

# IN VITRO FERTILIZATION

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*This paper was approved by the CJLS on December 13, 1995, by a vote of twenty in favor and one abstention (20-0-1). Voting in favor: Rabbis Kassel Abelson, Ben Zion Bergman, Stephanie Dickstein, Elliot N. Dorff, Jerome M. Epstein, Baruch Frydman-Kohl, Shoshana Gelfand, Myron S. Geller, Susan Grossman, Judah Kogen, Vernon H. Kurtz, Alan B. Lucas, Aaron L. Mackler, Mayer Rabinowitz, Avram Israel Reisner, Joel E. Rembaum, Gerald Skolnik, Elie Kaplan Spitz, Gordon Tucker, and Gerald Zelizer. Abstaining: Rabbi Paul Plotkin.*

*The Committee on Jewish Law and Standards of the Rabbinical Assembly provides guidance in matters of halakhah for the Conservative movement. The individual rabbi, however, is the authority for the interpretation and application of all matters of halakhah.*

## שאלה

In vitro fertilization (IVF) involves the fertilizing of a human ovum (egg cell) by sperm outside the human body. The resulting embryo can be transferred to a woman's uterus for gestation and (when successful) the birth of a child. This technique gives rise to a number of important questions:

1. May an infertile couple utilize IVF, using the husband's sperm and wife's egg, to have a child? What is the status of the offspring?
2. Does halakhah provide any guidance regarding the transfer of embryos to the woman's uterus for gestation?
3. May more embryos be created by IVF than are needed for immediate use? What may be done with extra embryos, including those that are cryopreserved (frozen)?
4. Is IVF using donated sperm and/or ova permitted? What is the status of the offspring?

## תשובה

Judaism values children as a blessing for their parents and for the broader community. For those able to do so, having children represents the fulfillment of a mitzvah, one that can be traced back to God's charge to "be fruitful and multiply" (פרו ורבו) in the biblical account of creation.<sup>1</sup> In vitro fertilization, like other reproductive technologies, offers the potential

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<sup>1</sup> M. Yevamot 6:6 states:

לא יבטל אדם מפרייה ורבייה אלא אם כן יש לו בנים. בית שמאי אומרים, שני זכרים, ובית הלל אומרים, זכר ונקבה, שנאמר, זכר ונקבה בראם.

One must not abstain from "fruitfulness and increase" unless one has children. The School

to bring a new child into the world. In appropriate cases, this can provide life to a child who otherwise would not have been born, add joy and harmony to the family, and contribute to the strengthening of the Jewish (and human) community.<sup>2</sup> At the same time, reproductive technologies can impose significant personal, financial, and physical costs on the individual or couple using them, and in some cases on children born of the procedure.

More broadly, the use of reproductive technologies can affect communal values and practices concerning children, reproduction, and the family. The United States and other societies have explored these concerns through a variety of means, including examination by professional associations and interdisciplinary commissions, and developments in civil law. In the Jewish tradition, the central means of responding to these concerns is through halakhah, or Jewish law.<sup>3</sup>

### *In Vitro Fertilization and Embryonic Development*

In vitro fertilization (IVF) involves the fertilization of an ovum outside the body; “in vitro,” literally meaning “in glass,” refers to the petri dish in which sperm and ova are combined. In the first successful use of IVF as a reproductive technology, British researchers Robert Edwards and Patrick Steptoe fertilized an ovum produced by Leslie Brown with sperm produced by her husband and transferred the fertilized ovum to her uterus, leading to the birth of Louise Brown in July 1978.

As typically practiced today, a woman preparing for IVF receives hormones to stimulate the development of several ova. Shortly before ovulation would occur, a physician uses ultrasound to guide a needle through the cervix to the ovaries to gather or “retrieve” developed ova. After inspection and appropriate preparation, the ova are combined with prepared sperm. The resulting embryo is allowed to develop for a time period of up to a few days,

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of Shammai say: two males. The School of Hillel say: a male and a female, as it is written, ‘male and female He created them’ [Gen. 1:27].

Jewish law follows Hillel’s view, but encourages continuing to engage in procreation even if one already has a son and a daughter. While having children (specifically, a boy and a girl) represents the fulfillment of a mitzvah, those unable to have children are exempt from the obligation. Indeed, Rabbi J. David Bleich argues that the mitzvah of procreation is best understood not as having children, which is beyond one’s control, but as continuing one’s practice of potentially procreative intercourse with one’s spouse at least until a boy and a girl are born (*Judaism and Healing* [New York: Ktav, 1981], p. 113).

Jewish law describes the obligation to procreate as incumbent upon the male. This formulation (exegetically based on the wording of Gen. 1:28) may reflect a sociological background in which men have greater control than women over whether they would marry and procreate; or a view that women should be encouraged but not technically obligated to entail the risks of pregnancy and childbirth. M. Yevamot 6:6; Shulhan Arukh, Even HaEzer 1; David M. Feldman, *Health and Medicine in the Jewish Tradition* (New York: Crossroad, 1986), pp. 69-71; David M. Feldman, *Marital Relations, Birth Control, and Abortion in Jewish Law* (New York: Schocken, 1978), pp. 46-59; Elliot N. Dorff, “Artificial Insemination, Egg Donation, and Adoption,” above, pp. 462-465. Unspecified citations of Dorff below refer to this paper.

<sup>2</sup> Dorff; Michael Gold, *And Hannah Wept* (Philadelphia: Jewish Publication Society, 1988); Richard V. Gazi, ed., *Be Fruitful and Multiply* (Jerusalem: Genesis, 1994); Mordechai Halperin, “Applying the Principles of Halakhah to Modern Medicine: In-Vitro Fertilization, Embryo Transfer, and Frozen Embryo,” *Proceedings of the Association of Orthodox Jewish Scientists*, vols. 8-9 (New York: Sepher-Hermon, 1987), pp. 198-200. Here and elsewhere I draw on Dorff’s recent responsum. Like Dorff, I only address the case of a married couple that seeks to have offspring. While some unmarried women wish to use donated sperm to reproduce, relatively few seek (or require) IVF procedures. In any case, the use of IVF by unmarried women raises concerns beyond the scope of this paper.

<sup>3</sup> See, e.g., Elliot N. Dorff, “A Methodology for Jewish Medical Ethics,” in *Contemporary Jewish Ethics and Morality*, ed. Elliot N. Dorff and Louis E. Newman (New York: Oxford University Press, 1995), pp. 161-176.

reaching the stage of 2-8 cells, and is then transferred to a woman's uterus, using a catheter inserted through the cervix. When the procedure is successful, the embryo continues to develop and implants in the uterus, leading to pregnancy and the birth of a child. At the 2-8 cell stage, the embryo could be cryopreserved or "frozen" for transfer at a later time.<sup>4</sup>

In vitro fertilization was originally developed to assist women with damaged or absent fallopian tubes. The fallopian tube, connecting the ovary and uterus, is typically the site of fertilization as well as the path by which the fertilized ovum reaches the uterus. IVF has also been used in response to other female infertility factors such as endometriosis or ovulatory problems, for male factors, and for "unexplained infertility."<sup>5</sup> The Society for Assisted Reproductive Technology and the American Society for Reproductive Medicine report that in 1993 IVF and related procedures were performed for 50,844 cycles, leading to 8,741 deliveries. The most common procedure, IVF using the recipient's ova and without embryo freezing, led to delivery of a child following 18.6% of egg retrievals. An individual's prospects might be significantly higher or lower, depending on personal and medical factors. For example, success rates have been found to be higher when no male factor is involved, and for women under age forty.<sup>6</sup>

