that assumes that the woman who gives birth is also the genetic mother of the child.<sup>118</sup> Justice Stevens's opinion in *Miller v. Albright*<sup>119</sup> in 1998, for example, is based solidly on that assumption. In noting the requirements for a single woman to convey her U.S. citizenship to her child born abroad, the court stated that "she must first choose to carry the pregnancy to term and reject the alternative of abortion . . .

112. U.S. DEP'T OF STATE, FOREIGN AFFAIRS MANUAL, 7 FAM § 1131.4-1.a (2010).

113. *Id.*

114. *Id.*

115. See *Solis-Espinoza v. Gonzales*, 401 F.3d 1090, 1094 (9th Cir. 2005) (holding that a child was born in wedlock and was not deportable, even though the child had no genetic tie to a U.S. citizen, because the birth mother gave up the child to the genetic father and his U.S. citizen wife); *Scales v. INS*, 232 F.3d 1159, 1165-66 (9th Cir. 2000) (holding that a child was born in wedlock and was thus a "legitimate child" under the INA because, at the time of the child's birth, the Philippine mother was married to a U.S. citizen, even though the child was conceived prior to the marriage by a non-U.S. father).

116. E.g., Titshaw, *supra* note 5, at 105; Bernard Friedland & Valerie Epps, *The Changing Family and the U.S. Immigration Laws: The Impact of Medical Reproductive Technology on the Immigration and Nationality Act's Definition of the Family*, 11 GEO. IMMIGR. L.J. 429, 451 (1997) (arguing, for example, that in cases where donor eggs are fertilized with the husband's sperm and then implanted into the wife, "[t]here seems to be no reason not to treat the wife as the mother of the child for immigration purposes, where it is clear that the egg donor waived any rights in possible offspring").

117. "[A] U.S. citizen mother must be either the genetic or the gestational and legal mother of the child at the time and place of the child's birth." U.S. Dep't of State, *supra* note 5.

118. See, e.g., *Miller v. Albright*, 523 U.S. 420, 433-34 (1998); *Nguyen v. INS*, 533 U.S. 53, 61 (2001).

119. 523 U.S. 420 (1998).

She must then actually give birth to the child.”<sup>120</sup> By so doing, “[t]he blood relationship to the birth mother is immediately obvious and is typically established by hospital records and birth certificates” thus differentiating her conduct from that of the unwed father, who may not even be aware of the birth.<sup>121</sup> Writing for the majority in a more recent citizenship case, Justice Kennedy likewise assumed that the birth mother is always genetically related to her child. He declared that “[f]irst, a citizen mother expecting a child and living abroad has the right to reenter the United States so the child can be born here and be a [Fourteenth] Amendment citizen.”<sup>122</sup> That option would not be available if a foreign gestational carrier gives birth to the child. Echoing Justice Stevens in *Miller*, Justice Kennedy asserted that “[i]n the case of the mother, the [biological parent–child] relation is verifiable from the birth itself.”<sup>123</sup> If that were true, however, all three of the women in our case studies, American citizens who gave birth in Switzerland, Israel and India, would have transmitted their U.S. citizenship to their children had the language now used on the website been followed.<sup>124</sup>

#### IV. DETERMINING PARENTAGE FOR A CHILD CONCEIVED USING ART

How should we determine parentage, and in particular maternity, now that genetics and gestation can be separated through assisted reproduction technology (ART)? For centuries, we had only one test for maternity: the mother was (and still is, in most cases) the woman who gave birth, the parturient. Many countries have adopted the parturient rule, including Argentina, Austria, Chile, France, Germany, Japan, the Netherlands, Portugal, Spain, Switzerland, and the U.K.<sup>125</sup> The rule is justified because:

[I]t is predictable, pragmatic and not dependent on further analysis, such as a genetic test; it thus promotes legal certainty. Second, the woman carrying the child is the person who, during pregnancy and at birth, establishes a strong physical and psychological bond with the child. . . .

. . . .

This can also be [a] coherent choice for legal systems where surrogate motherhood, while not prohibited, is discouraged or strongly regulated. If a surrogacy agreement is entered into nonetheless, without complying with the prescribed rules, the consequence again

120. *Miller*, 523 U.S. at 433.

121. *Id.* at 436, 438.

122. *Nguyen v. INS*, 533 U.S. 53, 61 (2001).

123. *Id.* at 62.

124. The State Department website now recognizes the “genetic or the gestational” mother to transmit her citizenship to the child. U.S. Dep’t of State, *supra* note 5 (emphasis added).

125. Daniel Gruenbaum, *Foreign Surrogate Motherhood: Mater Semper Certa Erat*, 60 AM. J. COMP. L. 475, 476–77 (2012).

would be that the parturient, not the commissioning woman, should be considered the legal mother.<sup>126</sup>

As a New Jersey Court observed in denying a pre-birth order that would have declared that the genetic parents, not the gestational carrier, were the parents of the child:

A bond is created between a gestational mother and the baby she carries in her womb for nine months. During the pregnancy, the fetus relies on the gestational mother for a myriad of contributions. A gestational mother's endocrine system determines the timing, amount and components of hormones that affect the fetus. The absence of any component at its appropriate time will irreversibly alter the life, mental capacity, appearance, susceptibility to disease and structure of the fetus forever. The gestational mother contributes an endocrine cascade that determines how the child will grow, when its cells will divide and differentiate in the womb, and how the child will appear and function for the rest of its life.<sup>127</sup>

Susan Appleton favors the parturient rule as a functional test that a woman can meet "in an objectively ascertainable way."<sup>128</sup> Unlike a genetic test, which would "wreak havoc" with donated gametes and would require routine genetic testing, or an intent-based test, which requires a court to ascertain the parents, Appleton's test recognizes that a woman who gestates a child for nine months has performed parental functions.<sup>129</sup> Jennifer Hendricks also advocates for the parturient rule, emphasizing that "[a] woman acquires initial parental rights by having biological offspring whom she gestates and to whom she gives birth; a man acquires similar rights by caring for his offspring after they are born."<sup>130</sup> Like Appleton, she notes that the test also allows maternity to be determined without involvement by the state.<sup>131</sup>

The chief consequence of the parturient test is that it excludes those who want genetic children if neither partner can gestate a child, because the gestational carrier is deemed the mother.<sup>132</sup> For states that seek to ban

126. *Id.* at 477-79 (footnote omitted).

127. *A.H.W. v. G.H.B.*, 772 A.2d 948, 953-54 (N.J. Super. Ct. Ch. Div. 2000).

128. Appleton, *supra* note 107, at 283.

129. *Id.* at 283-84.

130. Jennifer S. Hendricks, *Essentially a Mother*, 13 WM. & MARY J. WOMEN & L. 429, 444 (2007) (footnote omitted).

131. *Id.* at 466.

132. Susan Appleton has pointed out a possible solution that some scholars have advocated: apply the parturient rule only in cases of coital reproduction and donor insemination, but not when a gestational carrier is used. Appleton, *supra* note 107, at 264-66. Ultimately, she rejected this variation:

Try as I might, I cannot escape the conclusion that, in applying a functional test to construct a default rule operative at the time of birth, the woman gestating the pregnancy—the "surrogate"—will always have met the test, given the unique parental functions she has performed during pregnancy . . .

or limit gestational carrier arguments, this would be a positive outcome of the parturient test, even though it would preclude a number of infertile couples, including all gay couples, from having children with a genetic tie to one of the intended parents. Several states have attempted to curb the use of gestational carrier agreements by stating that the gestational carrier is the legal mother of the resulting child,<sup>133</sup> but an irrefutable presumption of maternity has been successfully challenged in two states.<sup>134</sup>

The highly publicized “Baby Manji” case illustrates the danger of the parturient test for a gestational carrier. In 2007, a Japanese couple, Ikufumi and Yuki Yamada, entered into a gestational carrier agreement with an Indian woman, Pritiben Mehta.<sup>135</sup> The Yamadas were not alone; at that time India’s commercial surrogacy industry was estimated to bring in \$445 million per year.<sup>136</sup> An anonymously donated egg was fertilized with Mr. Yamada’s sperm, and the resulting pre-embryo was implanted in Ms. Mehta.<sup>137</sup> The Yamadas divorced in June 2008, one month before Baby Manji was born, and only Mr. Yamada sought parentage of the child.<sup>138</sup> The Japanese Embassy in India refused to give the child a passport or visa because Japanese law does not recognize surrogate children.<sup>139</sup> India would not issue a birth certificate because Indian law requires both the mother and the father to be named, and authorities were unsure whether the gestational carrier, the egg donor, or the intended mother was the mother of the child, especially since none of the three sought to be declared the mother.<sup>140</sup> With no birth certificate, India refused to issue a passport, and so Baby Manji was stateless. Mr. Yamada did not have the option to adopt his own genetic child; an 1890 law prohibits single men from adopting baby girls.<sup>141</sup> Following argument in the India Supreme Court, the Indian government agreed to issue an identity

---

*Id.* at 275. The new Uniform Probate Code (UPC) amendments (2008) for children of assisted reproduction have adopted this solution. UPC § 2-120 declares that the woman who gives birth is the mother if she is not a gestational carrier; another section, UPC § 2-121, applies when a gestational carrier is used to declare that the woman who gives birth is ordinarily not considered the mother of the child. Kristine S. Knaplund, *The New Uniform Probate Code’s Surprising Gender Inequities*, 18 DUKE J. GENDER L. & POL’Y 335, 341 & nn.46–48 (2011).

133. ARIZ. REV. STAT. § 25-218, *invalidated by* Soos v. Superior Court, 897 P.2d 1356 (Ariz. Ct. App. 1994); UTAH CODE ANN. § 76-7-204 (repealed 2005).

134. Soos, 897 P.2d at 1360–61; J.R. v. Utah, 261 F. Supp. 2d 1268, 1283 (D. Utah 2002).

135. Kari Points, *Commercial Surrogacy and Fertility Tourism in India: The Case of Baby Manji*, KENAN INST. FOR ETHICS DUKE U. 2 (2009), *available at* <https://web.duke.edu/kenanethics/CaseStudies/BabyManji.pdf>.

136. *Id.* at 3.

137. *Id.* at 2.

138. *Japan Gate-Pass for Baby Manji*, TELEGRAPH (Oct. 18, 2008), [http://www.telegraphindia.com/1081018/jsp/nation/story\\_9984517.jsp](http://www.telegraphindia.com/1081018/jsp/nation/story_9984517.jsp).

139. Points, *supra* note 135, at 5.

140. *Id.*

141. *Id.*

certificate for Baby Manji, after which the Japanese embassy issued her a one-year visa to travel to Japan.<sup>142</sup>

Some argue that the parturient test shortchanges the harm suffered by the intended parents while emphasizing the loss felt by the gestational carrier;<sup>143</sup> it assumes that the bond felt by the parturient is superior to those developed by parents who lack a genetic or adoptive tie to the child, an assumption that is not supported by existing studies.<sup>144</sup> It also allows a gestational carrier who has agreed to relinquish the child at birth to renege on her promise.<sup>145</sup> The test places great emphasis on the bond formed during pregnancy, arguably making it superior to parental bonds formed later. Part of this bond may be chemical. Many pregnant women experience an increase in the hormone oxytocin (OT), which is believed to encourage postpartum behaviors (such as nursing) and to “prime[] the mental processes required for affiliative bonds.”<sup>146</sup> “[M]aternal bonding to the fetus during the third trimester was predicted by the increase in plasma OT from the 1st to the 3rd trimester, indicating dynamic associations between OT and the evolving maternal-infant bond.”<sup>147</sup> But not all pregnant women have high levels of OT; those with low levels are associated with symptoms of depression both before and after the birth.<sup>148</sup> High OT levels are also found in foster parents<sup>149</sup> and women playing with children not their own.<sup>150</sup> A number of studies have found that adoptive parents and their children have strong relationships.<sup>151</sup> Thus, the

---

142. Finally, *Baby Manji Flies to Papa in Japan Today*, TIMES INDIA (Oct. 31, 2008, 17:56 IST), [http://articles.timesofindia.indiatimes.com/2008-10-31/jaipur/27907561\\_1\\_japanese-surrogate-baby-manji-yamada-surrogate-child](http://articles.timesofindia.indiatimes.com/2008-10-31/jaipur/27907561_1_japanese-surrogate-baby-manji-yamada-surrogate-child).

143. See, e.g., John Lawrence Hill, *What Does It Mean to Be a “Parent”? The Claims of Biology as the Basis for Parental Rights*, 66 N.Y.U. L. REV. 353, 407 (1991); Marjorie Maguire Shultz, *Reproductive Technology and Intent-Based Parenthood: An Opportunity for Gender Neutrality*, 1990 WIS. L. REV. 297, 366 (1990).