The process of fertilization begins with the sperm penetrating the ovum. After about twenty-four hours, the chromosomes of the sperm and egg combine, a process referred to as syngamy. The embryo soon begins a series of cell divisions, but does not yet change in overall size. Within a few days, when the embryo has reached the eight-cell stage, the fusion of genetic material is complete and gene expression (functioning) begins. Transfer of an IVF embryo to a woman's uterus generally occurs between the two-cell and eight-cell stage.<sup>7</sup>

A series of changes takes place between this stage, about day 3 after fertilization, and day 14. Through day 3, each cell has the ability to develop into any type of cell or to divide off and develop into a separate embryo. With increasing differentiation within the embryo, cells begin to lose this ability after day 3, but some such abilities may persist until about day 14. In the uterus, implantation begins at about seven days after fertilization, and is completed by about fourteen days. During this second week of development the embryo begins to gain internal organization of a basic sort, such as the

<sup>4</sup> Canada, Report of the Royal Commission on New Reproductive Technologies, *Proceed with Care* (Ottawa, 1993) [cited below as Canada]; Ethics Committee, American Fertility Society, *Ethical Considerations of Assisted Reproductive Technologies, Fertility and Sterility* 62 (1994): 35S [cited below as AFS]. The term "embryo" is used broadly in this paper to refer to the product of fertilization throughout its early development. Because of the rudimentary nature of its development at this stage, many prefer the term "preembryo" (AFS) or "zygote" (Canada).

Similar techniques are employed in two related alternative procedures. In GIFT (gamete intrafallopian transfer), ova and sperm are mixed and placed directly in the fallopian tube. With ZIFT (zygote intrafallopian transfer), the embryo produced in vitro is transferred to the fallopian tube rather than the uterus. Both of these procedures require laparoscopy, a somewhat more invasive procedure than the transcervical procedures used in IVF (Canada; Grazi; AFS, 38S-40S). While this responsum focuses on IVF, its conclusions would in general apply to these procedures as well.

<sup>5</sup> Canada; AFS, 35S-36S.

<sup>6</sup> Society for Assisted Reproductive Technology, American Society for Reproductive Medicine, "Assisted Reproductive Technology in the United States and Canada: 1993 Results Generated from The Society for Reproductive Medicine/Society for Assisted Reproductive Technology Registry," *Fertility and Sterility* 64 (1995): 13-21 [cited below as SART]. For the sake of comparison, the average monthly likelihood of fertilization leading to live birth among sexually active fertile couples not using contraception in the general population is about 20-25%.

<sup>7</sup> Canada, pp. 149-60; AFS, 29S-31S; U.S., National Institutes of Health, "Final Report of the Human Embryo Research Panel," 27 Sept. 1994, 20-36, 57-63; Thomas A. Shannon and Allan B. Wolter, "Reflections on the Moral Status of the Pre-embryo," *Theological Studies* 51 (1990): 606-610.

differentiation of the embryo itself from the placenta. At about day 14, the embryo first exhibits a “primitive streak,” a clustering of cells at one end of the embryo. Formation of the neural groove, the rudimentary beginning of the nervous system, occurs in the third week. Current scientific capabilities generally cannot maintain an embryo in vitro beyond about the first week of development. As noted above, transfer of an embryo for reproduction occurs well before this time, at about day 3 of development.<sup>8</sup>

### *In Vitro Fertilization Using a Couple’s Own Ova and Sperm*

Most halakhic authorities who have addressed the issue of in vitro fertilization have treated this issue as similar to artificial insemination. Many permit in vitro fertilization using a wife’s egg and husband’s sperm. Central issues typically include whether the husband violates the prohibition against “wasteful emission of seed,” whether the couple can be sure that the embryo transferred to the woman in fact derives from their gametes (sperm and ova), and whether the husband fulfills the mitzvah of procreation. Thus, for example, Rabbi Ovadiah Yosef rules that IVF is permitted when it represents the only way for a couple to have children, and that the child is to be considered the parent’s offspring in all regards.<sup>9</sup>

Rabbi Eliezer Yehudah Waldenberg represents an exception to this rule, arguing that IVF is more problematic than artificial insemination on technical grounds, and should be absolutely forbidden.<sup>10</sup> Rabbi Avigdor Nebenzal, writing in response to Waldenberg, raises a number of objections to his position. Prohibiting IVF, even as a last resort, could prevent the husband from fulfilling the mitzvah of procreation, increase the couple’s anguish and bitterness of spirit, or lead to divorce. Producing sperm in order to fertilize an egg would not represent “emission of seed in vain,” for the husband’s intention is procreative. While IVF raises some legitimate concerns, these must be weighed against the “happiness of the couple among the people Israel.”<sup>11</sup>

Rabbi J. David Bleich raises two additional concerns with the procedure. First, IVF is objectionable if it entails a risk for the embryo and increases the likelihood of a seriously impaired child. Bleich argues that the uncertainties inherent in the first uses of IVF would represent an unacceptable risk; “it will require the birth and maturation through adolescence into adulthood of a significant number of healthy and normal test-tube babies before the technique may be viewed as morally acceptable.” Second, Bleich objects to the possible destruction of embryos that might result if more are created than are to be transferred for implantation. He expresses hope that, in time and given proper safeguards, IVF “can be a welcome means of bestowing the happiness and fulfillment of parenthood upon otherwise childless couples.”<sup>12</sup>

<sup>8</sup> Ibid.

<sup>9</sup> Cited in Moshe Drori, “Genetic Engineering – Preliminary Discussion of its Legal and Halakhic Aspects,” *Tehumin* 1 (1980): 287-288. On “wasteful emission of seed” (הרצאת זרע לבטלה) or “destruction of seed,” (השחתת השרץ), see Feldman, *Marital Relations*, pp. 109-131.

<sup>10</sup> Waldenberg asserts that IVF violates the prohibition against “wasteful emission of seed,” for while artificial insemination transfers a husband’s sperm to his wife’s reproductive system, in IVF sperm remains outside her body. IVF diverges more dramatically from natural reproduction, “upsetting the order of creation” (משנים בזה) (סדרי בראשית), making it impossible to view the husband or wife as parents of the offspring. Finally, Waldenberg argues that it is much more difficult to be certain that a transferred embryo represents the product of the couple’s gametes than it is to ensure that the husband’s sperm is used in artificial insemination. *Tzitz Eliezer* vol. 15, siman 45, pp. 115-120. This responsum appears as well in *Assia* no. 33 (1982): 5-13.

<sup>11</sup> “*In Vitro* Fertilization – Comments,” *Assia* no. 35 (1983): 5.

<sup>12</sup> “Test-Tube Babies,” in *Jewish Bioethics*, eds. Fred Rosner and J. David Bleich (New York: Sanhedrin Press, 1979), pp. 80-85.

Finally, Rabbi David Feldman observes that “with so pronatalist a . . . tradition, the Jewish response has been understandably affirmative to new reproductive techniques, such as in-vitro fertilization.” He notes the concerns of some that technological interventions such as IVF interfere with the natural process of reproduction.<sup>13</sup> He nonetheless argues that, given safeguards against abuse, IVF can provide an appropriate way for humans to act as partners with God in improving upon nature, and represents a positive response to the deeply human desire for offspring.<sup>14</sup>

I would agree with Feldman and others that the technological interventions required for IVF do not in themselves rule out the procedure. The Jewish ideal, when it is possible, is for children to be conceived through marital intercourse.<sup>15</sup> In the case of an infertile couple, however, this is not possible. Medical interventions to assist the natural process of reproduction can enable the couple to have a child. The use of IVF in such situations accords with our responsibility to be both reverent and active in our partnership with God. Similarly, I would agree with Rabbi Nebenzal and others that producing sperm for the purpose of reproduction does not violate any prohibition.<sup>16</sup>

Rabbi Bleich’s concern about the destruction of embryos will be addressed in the section on embryos not transferred for gestation below. The issue of risk to children born of IVF must be taken seriously by halakhah. Current information, however, suggests that the procedures do not involve prohibitive risks. Studies indicate that children born of IVF do not suffer from congenital anomalies to a greater extent than the general population. IVF as currently practiced is associated with an increased likelihood of multiple pregnancies and births (such as triplets and quadruplets), and multiple births entail an increased risk of low birth weight, which in turn is associated with increased risk of disability. In addition, the risk of perinatal death may be somewhat higher for births following IVF than for other births.<sup>17</sup>

The biomedical community should monitor long-term effects of IVF and continue to work to lessen all risk involved with this procedure. Couples using IVF should do their best to assure that any potential harm to children is minimized. While risks must be considered carefully by the couple in deciding about IVF, as they must be considered in any medical decision, currently available information suggests that they should not preclude the practice. Risks to the couple, specifically the woman, must be taken seriously as well; Jewish law and values prohibit us from endangering our lives or exposing ourselves to

<sup>13</sup> As noted above (n. 10), such concerns have been raised by Rabbi Eliezer Waldenberg. They also have been expressed within the context of Christian and secular ethics. See Leon R. Kass, *Toward a More Natural Science* (New York: Macmillan, Free Press), p. 72; Congregation for the Doctrine of the Faith, *Instruction on Respect for Human Life in its Origin and on the Dignity of Procreation: Replies to Certain Questions of the Day* (Washington, DC: United States Catholic Conference, 1987). A somewhat differing Roman Catholic view may be found in Lisa Sowle Cahill, “Moral Traditions, Ethical Language, and Reproductive Technologies,” *Journal of Medicine and Philosophy* 14 (1989): 515-516.

<sup>14</sup> Feldman, *Health and Medicine*, pp. 71-72.

<sup>15</sup> As expressed by the medieval *Iggret Hakodesh*: “The union of man with his wife, when it is proper, is the mystery of the foundation of the world and its civilization. Through the act they become partners with God in the act of creation. This is the mystery of what the sages said, ‘When a man unites with his wife in holiness, the Shekhinah is between them in the mystery of man and woman.’” *The Holy Letter*, trans. Seymour J. Cohen (Northvale, NJ: Jason Aronson, 1993; reprint of New York: Ktav, 1976), p. 92. This point is nicely expressed in a paper by Rabbi Daniel Schiff of the Reform movement, “Developing Halakhic Attitudes to Sex Preselection,” 1995, pp. 21-22 of typescript. [Since published in *The Fetus and Fertility in Jewish Law*, eds. Walter Jacob and Moshe Zemer (Pittsburgh: Rodef Shalom Press, 1995), pp. 91-117.]

<sup>16</sup> Nebenzal, p. 5; Dorff, above, p. 472.

<sup>17</sup> Canada, pp. 527-534; Norma C. Morin et al., “Congenital Malformations and Psychosocial Development in Children Conceived by In Vitro Fertilization,” *Journal of Pediatrics* 115 (1989): 222-227.

excessive risk.<sup>18</sup> Currently available information suggests that medical risks of the procedures are not in general prohibitive. Commonly used techniques to retrieve ova and transfer an embryo to the uterus do not require use of general anesthetic, and are fairly non-invasive. Potential harms associated with drugs that promote ovulation should be carefully evaluated by individuals and their physicians, but would not in general rule out the practice.

Couples, in particular women, should be aware of these risks. They should also be aware of the personal and psychological toll that the use of reproductive technologies such as IVF often entails. Financial costs of IVF should be considered as well. Finally, all should be aware that many couples who undergo these procedures do not have a child, and should have a realistic sense of the likelihood of a child in their specific circumstances. Some studies suggest that “the stress of repeated failures of treatment is particularly difficult for couples to cope with.”<sup>19</sup> Both thorough counselling and social support are important for all who consider using IVF or other reproductive technologies.

In light of these factors, it is clear that couples are not required by Jewish law to utilize procedures such as IVF. Given the risks, burdens, and uncertainty involved, the use of reproductive technologies such as IVF is clearly not obligatory, and probably would be ill-advised in some cases. Such interventions should not occur without the fully informed and voluntary consent of those involved, and the decision of a couple or individual not to use these procedures would be fully justifiable and must be respected. As expressed by Rabbi Elliot Dorff, “The Jewish tradition would have all people, fertile or infertile, understand that our ability to procreate is not the source of our ultimate, divine worth; that comes from being created in God’s image.”<sup>20</sup> Individuals who cannot have children can make other vital contributions to strengthening the Jewish (and human) community.<sup>21</sup> In particular, they should strongly consider adoption, which provides an opportunity to raise a child, strengthen the community, and provide a life-changing benefit for a child who cannot be cared for by biological parents.<sup>22</sup>

Having said this, it is clear that IVF is permissible for those who choose to utilize these procedures. For these couples, technical and other halakhic concerns are outweighed by the great good of a new human life, the addition to the harmony and joy of the family, and the contribution to the strengthening of the Jewish community and humanity.<sup>23</sup> A child born as a result of IVF using a couple’s sperm and egg is fully the parents’ child in all respects, and causes the mitzvah of “be fruitful and multiply” to be fulfilled.

<sup>18</sup> As expressed by the Talmud (Hullin 10a), חמירא סקנתא מאיסורא, that which is dangerous is to be avoided even more stringently than that which is ritually forbidden. The Rabbinic tradition finds this value expressed positively in the verse from Deuteronomy (4:15), ונשמרתם מאד לנפשתיכם, “you should take care of yourselves diligently.” See Feldman, *Health and Medicine*, pp. 24-26; Dorff, above, p. 495.

<sup>19</sup> Canada, pp. 532, 527-534. For a popular discussion of the potential frustrations and personal costs of these procedures, see Sharon Begley, “The Baby Myth,” *Newsweek*, 4 Sept. 1995, pp. 38-47.

<sup>20</sup> Dorff, above, p. 473. Dorff accordingly states that “infertile couples are under no Jewish obligation to use modern technology to have children. If they nevertheless choose to do so, they must recognize and take account of the factors involved in order to make a reasonable and Jewishly responsible decision.” Dorff, above, p. 469.

<sup>21</sup> See above, Dorff, p. 473; Gold. While this paper is addressed in particular to Jews, all humans have intrinsic value as beings created in the image of God and participants in God’s covenant with the children of Noah; see Louis Finkelstein, “Human Equality in the Jewish Tradition,” in *Aspects of Equality*, ed. Lyman Bryson et al. (New York: Harper and Brothers, 1956), pp. 179-205. The message of Isa. 56:3-5 is relevant as well. God assures those “who have chosen what I desire and hold fast to my covenant – I will give them, in My House and within My walls, a monument and a name better than sons or daughters. I will give them an everlasting name that shall not perish.”