144. See Hill, *supra* note 143, at 399–400.

145. *Id.* at 393; John A. Robertson, *Embryos, Families, and Procreative Liberty: The Legal Structure of the New Reproduction*, 59 S. CAL. L. REV. 939, 1014–15 (1986); Shultz, *supra* note 143, at 384.

146. Ruth Feldman et al., *Evidence for a Neuroendocrinological Foundation of Human Affiliation: Plasma Oxytocin Levels Across Pregnancy and the Postpartum Period Predict Mother-Infant Bonding*, 18 PSYCHOL. SCI. 965, 969 (2007). See also Wendy Saltzman & Dario Maestripieri, *The Neuroendocrinology of Primate Maternal Behavior*, 35 PROGRESS NEURO-PSYCHOPHARMACOLOGY & BIOLOGICAL PSYCHIATRY 1192, 1197 (2011) (noting the correlation of OT and attachment to fetus, such that OT may act to facilitate the onset of maternal behavior).

147. Ruth Feldman, *Oxytocin and Social Affiliation in Humans*, 61 HORMONES & BEHAV. 380, 384 (2012).

148. *Id.* at 386; see also Feldman et al., *supra* note 146, at 969.

149. Feldman et al., *supra* note 146, at 386.

150. Johanna Bick & Mary Dozier, *Mothers’ Concentrations of Oxytocin Following Close, Physical Interactions with Biological and Nonbiological Children*, 52 DEVELOPMENTAL PSYCHOBIOLOGY 100, 104 (2010) (“Mothers showed higher levels of oxytocin following interactions with unfamiliar children than following interactions with their own children.”).

151. Hill, *supra* note 143, at 402–03 & n.255; Steven L. Nickman et al., *Children in Adoptive Families: Overview and Update*, 44 J. AM. ACAD. CHILD & ADOLESCENT PSYCHIATRY 987, 989 (2005) (stating that in a study of 715 adoptive families in the United States, ninety-five percent of the adoptive parents endorsed the statement “I feel deeply attached to my child” (internal quotation marks omitted)).



parturient test may assume a strong bond where none in fact exists, and discount the bonds formed between parents and children after the child's birth.

In the three cases cited above,<sup>152</sup> in which American women used donated ova to give birth to a child in Switzerland, Israel or India, a parturient test would provide the most equitable result. All three women used donated eggs to become pregnant and give birth to children that they intended to raise. In the United States, each of the three women would be the presumed mother because she gave birth to the child.<sup>153</sup> No one is likely to challenge her status as the mother if the egg donor is truly a donor,<sup>154</sup> although many states have yet to enact statutes eliminating parental status for an egg donor.<sup>155</sup> Thus, for our three present cases, the matter could be easily resolved by changing the State Department regulations to mirror existing state law and the language on the State Department's website. However, because a parturient test would exclude infertile couples from being presumed parents in many cases, other parentage tests should also be considered.

Now that the science has progressed to the point that we can positively identify a child's genetic parents with a very high degree of certainty,<sup>156</sup> should that be our test for parentage? Anthony Miller is a key proponent of the view that genetics should be one of the tests for parentage, arguing that the biological connection is unique and worthy of constitutional protection.<sup>157</sup> Indeed, he asserts that presumptions (such as the marital presumption) that prevent a genetic father from proving paternity may violate a man's substantive and procedural due process rights.<sup>158</sup> A genetic test would always exclude at least half of a same-sex couple from claiming parentage; it would also insert a third (or even fourth) party into

---

152. See *supra* notes 12–14 and accompanying text.

153. UNIF. PARENTAGE ACT § 201(a)(1) (2002); Malina Coleman, *Gestation, Intent, and the Seed: Defining Motherhood in the Era of Assisted Human Reproduction*, 17 CARDOZO L. REV. 497, 524 (1996).

154. See, e.g., *K.M. v. E.G.*, 117 P.3d 673, 675, 678, 682 (Cal. 2005) (concluding the woman who donated an egg to her same-sex partner and the woman who gives birth to the child are both parents).

155. See CAL. FAM. CODE § 7613(b) (West 2012); 750 ILL. COMP. STAT. 40/3(b) (2013); KAN. STAT. ANN. § 23-2208(f) (West 2013); MINN. STAT. § 257.56(2) (2013); MO. REV. STAT. § 210.824(2) (2013); MONT. CODE ANN. § 40-6-106(2) (2013); NEV. REV. STAT. ANN. § 126.061(2) (West 2011); WISC. STAT. § 891.40(2) (2013), for examples of statutes that state that a sperm donor is not a parent but do not explicitly include an egg donor.

156. See, e.g., E. Donald Shapiro, Stewart Reifler & Claudia L. Psome, *The DNA Paternity Test: Legislating the Future Paternity Action*, 7 J.L. & HEALTH 1, 29–30 (1992–93) (stating that current tests determine probability of parentage to 99.999999% accuracy); cf. *State ex rel. Dep't of Soc. Servs. v. Miller*, 218 S.W.3d 2, 3–4 (Mo. Ct. App. 2007) (finding that blood tests showed that twin brothers each had a 99.999% probability of being the father).

157. Anthony Miller, *Baseline, Bright-Line, Best Interests: A Pragmatic Approach for California to Provide Certainty in Determining Parentage*, 34 MCGEORGE L. REV. 637, 694–97 (2003).

158. Anthony Miller, *The Case for the Genetic Parent: Stanley, Quilloin, Caban, Lehr, and Michael H. Revisited*, 53 LOY. L. REV. 395, 437, 440–41 (2007).

any couple—heterosexual or homosexual—using donated gametes.<sup>159</sup> The main allure of the test—its certainty—may prove to be ephemeral as science progresses. Even today, a DNA test is unable to discern parentage in cases of identical twins.<sup>160</sup> Two recent cases, neither involving assisted reproduction, struggled with the issue of paternity when the potential father was an identical twin. Because DNA tests established both men as the father, other evidence—the old nineteenth century, eighteenth century, even seventeenth century tests of access to the mother—was needed to determine which twin had fathered the child.