<sup>22</sup> See Dorff, above, pp. 501-504.

<sup>23</sup> Cf. Nebenzal.

## *Transferring In Vitro Embryos for Gestation*

### A. Preimplantation Genetic Testing

Genetic information about embryos can be obtained through a number of techniques. In one approach, a cell is removed from an embryo at an early stage of development, when the embryo consists of eight cells. While the embryo can continue to develop normally, the DNA (genetic material) of the single cell is amplified to provide a sufficient quantity of material to allow for genetic testing. In research reported in 1992, genetic diagnosis was performed on embryos created from the sperm and ova of couples, both members of which were carriers for the (recessive) disease of cystic fibrosis. For two couples, some embryos were identified that would be affected by the disease and were not transferred, and other embryos (representing carriers or noncarriers) were transferred. One of the women became pregnant, and gave birth to a girl unaffected by the disease.<sup>24</sup>

Asked about genetic testing, Rabbi Y. Zilberstein responded that “one cannot close the door in the face of despondent people who suffer mental anguish in fear of giving birth to sick children, pressure which can drive the mother mad. Therefore, in the case of a serious genetic disease that affects the couple, it is difficult to forbid the suggestion [for genetic testing through IVF].”<sup>25</sup>

Genetic diagnosis and selective transfer of embryos is clearly no more problematic than prenatal diagnosis and abortion of a fetus affected with a severe genetic disease, which has been accepted in the Conservative movement and by some in Orthodoxy.<sup>26</sup> If anything, selective non-transfer of an early in vitro embryo would be preferable to abortion of a more fully developed fetus in utero. The use of IVF for genetic testing faces great practical obstacles, and the risks and uncertainties of IVF will preclude requiring such use for the foreseeable future. For those couples who desire to use IVF and preimplantation genetic testing to avoid having a child with a severe genetic disease, the procedure is certainly fully acceptable.

### B. Gender Selection

Similar (and often somewhat simpler) techniques can be used to determine the gender of an embryo. In some cases, a severe genetic disease may be linked to a sex chromosome, and so affect primarily children of only one gender, generally males. For example, if a woman is a carrier for Duchenne’s muscular dystrophy, half of her sons but none of her daughters would be likely to be affected by the disease. In such situations, preimplantation sex selection of embryos would represent a form of testing for a severe genetic defect, and would be acceptable.

Sex selection in other situations would be more problematic. The desire for a child of a particular gender would not be enough to justify the risks and other problems associated with

<sup>24</sup> Alan H. Handyside et al., “Birth of a Normal Girl After In Vitro Fertilization and Preimplantation Diagnostic Testing for Cystic Fibrosis,” *New England Journal of Medicine* 327 (1992): 905-909; Joe Leigh Simpson and Sandra Ann Carson, “Preimplantation Genetic Diagnosis,” *New England Journal of Medicine* 327 (1992): 951-953. See also AFS, 64S-66S; William Edward Gibbons et al., “Preimplantation Genetic Diagnosis for Tay-Sachs Disease: Successful Pregnancy after Pre-Embryo Biopsy and Gene Amplification by Polymerase Chain Reaction,” *Fertility and Sterility* 63 (1995): 723-728.

<sup>25</sup> Responsum to Richard Crazi, Shevat 5751 (1991), cited in Richard V. Crazi and Joel B. Wolowelsky, “Preimplantation Sex Selection and Genetic Screening in Contemporary Jewish Law and Ethics,” *Journal of Assisted Reproduction and Genetics* 9 (1992): 321; this material appears also in Crazi, p. 189.

<sup>26</sup> E.g., Kassel Abelson, “Prenatal Testing and Abortion,” *PCJLS* 80-85, pp. 3-10.

IVF. Moreover, sex selection by any means raises important concerns. It is offensive to regard one gender as in general better than or preferable to the other, and it would be wrong to choose the gender of a child or take any other action on the basis of sexist views. Moreover, some studies suggest that couples with a strong preference regarding their child's gender disproportionately would choose boys. If sex selection were to be widely practiced, this might lead to an overabundance of males in society, entailing significant social problems.<sup>27</sup>

Rabbi Bleich observes that classical Rabbinic sources do not object to sex selection, and the Talmud provides advice on increasing the likelihood of a male birth. These sources would be more concerned with legitimacy of the method used for sex selection than with the attempt to influence the gender of one's offspring. Bleich nonetheless argues that, based on demographic concerns, "society would find ample justification in the teachings of Judaism for discouraging widespread sex preselection."<sup>28</sup> Rabbis Y.B. Shafran and Y. Zilberstein have specifically ruled against the use of IVF for sex selection.<sup>29</sup> I would agree that (with the exception of sex-linked disease) IVF should not be used solely for the purpose of sex selection.<sup>30</sup>

### c. Number of Embryos Transferred

A question can also be raised with regard to the number of embryos to be transferred to the woman's uterus. A number of embryos are generally transferred together in order to increase the likelihood of at least one implanting. At the same time, transferring a large number of embryos increases the risk of multifetal pregnancies. Multifetal pregnancy, especially when involving more than two or three fetuses, increases risks for the woman and for the fetuses.<sup>31</sup>

A procedure of multifetal pregnancy reduction has been developed to selectively abort some of the fetuses in order to lessen the risk for the woman and/or the other fetuses. If a woman is pregnant with more than two fetuses, multifetal pregnancy reduction would be halakhically acceptable in appropriate cases – certainly in order to protect the woman from a serious threat to her health, and arguably with the independent justification of protecting the remaining fetuses.<sup>32</sup> At the same time, this procedure may itself entail risks for the woman and especially for the remaining fetuses. From the standpoint

<sup>27</sup> See Schiff, pp. 18-19, and Owen D. Jones, "Sex Selection: Regulating Technology Enabling the Predetermination of a Child's Gender," in *Harvard Journal of Law and Technology* 6 (fall 1992): 12-17, cited therein. Schiff argues that, assuming that it is not sexist in application, sex preselection is not inherently objectionable; nonetheless, the use of a fully efficient method of sex selection would represent hubris and an inappropriate overreliance on technology. See also AFS, 64S-66S.

<sup>28</sup> "Sex Preselection," *Judaism and Healing*, pp. 110-115.

<sup>29</sup> In Grazi and Wolowelsky, pp. 320-21.

<sup>30</sup> One possible exception would be the case of a couple undergoing IVF for independent reasons who gain knowledge about the sex of embryos. If the couple has only children of one sex, one could argue that they could use available information to choose embryos of the other sex for implantation. This would help them to achieve the classical goal articulated by Hillel of having at least one child of each gender (M. Yevamot 6:6; see n. 1 above). A practice of sex selection limited to this situation would avoid the concerns with sexism and demography noted above.

<sup>31</sup> Canada, pp. 527-530; Fred Rosner, "Pregnancy Reduction in Jewish Law," *Journal of Clinical Ethics* 1 (1990): 181.

<sup>32</sup> Richard V. Grazi and Joel B. Wolowelsky, "Multifetal Pregnancy Reduction and Disposal of Untransplanted Embryos in Contemporary Jewish Law and Ethics," *American Journal of Obstetrics and Gynecology* 165 (1991): 1268-1271; J. David Bleich, "Pregnancy Reduction," *Tradition* 29, no. 3 (1995): 55-63; Yitzchak Mehlman, "Multi-Fetal Pregnancy Reduction," *Journal of Halachah and Contemporary Society* 27 (1994): 35-68; Rosner, pp. 181-86; and numerous sources cited in these articles.



of Judaism, it would be important to take reasonable steps to lessen the likelihood of the need for multifetal pregnancy reduction, as it would be appropriate to lessen the likelihood of recourse to abortion in other circumstances.

Many who have examined the practice of IVF have recommended limiting the number of embryos transferred to no more than three. This limit is found in guidelines of Britain's Human Fertilisation and Embryology Authority, Canada's Royal Commission on New Reproductive Technologies, and the European Society of Human Reproduction. The Canadian Commission, for example, argues that transferring more than three embryos increases the risk of multifetal pregnancy, but does not increase the likelihood of success, and in fact may lessen the likelihood of the live birth of a child.<sup>33</sup> The specific concern of Jewish law and ethics to minimize risk to the woman and fetuses provides additional support for this limit. No more than three embryos should be transferred in a procedure. To the extent possible, transferring only two embryos would be preferable.<sup>34</sup>

### ***Embryos that are Not Transferred for Gestation***

While it would be possible to use only one or two ova in an IVF procedure, current IVF practices involve attempts to fertilize all ova retrieved from the woman's ovaries, often five to ten or more. One reason is that fertilization does not always occur, and exposing all available ova to sperm maximizes the chance that the needed number of embryos will be created. In addition, current capabilities allow for the successful cryopreservation or freezing of early-stage embryos, but not of unfertilized ova. "Extra" embryos, beyond the number appropriate for immediate transfer, could be frozen for later use, in case the current transfer does not result in the birth of a child or the couple wishes to have additional children using IVF. Embryos are generally frozen between the one-cell and eight-cell stage. Embryo freezing avoids the need for additional egg retrieval procedures, and may be desirable for other medical or personal reasons.<sup>35</sup>

Creating extra embryos and freezing embryos, as currently practiced, would be halakhically acceptable.<sup>36</sup> These procedures both enhance the likelihood of success and minimize the medical risks and burdens faced by the woman. This permissibility is based on the assumption that cryopreservation of embryos is safe, as appears to be the

<sup>33</sup> Canada, pp. 527-30; Great Britain, Human Fertilisation and Embryology Authority, *Manual for Centres* (1990), Code of Practice, 7.i.

<sup>34</sup> This agrees with the position of Dorff, above, pp. 497-498. A group of Belgian researchers found that "limiting the number of embryos transferred to only two did not influence the take home baby rate but eliminated triplet and quadruplet gestations. Moreover, the number of patients with good quality supernumerary [extra] embryos available for cryopreservation increased." Martine Nijs et al., "Prevention of Multiple Pregnancies in an In Vitro Fertilization Program," *Fertility and Sterility* 59 (1993): 1245-1250.

The Ethics Committee of the American Fertility Society (37S), while expressing similar concerns, has offered a somewhat more complex recommendation. "The goal of this procedure is to maximize pregnancy rates while minimizing multiple gestation rates." Variations among particular cases, however, argue against establishing a standard numerical limit. Rather, "the number of preembryos transferred should be limited. . . to anticipate that no quadruplet pregnancies will occur and that triplet pregnancies will be minimized to 1% to 2%." I would suggest that this criterion could be used to determine when the number of embryos transferred should be limited to two, and when transferring three would be indicated. Unusual cases in which transferring more than three embryos would be necessary for a reasonable chance of pregnancy, and would be consistent with the AFS guidelines, should be dealt with on a case-by-case basis.

<sup>35</sup> Canada, pp. 507-512, 595-596; AFS 56S-59S. For 1993, 6869 transfers of frozen embryos for gestation were reported, and 9,100 IVF procedures gave rise to frozen embryos. SART, p. 18.

<sup>36</sup> See similarly Halperin, pp. 207-208.

case. While the freezing of embryos is permissible, it poses problems as well, as will be seen below. If it becomes technically possible to freeze and thaw unfertilized ova, this would be preferable.<sup>37</sup>

Freezing embryos with the possibility of future transfer, and maintaining them in the frozen state, also appear to be consistent with any obligations concerning appropriate treatment of the embryos.<sup>38</sup> Other options for frozen or newly created embryos are more problematic (although not necessarily prohibited). These include: 1) thawing a frozen embryo without transferring it (or not transferring a newly created embryo), so that the embryo dies; 2) using the embryo for scientific research; and, 3) donating the embryo for use by another.

Some halakhic authorities have ruled that in vitro embryos, at least those that are not intended to be transferred, have no significant halakhic status, and may be discarded. Rabbi Hayyim David Halevi, for example, holds that “all ova that are fertilized in vitro do not have the legal status of an embryo; one does not violate the Sabbath on their behalf, and it is permissible to discard them if they were not chosen for transfer, since the law of abortion only applies to [an embryo] in the womb. . . . In vitro, there is no prohibition whatsoever.”<sup>39</sup> Rabbi Mordechai Eliyahu, while somewhat less categorical, agrees: “Fertilized ova that have been designated for transfer to a woman’s uterus should not be destroyed, since a live fetus will develop from them, but fertilized ova that have not been designated for transfer may be discarded.”<sup>40</sup>

In contrast, Rabbi Bleich objects that “there are no obvious grounds for assuming that nascent human life may be destroyed simply because it is not sheltered in its natural habitat, i.e., its development takes place outside the mother’s womb.” He suggests that in vitro embryos that are viable should not be destroyed.<sup>41</sup>

My own view is that the early embryo should be accorded a significant degree of respect and sanctity as a wondrous divine creation and potential human life. It would seem implausible to claim that Jewish restrictions with regard to in utero embryos and fetuses are simply irrelevant because of the embryo’s location. At the same time, the fact that the embryo is in vitro does make its potential development more complicated and less likely. Moreover, embryos at the early stage at which freezing occurs are still a

<sup>37</sup> See AFS, 54S-55S.

<sup>38</sup> Transfer of the embryo for gestation in most cases would not raise any special concerns. In some cases one member of the couple may oppose transfer of an embryo deriving in part from his or her gametes; this might occur following divorce, or due to other considerations. Given the personal and halakhic concerns involved, and the understanding of the status of the fetus developed in the body of this paper, such opposition should be respected. Those using IVF should be encouraged to indicate at the time of cryopreservation their preferences regarding disposition of embryos under various circumstances that might arise, but should have the right to alter their decision. As a moral matter, an individual should reflect carefully before opposing transfer that accords with a prior decision, or that (e.g., following divorce) would provide important benefits for one spouse without entailing significant difficulties for the other (זה נהנה וזה לא חסר). Still, an individual could have valid personal and halakhic reasons to oppose transfer. Transfer for gestation should not occur over the opposition of either individual.

<sup>39</sup> “Fetal Reduction,” *Assia* no. 47-48 (1990): 15.

<sup>40</sup> “Destroying Fertilized Eggs and Fetal Reduction,” *Tehumin* 11 (1990-91): 272-273. A *Compendium on Medical Ethics* edited by R. David M. Feldman and Fred Rosner similarly states (p. 51): “A fertilized egg not in the womb, but in the environment – the Petri dish – in which it can never attain viability, does not yet have humanhood. It may be discarded or used for the advancement of scientific knowledge.” (6th ed., New York: Federation of Jewish Philanthropies of New York, 1984).