In the future, scientific advances in assisted reproduction technology may open the door to children with mixed DNA, thus rendering the DNA tests inconclusive in more instances. In the early 1990s, researchers reported a controversial and highly successful ART that created genetic anomalies in the children. Dr. Jacques Cohen pioneered a solution for female infertility in which the ooplasm (cytoplasm) of a donor egg was injected into the egg of a woman who had had difficulty conceiving.<sup>161</sup> The initial attempts resulted in twelve clinical pregnancies after twenty-eight attempts in twenty-five women, a rate “higher than expected” in a population in which participants had had difficulty conceiving.<sup>162</sup> Over the next several years, as many as thirty children were born using this technique.<sup>163</sup> After confirmation that some of the children had genetic material from three sources (the donor egg, the intended mother’s egg, and the sperm),<sup>164</sup> the Food and Drug Administration notified Dr. Cohen and his team that the use of techniques such as ooplasm transfer “constitutes a clinical investigation and requires submission of an Investigation-

---

159. See, e.g., *Dantzig v. Biron*, No. 07CA1, 2008 WL 187532, at \*1–3 (Ohio Ct. App. Jan. 18, 2008) (dismissing action brought by genetic father who sued gestational carrier for paternity for failure to join the natural mother, the egg donor, as a party).

160. See Dep’t of Pub. Aid *ex rel. Masinelli v. Whitworth*, 652 N.E.2d 458, 459–60 (Ill. App. Ct. 1995) (deciding blood tests showed that either twin brother could be father of child despite testimony by mother of child that she had sexual relations with one brother but not the other); *Miller*, 218 S.W.3d at 3–4, 6 (finding that blood tests showed that twin brothers each had a 99.999% probability of being the father; because mother testified to having had sexual relations with both brothers, the court used other evidence to determine which brother had access to mother at time of conception). Because the children in these cases were conceived coitally, evidence other than genetic tests could be used to determine paternity.

161. Jacques Cohen et al., *Ooplasmic Transfer in Mature Human Oocytes*, 4 MOLECULAR HUM. REPROD. 269, 277 (1998).

162. Jason A. Barritt et al., *Mitochondria in Human Offspring Derived from Ooplasmic Transplantation*, 16 HUM. REPROD. 513, 513 (2001).

163. David Whitehouse, *Genetically Altered Babies Born*, BBC NEWS (May 4, 2001, 15:26 GMT), <http://news.bbc.co.uk/2/hi/sci/tech/1312708.stm>.

164. Barritt, *supra* note 162, at 513; Heidi Mertes & Guido Pennings, *Embryonic Stem Cell-Derived Gametes and Genetic Parenthood: A Problematic Relationship*, 17 CAMBRIDGE Q. HEALTHCARE ETHICS 7, 8 (2008) (“[O]ne objection persists against both ooplasmic transfer and oocyte nuclear transfer, namely, that the resulting child would have two genetic mothers: one providing the nuclear DNA (and in the [ooplasmic] case most of the mtDNA) and another providing mitochondrial DNA.”).

al New Drug application (IND) to FDA,”<sup>165</sup> shutting down the experiment in the United States.<sup>166</sup> Doctors developing a related procedure to overcome infertility, in which the nucleus from one woman’s egg was injected into a donor egg, halted their research after the FDA letter and gave their results to doctors in China.<sup>167</sup> Most recently, scientists have replaced mutated mitochondrial DNA with donor DNA, reporting that 70% of the experimental eggs were successfully fertilized.<sup>168</sup> A recent article in *The Economist* describing Dr. Shoukhrat Mitalipov’s work at the Oregon Health and Science University featured a cover banner that proclaimed “The benefits of having three parents.”<sup>169</sup> Even without human intervention to alter DNA, there is evidence that mitochondrial heteroplasmy, in which mitochondrial DNA inherited from the mother is not identical in all samples from a single person, can occur spontaneously.<sup>170</sup> Although DNA tests today sequence nuclear DNA and not mitochondrial DNA, we can’t assume that this will always be the case as science progresses.

In the future, the use of inheritable genetic modifications (IGM) could alter DNA such that the child’s DNA would not reflect the genetic makeup of her parents. Scientists are experimenting with ways to alter a specific gene through *in vitro* fertilization, gene transfer, stem cells, and

165. Letter from Kathryn C. Zoon, Dir., Ctr. for Biologics Evaluation & Research, Food & Drug Admin., to Sponsors / Researchers, Dep’t of Health and Human Servs. et al. (July 6, 2001), available at <http://www.fda.gov/BiologicsBloodVaccines/SafetyAvailability/ucm105852.htm>.

166. The risks associated with mixing the mitochondrial DNA (mtDNA) are not known, but there is speculation that the donor might transmit a hereditary disease or alter certain behavioral traits. Mertes & Pennings, *supra* note 164, at 8; see also Rachel Levy et al., *Cytoplasmic Transfer in Oocytes: Biochemical Aspects*, 10 HUM. REPROD. UPDATE 241, 245 (2004) (noting that mtDNA is transmitted only by the female for an evolutionary reason, and so including mtDNA from a second female might have unexpected effects); M. De Rycke et al., *Epigenetic Risks Related to Assisted Reproductive Technologies*, 17 HUM. REPROD. 2487, 2491 (2002) (“Ooplasmic transfer into human oocytes may induce conflicts between the multiple genome parts (nuclear DNA, recipient mtDNA, donor mtDNA) and lead to unpredictable outcomes.”); E. Scott Sills et al., *Genetic and Epigenetic Modifications Associated with Human Ooplasm Donation and Mitochondrial Heteroplasmy—Considerations for Interpreting Studies of Heritability and Reproductive Outcome*, 62 MED. HYPOTHESES 612, 615 (2004) (observing that negative outcomes may not be known for several decades). Note that the nuclear DNA is not affected by ooplasmic transfer. See A.L. Bredenoord et al., *Ooplasmic and Nuclear Transfer to Prevent Mitochondrial DNA Disorders: Conceptual and Normative Issues*, 14 HUM. REPROD. UPDATE 669, 670 (2008).

167. See Denise Grady, *Pregnancy Created Using Egg Nucleus of Infertile Woman*, N.Y. TIMES, Oct. 14, 2003, at A1.

168. Gautam Naik, *DNA Switch Boosts Disease Fight*, WALL ST. J., Oct. 25, 2012, at A4.

169. *Hello Mothers, Hello Father*, ECONOMIST, Oct. 27, 2012, at 79, 79–80, cover.