<sup>41</sup> Bleich, “*In Vitro* Fertilization,” *Tradition* 25, no. 4 (1991): 97. Unspecified citations of Bleich below refer to this article.

mass of undifferentiated cells which can give rise to two or more embryos.<sup>42</sup>

A non-Jewish ethicist has suggested that frozen embryos should not be destroyed; he argues that freezing the embryo indefinitely would be preferable, and could be defended either on grounds of respect for the embryo's status, or as a symbolic expression of respect for human life generally.<sup>43</sup> Such an approach would accord well with Jewish law and values. Nonetheless, it does not seem to be required halakhically. Thawing a frozen embryo in order to discard it would be halakhically permissible.

The use of embryos for non-therapeutic research, in order to gain scientific knowledge but without the expectation that the embryo would be transferred for gestation, is a topic of current controversy in the United States and other countries. Many have suggested that in vitro embryos that a couple does not wish to implant could be used for research under certain conditions: for example, that the information is important and could not be gained in any other way, that the experiment has been appropriately reviewed, and that embryos are not maintained beyond the fourteenth day of development.<sup>44</sup>

A full analysis of the issue of embryo research is beyond the scope of this paper. Allowing an embryo to be observed for scientific research does not seem intrinsically more objectionable than simply discarding the embryo. On the other hand, using an embryo for research becomes more troubling as the embryo reaches further points of development. A *Compendium on Medical Ethics*, edited by Rabbi David Feldman and Dr. Fred Rosner, allows the use of "a fertilized egg not in the womb. . . for the advancement of scientific knowledge."<sup>45</sup> The rationale for this position, and guidance for its application, require further examination beyond the scope of this paper.

The donation of embryos is discussed in the next section.

## ***Donor Sperm, Eggs, and Embryos***

### **A. Using Donor Gametes and Embryos**

Some couples are unable to have children using their own sperm and eggs, even with the assistance of procedures such as IVF. These cases raise the difficult question of whether

<sup>42</sup> This fits relatively well with the legal category of "mere fluid" (*מֵיאָ בְּעַלְמָא*) found in the Talmud in connection with the early fetus. Yevamot 69b; see Feldman, *Marital Relations*, p. 266. Given the current state of scientific knowledge, it may be less plausible to see as "mere fluid" later stages of embryonic and fetal development, especially beyond the fourteenth day. None of the CJLS papers on abortion rely on this view of the embryo or fetus, and none distinguishes between abortion before or after the fortieth day of development.

On this issue, my position would be similar to those of the AFS Ethics Committee; Shannon and Wolter, "Reflections on the Moral Status of the Pre-embryo;" and Richard McCormick, "Who or What is the Preembryo?," *Kennedy Institute of Ethics Journal* 1 (1991): 1-15. These contrast with the Vatican's position that "the human being must be respected – as a person – from the very first instant of his existence," i.e., the moment of conception. Congregation for the Doctrine of the Faith, *Instruction on Respect for Human Life in Its Origin and on the Dignity of Procreation* (Washington, DC: United States Catholic Conference, 1987), p. 12.

<sup>43</sup> David T. Ozar, "The Case Against Thawing Unused Frozen Embryos," *Hastings Center Report* 15, no. 4 (1985): 7-12.

<sup>44</sup> AFS, 78S-80S; NIH. Yet additional concerns would be raised by the creation of an embryo specifically for purposes of research, a prospect beyond the scope of this paper. Non-therapeutic research discussed in the body of the paper is distinct from therapeutic research, in which IVF procedures take place within the context of a research protocol, intended to increase the likelihood of success and benefit the couple and/or the fetus. Like other therapeutic research, this would not be inherently problematic, provided that the couple is aware of the research protocol and consents to participation, and risks and benefits are appropriately weighed.

<sup>45</sup> Feldman and Rosner, p. 51.

sperm, eggs, or embryos, donated by another person may be used by a couple to have a child.<sup>46</sup> This question has been addressed at length by Rabbi Dorff. Dorff acknowledges that the use of donated gametes raises significant concerns in Jewish law, including the possibility of incest in future generations, and ambiguity with regard to the identity of the child's parents. Even more significantly, the use of donor gametes entails personal and psychological difficulties for all involved; it has the potential to add strain to the marriage, and complicate the relationship of the child to his or her (social) parents.<sup>47</sup>

Nonetheless, motivated largely (but not exclusively) by compassion for couples who desire the procedure, Dorff deems the use of donor gametes permissible, providing that certain guidelines are met. The couple should seriously investigate alternatives, including adoption. They should be aware of all that the use of donor gametes involves, including the likely strain entailed. As well, they should receive thorough counselling and plan for the best ways to meet these challenges. Couples who use donor gametes should not keep this use secret, especially within the family. Based on the experience of many families who have used reproductive technologies, an open approach promotes the ability of family members to receive needed support, and contributes to the family's harmony and the psychological health of all involved.<sup>48</sup>

I would concur with Dorff's position with regard to the use of sperm in IVF, including the guidelines and restrictions that accompany his permission for the use of donor gametes, and extend this position to the use of donated eggs and embryos.<sup>49</sup> I would emphasize that no couple or individual should use donated gametes without careful reflection and a fully informed and voluntary decision. A decision by either member of the couple not to make use of these procedures must be fully respected, and would be strongly supported by ethical and halakhic considerations.

## B. Maternal Identity

In the case of sperm donation, as Dorff argues, the sperm donor is the genetic father, and should be viewed as the father both with regard to technical issues of Jewish identity and in order to prohibit marriage (or sexual relations) with genetic relatives. At the same time, the social father of a child conceived using donor insemination, like the social father of an adopted child, is "the 'real' father in most significant ways," and is accorded by Jewish tradition the special status of one who "does right at all times."<sup>50</sup>

Paternal identity is complicated by the use of donor sperm in that two men might be

<sup>46</sup> Reporting on procedures conducted in 1993, the Society for Assisted Reproductive Technology notes 2,766 IVF procedures using donated eggs, leading to 716 deliveries, and an additional 625 procedures using donated embryos, leading to 108 deliveries. (The paper also reports 246 procedures involving gestational surrogacy, resulting in seventy-eight deliveries. A halakhic analysis of surrogate motherhood is beyond the scope of this paper.) SART, pp. 17-18.

<sup>47</sup> Dorff, above, pp. 474-494. On the psychological challenges posed by the use of donor gametes, see also Patricia P. Mahlstedt and Dorothy A. Greenfeld, "Assisted Reproductive Technology with Donor Gametes: The Need for Patient Preparation," *Fertility and Sterility* 52 (1989): 908-914. Most Orthodox sources either do not address the issue of donated sperm, eggs, or embryos, or argue against these practices; see, e.g., Halperin, pp. 203-207. For a somewhat differing view, see Richard V. Grazi and Joel B. Wolowelsky, "Donor Gametes for Assisted Reproduction in Contemporary Jewish Law and Ethics," *Assisted Reproduction Reviews* 2 (1992): 154-160.

<sup>48</sup> *Ibid.* Couples should also be aware that in many states legal issues concerning the use of donor eggs and embryos have been less clearly addressed in legislation than have corresponding issues in the use of donor sperm, although this difference seems unlikely to have any practical effect. AFS, 47S-49S.

<sup>49</sup> Dorff (above, pp. 474-475) notes, and rejects, the argument of some authorities that donor insemination constitutes (or is akin to) adultery in introducing another man's sperm into a woman's reproductive system. This concern is even less significant with IVF, in which an embryo, and not sperm, is placed in a woman's uterus.