170. See Mark R. Wilson et al., *A Family Exhibiting Heteroplasmy in the Human Mitochondrial DNA Control Region Reveals Both Somatic Mosaicism and Pronounced Segregation of Mitotypes*, 100 HUM. GENETICS 167, 167, 170 (1997), for an analysis of mitochondrial DNA typing of three separate hair root extracts from a single individual. The study concluded that “the degree of heteroplasmy differs from hair to hair.” *Id.* at 169. Accordingly, the authors advised that “[d]epending on the situation, if there is an apparent difference of one or two nucleotides between two samples, one should consider the possibility of heteroplasmy. . . . Should evidence exist for a heteroplasmic mixture at such a base or bases, the proper interpretation would be a failure to exclude” the two samples as potentially originating from the same source. *Id.* at 170.

cloning.<sup>171</sup> Currently, prospective parents using *in vitro* fertilization can analyze each pre-embryo for specific genetic diseases, such as Tay Sachs or cystic fibrosis, to choose which to implant if at least one viable pre-embryo is free of the disease. No genes are modified or altered through this procedure, called pre-implantation genetic diagnosis or screening.<sup>172</sup> By contrast, IGM would change the genetic makeup by removing embryonic stem cells from the pre-embryo, altering the cells to create new genes, and eventually implanting the pre-embryo with the modified cells in a woman.<sup>173</sup> The resulting child would have a gene that is absent from both her mother and her father. In the distant future, science may make it possible for prospective parents to assemble a child through synthetically created genes, so theoretically the child's entire genetic makeup might be different from the parents'. Now that J. Craig Venter and his team have assembled a synthetic genome of a simple bacterium that has replicated itself,<sup>174</sup> the possibility of a human genome constructed entirely from synthetic materials, although far in the future, means that a genetic test would be ineffective: such a child could have DNA constructed from a parent's wish list which did not match any living person's DNA.<sup>175</sup> Thus, the main appeal of the genetic test—its certainty—already fails in a variety of cases today and is likely to fail in even more cases as the science progresses.

The use of ART—including *in vitro* fertilization, donated sperm and ova, gestational carriers, and other techniques—has led to a third test: intended parentage. The parent of the child, proponents argue, should be the one who sets the process in motion with the ultimate goal of parenting the child, even if that parent has no genetic connection to the child and did not give birth.<sup>176</sup> The “intended parent” test has long been applied to establish paternity: a man who consented to his wife's use of assisted insemination with donor sperm was considered the father, despite his lack of a genetic tie. Can the intended parent test be used to establish maternity as well? Scholars have noted the arbitrariness of favoring a gestational carrier over the genetic mother through the parturient

---

171. *Inheritable Genetic Modification Basic Science*, CENTER FOR GENETICS & SOC'Y, <http://www.geneticsandsociety.org/article.php?id=286> (last modified June 1, 2006).

172. Jaime King, *Predicting Probability: Regulating the Future of Preimplantation Genetic Screening*, 8 YALE J. HEALTH POL'Y L. & ETHICS 283, 285 (2008).

173. *Inheritable Genetic Modification Basic Science*, *supra* note 171.

174. Craig Venter, *Watch Me Unveil "Synthetic Life"*, TED: IDEAS WORTH SPREADING (May 2010), [http://www.ted.com/talks/craig\\_venter\\_unveils\\_synthetic\\_life.html](http://www.ted.com/talks/craig_venter_unveils_synthetic_life.html).

175. See generally Kristine S. Knaplund, *Synthetic Cells, Synthetic Life, and Inheritance*, 45 VAL. U. L. REV. 1361, 1362 (2011) (examining “the practical and regulatory issues that may encourage or inhibit the use of Venter's technology to create synthetic gametes and the legal issues of parentage and inheritance for a synthetically created child”).

176. See, e.g., Richard F. Storrow, *Parenthood by Pure Intention: Assisted Reproduction and the Functional Approach to Parentage*, 53 HASTINGS L.J. 597, 602 (2002) (“[T]he law should understand intentional parenthood as subsumed by the notion of functional parenthood . . .”).

test.<sup>177</sup> A woman who agreed to carry the child for another person, promising to relinquish the baby on birth, should not be permitted to override her earlier promise; after all, she never would have received the embryo at all but for the earlier agreement.<sup>178</sup> Some see the use of either the genetic or the parturient test as trying to wedge all couples into pre-existing categories, with the paradigm being a married, heterosexual couple, even though many using ART do not fit this model.<sup>179</sup>

Rather than enacting one definition of maternity (such as “the mother is the woman who gives birth”), a wiser course is to enact different presumptions of maternity, similar to those enacted for paternity. For example, states no longer have a conclusive presumption that the birth mother’s husband is the father; rather, the husband is a presumed father, but others can avail themselves of the presumption as well.<sup>180</sup> If a husband and wife use *in vitro* fertilization to create a pre-embryo using their genetic material and then hire a gestational carrier who gives birth to the child, the gestational carrier can use the presumption of maternity because she gave birth, while the wife can use a presumption of maternity based on a DNA test.<sup>181</sup> For an intended parent who has no genetic tie to the child, a third presumption is needed, which could be based on the intent of the person to parent the child.<sup>182</sup>

177. Hill, *supra* note 143, at 399–400 (arguing that no evidence exists to show that a biological or birthing bond is superior to the bonds formed by parents of children with no biological relation, such as by adoption); Shultz, *supra* note 143, at 331–33 (asserting that there is no persuasive basis for preferring the birth mother over the genetic mother).

178. Robertson, *supra* note 145, at 1015; Shultz, *supra* note 143, at 366–67.

179. Richard F. Storror, *Parenthood by Pure Intention: Assisted Reproduction and the Functional Approach to Parentage*, 53 HASTINGS L.J. 597, 598–99 (2002) (“[R]estrictive policies . . . promise to widen the divide between the myriad forms of the family that exist in society today and the ability of the law to protect the integrity of those families.”); see Katharine K. Baker, *Bargaining or Biology? The History and Future of Paternity Law and Parental Status*, 14 CORNELL J.L. & PUB. POL’Y 1, 62 (2004) (arguing that an intent-based test eliminates the distinction between heterosexual and homosexual couples, as well as distinctions between children conceived coitally and those conceived with ART); Courtney G. Joslin, *Protecting Children(?): Marriage, Gender, and Assisted Reproductive Technology*, 83 S. CAL. L. REV. 1177, 1180 (2010) (arguing that heterosexual limitation is unjust because a same-sex couple’s child will have only one legal parent, resulting in financial and other deprivations for the child); Kelly M. O’Bryan, Comment, *Mommy or Daddy and Me: A Contract Solution to a Child’s Loss of the Lesbian or Transgender Nonbiological Parent*, 60 DEPAUL L. REV. 1115, 1143 (2011) (“[N]o [legitimate] reason exists to provide the children born to lesbian parents through the use of reproductive technology with less security and protection than that given to children born to heterosexual parents through artificial insemination.” (second alteration in original) (quoting *In re A.B.*, 818 N.E.2d 126, 131 (Ind. Ct. App. 2004), *vacated sub nom.* *King v. S.B.*, 837 N.E.2d 965 (Ind. 2005)) (internal quotation marks omitted)).

180. See, e.g., UNIF. PARENTAGE ACT § 4(a) (1973) (“A man is presumed to be the natural father of a child if: . . . (4) while the child is under the age of majority, he receives the child into his home and openly holds out the child as his natural child . . . .”); UNIF. PARENTAGE ACT § 204(a) (2002) (“A man is presumed to be the father of a child if: . . . (5) for the first two years of the child’s life, he resided in the same household with the child and openly held out the child as his own.”).

181. See, e.g., *Johnson v. Calvert*, 851 P.2d 776, 781–82 (Cal. 1993) (in bank) (holding that the genetic mother was the legal mother of the child because it was she who intended to procreate the child).

182. *Elisa B. v. Superior Court*, 117 P.3d 660, 670 (Cal. 2005).

If we enact several presumptions of maternity, we face the difficult problem of deciding which presumptive mother prevails. In a gestational carrier case, in which the woman who gives birth is not genetically related to the child, who “wins” will depend on the court’s view of the enforceability of the contract: if the agreement is enforceable, the intended mother, not the birth mother, will prevail;<sup>183</sup> if the agreement is not enforceable, the gestational carrier will be the mother.<sup>184</sup>

But how do we resolve switched embryo cases? These are cases in which the woman who gives birth intended to carry her own child, but through a series of events (usually a mistake by the clinic, but it could also occur by design), she is implanted with the wrong embryo.<sup>185</sup> Thus, the birth mother is not a true gestational carrier, but she is also not the genetic mother of the child she bears. Who should prevail? In a 2000 case in New York, for example, the Perry-Rogers’ embryo was implanted in Ms. Fasano, along with Ms. Fasano’s own embryo; Ms. Fasano subsequently gave birth to two children, one her own genetic child and the other the genetic child of Perry-Rogers.<sup>186</sup> The court acknowledged that a bond could develop with the gestational mother but held that “the suggested existence of a bond is not enough under the present circumstances.”<sup>187</sup> Thus, the court sided with the genetic parents (Perry-Rogers) rather than the parturient (Fasano), in part because Fasano learned of the mistake before she gave birth.<sup>188</sup> A 2003 California case involving mistakenly implanted embryos also favored the genetic tie for the father. In *Robert B. v. Susan B.*,<sup>189</sup> Robert and his wife Denise used an anonymously donated egg and Robert’s sperm to create an embryo that they intended Denise to carry; however, the embryo was mistakenly implanted in Susan B., an unmarried woman.<sup>190</sup> Rather than deciding that the birth mother had no rights to the child, as the court held in *Perry-Rogers v. Fasano*, this court ruled that, under California law, Susan B. was the presumed mother because she gave birth; Robert could use the genetic tie to argue he is the presumed father; and Robert’s wife Denise, who lacked either a gestational or a genetic tie to the child, was not a parent at all.<sup>191</sup>

183. See *Raftopol v. Ramey*, 12 A.3d 783, 793, 804 (Conn. 2011); *De Bernardo v. Gregory*, No. FA074007658S, 2007 WL 4357736, at \*3–4 (Conn. Super. Ct. Nov. 7, 2007); *In re Baby Boy A.*, No. A07-452, 2007 WL 4304448, at \*6–7 (Minn. Ct. App. Dec. 11, 2007); *J.F. v. D.B.*, 879 N.E.2d 740, 741–42 (Ohio 2007); *S.N. v. M.B.*, 935 N.E.2d 463, 470–71 (Ohio Ct. App. 2010).

184. See, e.g., *R.R. v. M.H.*, 689 N.E.2d 790, 796–97 (Mass. 1998).

185. The State Department warns U.S. couples that “[t]he Department is aware of cases of foreign fertility clinics that have substituted alternate donor sperm and eggs when the U.S. parents’ genetic material turned out not to be viable.” U.S. Dep’t of State, *supra* note 5.

186. *Perry-Rogers v. Fasano*, 715 N.Y.S.2d 19, 21–22 (App. Div. 2000).

187. *Id.* at 26.

188. *Id.* at 26–27. Because Perry-Rogers is African American and Fasano is Caucasian, the decision has been criticized for considering racial bias and sexist factors *sub rosa*. See Leslie Bender, *Genes, Parents, and Assisted Reproductive Technologies: ARTs, Mistakes, Sex, Race, & Law*, 12 COLUM. J. GENDER & L. 1, 32 (2003).

189. 135 Cal. Rptr. 2d 785 (Ct. App. 2003).

190. *Id.* at 786–87.

191. *Id.* at 789–90.

Genetics may not control if enough time elapses before the genetic parents seek to claim the child. An attempt by the genetic parents for visitation was denied when the trial court found that it was not in the best interests of the children, who were almost fourteen years old.<sup>192</sup>

The overseas mix-ups described in the State Department warning present a more difficult ethical problem. In both *Perry-Rogers v. Fasano* and *Robert B. v. Susan B.*, the genetic parents of the mistakenly implanted embryo could be identified and wanted to claim “their” genetic child. In some cases, however, the implanted embryo may have been created by anonymously donated gametes. The birth mother believes she is carrying her own genetic child but learns otherwise when the State Department requires a blood test. Even if the genetic parents of the child can be found, it is not at all certain that they would want to claim the child as their own. Will this child then be an orphan? If the birth mother is a U.S. citizen, she may be able to transmit citizenship to the child if she meets the residency requirements. If the couple were trying to claim citizenship through the father, however, citizenship would be denied when the blood reveals no tie.