<sup>50</sup> Dorff, above, p. 482, citing Ketubbot 50a.

seen as fathers: the genetic father and the social father. The use of donated eggs complicates maternal identity to an even greater extent, for not two but three factors are relevant. The donor of the eggs could be seen as the genetic mother; the woman who is pregnant with and gives birth to the child could be seen as the gestational or birth mother; and the woman who raises the child could be seen as the social mother.

A number of halakhic authorities have addressed the issue of maternal identity in such cases. Many of these statements have been summarized in a review article by Rabbi Bleich.<sup>51</sup> These sources suggest that maternal identity is to be determined primarily by gestation and birth.

A central precedent in the discussion is the case of a pregnant woman who converts: conception is by a non-Jew, from an ovum from a non-Jew; the fetus is gestated by a non-Jew and then by a Jew; and a woman who is Jewish gives birth. Orthodox sources debate whether the child requires immersion, and the rationale for the requirement or lack of requirement. The Conservative position, however, is clear. Following the Shulhan Arukh, Rabbi Isaac Klein rules: "If a woman converts while pregnant, the child does not require conversion, even if it was conceived before conversion, because at the time of its birth its mother was already Jewish."<sup>52</sup> The woman's status at the time of birth determines the child's identity. By extension, the status of the birth mother determines the child's identity for IVF. While this argument provides the central basis for a Conservative position on maternal identity, this position may be supported by additional considerations as well.<sup>53</sup>

<sup>51</sup> Bleich, pp. 82-102.

<sup>52</sup> Klein, *A Guide to Jewish Religious Practice* (New York: Jewish Theological Seminary of America, 1979), p. 446. The Shulhan Arukh (Yoreh De'ah 268:6) states this conclusion, but does not offer a rationale: כותיה שנתגיירה. והיא מעוברת בנה אין צריך טבילה. The Talmudic source of this ruling, Yevamot 78a, is not in itself decisive on the issue of maternal identity. Bleich argues that Yevamot 97b, discussing the status of twins born to a woman who converts while pregnant, supports the identification of the birth mother as halakhic mother.

<sup>53</sup> Among the supporting arguments:

a. Halakhah views the status of a fetus as subservient to that of the woman. As the Talmudic phrase, עובר ירך, (Hullin 58a) is explicated by Rabbi David Feldman: "The fetus is deemed a 'part of the mother' rather than an independent entity." David M. Feldman, "Abortion: The Jewish View," in *PCJLS 80-85*, p. 11. This phrase is also cited in the teshuvot of Rabbi Robert Gordis ("Abortion: Major Wrong or Basic Right," *PCJLS 80-85*, p. 22) and Rabbi Isaac Klein ("A Teshuvah on Abortion," *PCJLS 80-85*, p. 33). Accordingly, the status of the gestating woman determines the status of the fetus, and the status of the birth mother determines the status of the child.

b. The above argument is strengthened by the fact that embryo transfer takes place well within the first days of development of the embryo, when the Talmudic designation of the embryo/fetus as "mere fluid" (מיא בעלמא, Yevamot 69b) most clearly applies. See n. 42 above, and Bleich, pp. 93-94, who rejects this view in part because of his belief that "the developing fetus is a 'person' in its own right."

c. Halakhic identification of a firstborn son as one who "opens the womb" supports defining the birth mother as the child's mother. See Exodus 13, and Dorff, above, p. 497.

d. Some have suggested that one reason for basing Jewish identity on matrilineal descent is that the child's mother can always be identified; see, e.g., Walter Jacob, ed., *Contemporary American Reform Responsa* (New York: Central Conference of American Rabbis, 1987), p. 63; Shaye J.D. Cohen, "The Origins of the Matrilineal Principle in Rabbinic Law," *AJS Review* 10 (1985): 40-41, who reports but argues against this view. This consideration would support determining the child's status on the basis of the birth mother.

e. Targum Yonatan (Gen. 30:21) and Rabbi Samuel Edels (Maharsha, commenting on Niddah 31a) relate that, prior to the birth of Joseph and Dinah, Leah was pregnant with a male, and Rachel with a female. Leah prayed that Rachel would give birth to the male, and God switched the embryos. Dinah, conceived by Rachel but born to Leah, is considered Leah's child; Joseph, conceived by Leah but born to Rachel, is considered Rachel's child. Thus, the status of the birth mother determines the child's identity. See Bleich, p. 84; Dorff, above, p. 496.

f. As discussed below, identifying the birth mother but not the genetic mother as the halakhic mother facilitates the use of donated eggs and embryos, and enables Jews to donate eggs and embryos. This policy/ethical concern, while not necessarily decisive, represents an important halakhic consideration that minimally serves to reinforce the above arguments.

[See also, "Maternal Identity and the Religious Status of Children Born to a Surrogate Mother," above, pp. 137-145.]

Accordingly, the woman who gestates and gives birth to the child is to be treated as the child's mother for purposes of Jewish law, including the determination of Jewish identity. If a Jewish woman gives birth to a child, that child should be considered Jewish, whether the egg came from a Jewish or non-Jewish woman. If a non-Jewish woman gives birth to a child, that child would not be Jewish (and so would require conversion in order to be recognized as a Jew), whether the egg came from a Jewish or non-Jewish woman.

A less satisfactory alternative position to identifying the birth mother as mother, which might also be compatible with halakhic precedent, would be to recognize *both* the genetic and birth mothers as having maternal status: even if birth is the primary determinant of maternal identity, the genetic mother would be treated as mother because of doubt, or to follow a more stringent position. This alternative is in some ways attractive at the theoretical level, for it would formally recognize the contributions of both women to the child's birth. At the practical level, however, it would impose unnecessary complications for the use of donated ova.<sup>54</sup> If an anonymously donated egg were used, the presumption (outside of Israel) would be that the donor is not Jewish; accordingly, the child (born to a Jewish mother) would require conversion in order to be fully Jewish. Moreover, the child would have obligations of honoring her or his (genetic) mother (כיבוד אב ואם) that likely would be unfulfilled.

Furthermore, eggs from a known or designated donor are used in about a quarter of ovum donation procedures in the United States and Canada,<sup>55</sup> in part because donating ova is more invasive and entails greater risks than donating sperm, and ova are accordingly less readily available (and more expensive). Accordingly, I agree with Rabbi Dorff that a fertile sister (or other relative) may donate eggs to an infertile woman, provided that all involved receive appropriate counselling and consider ways in which they would deal with "boundary questions" ("Is my aunt also my mother?" "Is my niece also my child?")<sup>56</sup> In such a case, officially recognizing the genetic mother as mother would complicate this enterprise by answering these boundary questions in the affirmative: my aunt is indeed my mother (in addition to my birth/social mother). Such a halakhic stance would be likely to undermine family harmony and the psychological well-being of all involved.

While the genetic mother should not be viewed as mother halakhically, genetic siblings should not marry (or engage in sexual relations with) one another. The most basic reason for this prohibition is that offspring of a consanguineous union face a high risk of genetically-based disease; this concern alone would suffice to support a rabbinic prohibition. Combining this ruling with those found in Rabbi Dorff's paper, one comes to the unsurprising conclusion that one should not marry (or engage in sexual relations with) children of one's genetic, gestational, or social parents. Technically, the prohibition would be Toraitic with regard to children of one's genetic father and birth mother, and would reflect the category of secondary relations (שניירות) for children of other parents.<sup>57</sup>

Based on the reasoning allowing a couple to use donor sperm or eggs in order to have a child, couples could use both donor sperm and eggs in IVF when necessary to have a

<sup>54</sup> Some analogous complications are accepted in the use of donor sperm (Dorff). However, because Jewish identity (for those who do not convert to Judaism) is based on the mother's status, egg donation would entail additional problems. More importantly, the complications do not seem to be avoidable with sperm donation, and may be avoided here simply by following the position most clearly suggested by halakhic precedent.