In denying a person’s petition to be declared a parent, a court may suggest adoption as an alternative.<sup>193</sup> In *Andres A. v. Judith N.*,<sup>194</sup> for example, a married couple, Luz and Andres, used their gametes to form a pre-embryo, which was implanted in a gestational carrier, Judith.<sup>195</sup> After Judith gave birth to twins, Luz, Andres, Judith, and Judith’s husband David sought a declaration that the genetic and intended parents, Luz and Andres, were the children’s legal parents.<sup>196</sup> Under New York law, Andres, as the genetic father, could challenge the presumption that the birth mother’s husband was the father of the children, but the court was powerless to make a declaration of maternity, and so Judith, the birth mother, remained as the second parent.<sup>197</sup> “The court note[d] that petitioner Luz A. [was] not without a remedy since she [could seek] to adopt the two children.”<sup>198</sup> That would have entailed considerable expense and time,<sup>199</sup> as a Massachusetts court observed in another case seeking an uncontested pre-birth order.<sup>200</sup> Requiring the genetic parents to adopt the children

192. *Prato-Morrison v. Doe*, 126 Cal. Rptr. 2d 509, 515–16 (Ct. App. 2002) (“Simply put, the social relationship established by the Does and their daughters is more important to the children than a genetic relationship with a stranger.”).

193. See, e.g., *In re T.J.S.*, 16 A.3d 386, 388–89, 398 (N.J. Super. Ct. App. Div. 2011) (finding that, in the case of a child born to gestational carrier with sperm of husband T.J.S. and donated ovum, wife A.L.S. was not the legal mother of her husband’s biological child and must adopt).

194. 591 N.Y.S.2d 946 (Fam. Ct. 1992).

195. *Id.* at 947.

196. *Id.* at 947–48.

197. *Id.* at 948–50.

198. *Id.* at 950.

199. Thomas Crampton, *What Marriage Means to Gays: All that Law Allows Others*, N.Y. TIMES, Mar. 30, 2004, at B1 (citing a cost of about \$3,000 for an adoption).

200. *Culliton v. Beth Isr. Deaconess Med. Ctr.*, 756 N.E.2d 1133, 1136–38 (Mass. 2001).

born to a gestational carrier would mean that, during the four-day waiting period in that state:

[t]he duties and responsibilities of parenthood (for example, support and custody) would lie with the gestational carrier for at least four days; the gestational carrier could be free to surrender the children for adoption; and the genetic parents of the children would be forced to go through the adoption process, possibly having to wait as long as six months before becoming the legal parents of the children. As is evident from its provisions, the adoption statute was not intended to resolve parentage issues arising from gestational surrogacy agreements.<sup>201</sup>

In the case of a heterosexual married couple like Luz and Andres in *Andres A.* or the Cullitons, who sought to adopt their own genetic child with the consent of the legal parents, the adoption is likely to be successful but still has drawbacks.<sup>202</sup> The dissenting justices in a 2012 New Jersey case in which the genetic father, his wife, and the gestational carrier all sought a pre-birth order to include the wife (who had no genetic or biological connection to the child) listed some of the disadvantages, calling adoption “a considerable burden . . . on the intended mother.”<sup>203</sup> Even though all involved agreed that the wife should be named the child’s mother, the adoption process would take two to three months, during which time the child would be “legally motherless.”<sup>204</sup> Until the adoption process was completed, the child would not inherit from the wife if she died intestate and would have no claim for benefits such as workers’ compensation, social security, and life insurance.<sup>205</sup> For a same-sex couple or a single parent, the process can be much more challenging. Several states have statutes that prohibit unmarried couples or same-sex couples from adopting.<sup>206</sup> In other states, adoption severs the relationship of the

201. *Id.* at 1138 (citation omitted).

202. *Cf.* Nancy D. Polikoff, *A Mother Should Not Have to Adopt Her Own Child: Parentage Laws for Children of Lesbian Couples in the Twenty-First Century*, 5 STAN. J. C.R. & C.L. 201 (2009) (arguing that adoption should not be required for a genetic parent).

203. *In re T.J.S.*, 54 A.3d 263, 276–77 (N.J. 2012) (Albin, J., dissenting).

204. *Id.* at 276.

205. *Id.* at 277.

206. FLA. STAT. ANN. § 63.042(3) (LexisNexis 2013) (“No person . . . may adopt if that person is a homosexual.”); MISS. CODE ANN. § 93-17-3(5) (2013) (“Adoption by couples of the same gender is prohibited.”); UTAH CODE ANN. § 78B-6-117(3) (West 2013) (“A child may not be adopted by a person who is cohabiting in a relationship that is not a legally valid and binding marriage under the laws of this state.”). *But see* Ark. Dep’t of Human Servs. v. Cole, 380 S.W.3d 429, 431–32, 443 (Ark. 2011) (holding that a law prohibiting unmarried cohabitants from adopting violated the Arkansas Constitution); Fla. Dep’t of Children & Families v. X.X.G., 45 So. 3d. 79, 91–92 (Fla. Dist. Ct. App. 2010) (holding that the ban violates the Equal Protection Clause of the Florida Constitution). *See also* DAVID M. BRODZINSKY, EVAN B. DONALDSON ADOPTION INST., *Adoption by Lesbians and Gays: A National Survey of Adoption Agency Policies, Practices, and Attitudes*, 3, 20 (Oct. 29, 2003), available at <http://adoptioninstitute.org/publications/adoption-by-lesbians-and-gays-a-national-survey-of-adoption-agency-policies-practices-and-attitudes/> (summarizing a survey of 307 public and private adoption agencies in 1999 and 2000, which found that about 19% of agencies followed religious beliefs that would reject a gay or lesbian applicant, 8% had policies of placing



child with the biological parents unless the adopting parent is the spouse of the biological parent and thus prevents unmarried couples from being declared parents of the child.<sup>207</sup> For many reasons, adoption is not a practical solution for couples using ART, and thus an equitable means of determining parentage is critical.

In 2008, the Uniform Probate Code (UPC) proposed two amendments to determine parentage in cases in which ART is employed.<sup>208</sup> Section 2-120 applies when no gestational carrier is used, and thus the woman who gives birth intends to be a parent of the child, while Section 2-121 covers parentage when a gestational carrier is used.<sup>209</sup> The new UPC sections incorporate the assumption of the 2000 and 2002 Parentage Acts that a “third party donor” of sperm or eggs is not a parent of the child.<sup>210</sup> If no gestational carrier is involved, the UPC presumes that the woman who gives birth is the mother<sup>211</sup> and that her spouse, or another individual who consented to the ART procedure, is the other parent.<sup>212</sup> If a gestational carrier is used, then UPC Section 2-121 provides that the woman who gives birth is generally *not* presumed to be the mother,<sup>213</sup> instead, the parent-child relationship is created with an intended parent, defined as “an individual who entered into a gestational agreement providing that the individual will be the parent of a child born to a gestational carrier by means of assisted reproduction.”<sup>214</sup>

In the same way that the Uniform Probate Code has recognized that a single definition of “parent” will lead to unjust results if applied both to children conceived coitally and to those conceived using ART, our citizenship rules for children born abroad should acknowledge the different ways in which children are conceived. In 1952, when the current “blood relationship” requirement was adopted by the State Department, sperm banks did not exist<sup>215</sup> and no child had been conceived using *in vitro*

children only with married couples, and 5% were governed by state law prohibiting placement with lesbians and gays).

207. *S.J.L.S. v. T.L.S.*, 265 S.W.3d 804, 823 n.13 (Ky. Ct. App. 2008) (citing statutes and cases in Nebraska, Oklahoma, North Dakota, Ohio, Wisconsin, Illinois, Georgia, and Tennessee that have “reached our same conclusion” that adoption by the parent’s same-sex partner will sever the parent-child relationship with the first parent); *see also In re T.K.J.*, 931 P.2d 488, 494 (Colo. App. 1996) (stating that Colo. Rev. Stat. § 19-5-203 regarding stepparent adoptions required the parent seeking to adopt to be married to the child’s parent, and thus unmarried lesbian partners could not adopt each other’s children).

208. *See generally* Sheldon F. Kurtz & Lawrence W. Waggoner, *The UPC Addresses the Class-Gift and Intestacy Rights of Children of Assisted Reproduction Technologies*, 35 ACTEC J. 30, 32 (2009).

209. UNIF. PROBATE CODE §§ 2-120 to 2-121 (2010).

210. *Id.* § 2-120(b).

211. *Id.* § 2-120(c).

212. *Id.* § 2-120(d), (f).

213. *Id.* § 2-121(c).

214. *Id.* § 2-121(a)(4).

215. Dr. Jerome Sherman created the world’s first sperm bank in Iowa City, Iowa in 1952. Alexis C. Madrigal, *The Surprising Birthplace of the First Sperm Bank*, ATLANTIC (Apr. 28, 2014),

fertilization.<sup>216</sup> Now that children can be conceived in a variety of ways, the State Department regulations can mean that an ART child is not only denied U.S. citizenship but, depending on the law of the country in which the child is born, also stateless.

#### CONCLUSION

Unlike the ancient Greeks and Romans, we now know (or we *think* we know) how a child is created: by the mixing of genes contributed by both a man and a woman, and the nourishment of the resulting pre-embryo in a woman's womb. In the vast majority of cases, the woman who nurtures and gives birth to the child is the genetic as well as the intended mother. All three tests of parentage—parturient, genetic, and intent—work equally well to determine maternity since they all lead to the same woman. The problem arises when ART is used to conceive a child. The parturient may not be the genetic mother of the child if a donated egg or embryo is used in conception. The parturient may not be the intended mother of the child if she is a gestational carrier.

The State Department's definition of a parent as solely the genetic contributor is out of step with current American law. It is contrary to its origins in Roman law, which regarded the parturient as something akin to a gestational carrier: someone who nurtured the child but not one who determined its genetic makeup. It is also out of step with centuries of family law, in which a pure genetic connection was not the sole determinant of paternity. The husband of a married woman might be declared the child's father even though he had no blood relationship with the child; the companion of an unmarried woman might not be declared the child's father, even after proving the genetic connection, unless he acted as a father in some way.

In late 2013, the State Department changed its interpretation of INA sections 301 and 309 to recognize egg donations. While the prior posting on the Department of State informational page stated, "[T]he U.S. citizen parent must be the sperm or the egg donor in order to transmit U.S. citizenship to a child conceived through ART,"<sup>217</sup> their webpage "Important Information for U.S. Citizens Considering the Use of Assisted Reproductive Technology (ART) Abroad" now states, "[A] U.S. citizen mother

---

11:59 EST), <http://www.theatlantic.com/technology/archive/2014/04/how-the-first-sperm-bank-began/361288/>.

216. Louise Brown, the first child born using in vitro fertilization, was born in 1978. James Gallagher, *Five Millionth 'Test Tube Baby,'* BBC NEWS, <http://www.bbc.co.uk/news/health-18649582?print=true> (last updated July 1, 2012, 21:22 EST) (noting that the first such child, Louise Brown, was born in the UK in July 1978, and that, since then, about five million babies have been born using the technology).

217. U.S. Dep't of State, *Important Information for U.S. Citizens Considering the Use of Assisted Reproductive Technology (ART) Abroad*, WAYBACK MACHINE (Oct. 29, 2013), [http://web.archive.org/web/20131029203440/http://travel.state.gov/law/citizenship/citizenship\\_5177.html](http://web.archive.org/web/20131029203440/http://travel.state.gov/law/citizenship/citizenship_5177.html).

must be either the genetic or the gestational and legal mother of the child at the time and place of the child's birth. (A gestational mother is the woman who carries and gives birth to the child.)<sup>218</sup> This is a good beginning, since it allows an American woman using a donated embryo to secure American citizenship for the child she bears, even though she has no genetic connection to the child. But much more is needed. First, the INA sections 301 and 309 need to be amended to reflect this new policy, and to make clear that children born before the policy change can apply retroactively for American citizenship. Second, the new interpretation covers children conceived with donated ova, but not children conceived with donated sperm. The Department of State still requires, *inter alia*,<sup>219</sup> that the U.S. citizen father is the child's genetic parent in order for the child to obtain American citizenship at birth through the father.

By focusing on just one factor—the blood relationship—the State Department's policy of *jus sanguinis* forces us to examine the essential attributes of parentage. Rather than articulating one test for all cases, the rules for bestowing citizenship at birth should be amended to provide for those conceived through ART, by allowing several presumptions of parentage to apply. The Uniform Probate Code amendments provide an excellent template with which to begin.

---

218. U.S. Dep't of State, *supra* note 5.

219. In addition to being the genetic parent, the U.S. citizen parent must meet certain residency requirements to transmit American citizenship to the child.