<sup>55</sup> In 599 out of 2,766 cycles; SART, p. 17.

<sup>56</sup> Dorff, above, p. 496.

<sup>57</sup> See Dorff, above, pp. 482-483; Shulhan Arukh, Even HaEzer 15. A child born from IVF who unknowingly engaged in sexual relations with a genetic sibling would not be culpable. Children born of these procedures should in no way be stigmatized.

child. Similarly, a couple could use a donated embryo. This might be required in an unusual case in which the husband had a medical indication for donor sperm and the wife had an indication for donor eggs, but was able to gestate and give birth to a child. It might also be suggested if the couple had indications for a donated egg, and donor embryos but no donor eggs were available.<sup>58</sup>

### c. Donating Embryos

A final and difficult issue concerns whether a couple may donate extra embryos formed from their gametes. Here my inclination is to follow, and expand upon, Rabbi Dorff's permission for Jews to donate sperm and eggs in order to enable another couple to have a child. I would emphasize that such donation is not required, and may be done "only after due consideration of the implications of what they are doing and only with due respect and, indeed, awe for the whole procedure."<sup>59</sup>

Rabbi Dorff notes that donating sperm or eggs entails a biological connection with resulting children that may have great personal significance, and that has importance in halakhah. Thus, for example, a sperm donor should take steps to ensure that no marriages or sexual relations occur among genetic offspring arising from donated sperm and genetic offspring within the man's own family. An egg donor would face similar responsibilities (even though they would be rabbinic rather than Toraitic in their basis.) Other responsibilities for one's genetic children, as well as any medical risks, must be faced as well.<sup>60</sup>

An additional concern raised by the donation of eggs or embryos must be addressed, but can be readily dealt with on the basis of the position developed above. If (disagreeing with my position) the genetic mother were to be considered the child's mother, then a child born of an embryo that develops from a Jewish woman's egg, or a child born from an egg donated by a Jewish woman, would be Jewish. I can see no way that halakhah would permit a Jewish woman or couple to make donations that would lead to a Jewish child who would be raised as a non-Jew. If this alternative position were followed, either Jews would not be able to donate eggs or embryos, or they would be able to do so only if the clinic could guarantee that these would be used to help infertile Jews but not non-Jews. Such a position would be highly problematic, to say the least.<sup>61</sup>

As argued above, however, the birth mother is the sole halakhically recognized mother, and so a child born to a non-Jew from an egg or embryo donated by Jews would not be Jewish. Accordingly, Jews can donate eggs and embryos, within the guidelines developed above and in Rabbi Dorff's paper. This position accords with the traditional mandates of תיקון העולם, improving the world and maintaining social order, and דרכי שלום, the ways of peace.

<sup>58</sup> AFS, 50S. Donated embryos generally are not created for the purpose of donation, but represent "extra" embryos that another couple does not wish to use. Accordingly, genetic screening may be less complete than is usually the case for donated sperm or ova.

<sup>59</sup> Dorff, above, p. 505.

<sup>60</sup> Dorff, above, pp. 499-501; AFS, 47S-49S. While the ovum donor is not halakhically considered the child's parent, her responsibilities for the welfare of the child as another human being are similar to those faced by the sperm donor.

<sup>61</sup> A similar concern is raised by Bleich, pp. 94-95, although my response to this issue differs markedly from his. In discussing the permissibility of autopsies, R. Yehudah Leib Graubart argues that to discriminate against non-Jews, so as to appear to care little for the life and health of non-Jews, would represent a desecration of God's name. He argues that concern to avoid such desecration not only would support ruling in accord with a lenient position (as in this paper), but could suffice to allow that which otherwise would be prohibited. *Responsa Havalim Ban'im*, vol. 3, sec. 64 (Jerusalem: Feldheim, 1975, reprint); cited in part in Isaac Klein, *Responsa and Halachic Studies* (New York: Ktav, 1975), p. 41. I am grateful to Rabbi Elliot N. Dorff for alerting me to this reference.

If Jews are willing to accept donated embryos, then allowing Jews to donate embryos as well helps to maintain the system, fulfilling one sense of *תיקון העולם*, as well as contributing to the improvement of the world, fulfilling another sense. This permission promotes harmonious relations between Jews and non-Jews, fulfilling one sense of *דרכי שלום*, as well as promoting the value of harmony and peace.

“Great is peace (*שלום*), for all blessings are contained within it.”<sup>62</sup> We hope that in vitro fertilization and other reproductive technologies, used responsibly in accord with the guidance of halakhah, will contribute to wholeness and healing (*שלמות*) for infertile couples who choose to use these procedures, harmony (*שלום בית*) in their families, and healthy new life that will add to the peace of Israel and the world.<sup>63</sup>

### **Conclusions**

1. An infertile couple may utilize IVF, using the husband’s sperm and wife’s egg, to have a child. They are under no obligation to do so. Before undergoing IVF procedures, the couple should consider medical risks as well as the personal and psychological toll that IVF often entails. A child born as a result of such an IVF procedure is fully the parents’ child in all respects, and causes the mitzvah of “be fruitful and multiply” to be fulfilled.

2. Couples who wish to use IVF and preimplantation genetic testing to avoid having a child with a severe genetic disease may do so.

3. IVF should not be used solely for the purpose of gender selection. If used to avoid having a child with a severe disease that is gender-linked, however, preimplantation testing would represent a form of genetic testing, and would be acceptable.

4. In order to avoid risks to the mother and child, and decrease the likelihood of abortion, no more than three embryos should be transferred in an IVF procedure. To the extent possible, transferring only two embryos would be preferable.

5. Creating extra embryos and freezing embryos are halakhically acceptable. Embryos may be maintained as frozen indefinitely, but thawing a frozen embryo that the couple does not wish to implant, in order to discard it, would be halakhically permissible.

6. Couples considering the use of donated sperm, ova, or embryos should consider the halakhic and personal concerns involved, receive thorough counselling, and seriously investigate alternatives, including adoption. Those wishing to use donated sperm, ova, or embryos may do so.

7. The woman who gestates and gives birth to a child is to be treated as the child’s mother for purposes of Jewish law, including the determination of Jewish identity. One should not marry or engage in sexual relationships with the offspring of one’s birth, genetic, or social parents.

8. After careful consideration of the implications of their actions, a couple may donate an embryo formed from their sperm and egg to enable another couple to have a child.

<sup>62</sup> Leviticus Rabbah 9:9.

<sup>63</sup> For their suggestions and thoughtful insights which have contributed greatly to this paper, I would like to thank Dr. David Kelly, Lorraine Newman Mackler, and members of the Committee on Jewish Law and Standards, including my fellow members of the Subcommittee on Biomedical Ethics: Rabbis Kassel Abelson, Elliot N. Dorff, David M. Feldman, Shoshana Gelfand, Avram Israel Reisner, Joel Roth and Elie Kaplan Spitz.