

SEX SELECTION AND HALAKHIC ETHICS: A CONTEMPORARY DISCUSSION

EDITOR'S NOTE:

Medical ethics is, of course, a halakhic issue left to posekim to adjudicate. But it also includes a social and public-policy dimension, as well as an attitude towards what may be technically permissible. As the secular medical community discusses the parameters of sex selection through pre-implantation genetic diagnosis, we asked Joel B. Wolowelsky and Richard V. Grazi to introduce the issues from a halakhic perspective and for a group of thoughtful discussants to then offer various perspectives on the issue.

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There are three principal means for parents to determine the sex of their offspring (putting aside various ineffectual folk suggestions). The first is prenatal diagnosis (either through a sonogram, amniocentesis, or chorionic villus sampling) followed by abortion of fetuses of the unwanted sex. This is readily available in all countries allowing abortion on demand (where a woman need not articulate the reason she wants an abortion). In India and China, where cheap mobile ultrasound clinics are readily available, women who discover that their fetus is female often opt for legal abortions. This practice has reportedly skewed sex ratios from the natural 106 boys to 100 girls to as high as 130 boys to 100 girls.

The other two methods are more widely used in the United States. One is pre-implantation genetic diagnosis (PGD) followed by selective implantation based on sex. In this technique, embryos are created through IVF (*in vitro* fertilization) and then one or two cells,

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called “blastomeres,” are removed from each for chromosome analysis and sex determination. One or even two blastomeres can be removed from an embryo without harming it, as the embryo can go on to develop just as though these cells were never removed. These cells are examined for the X or Y chromosome and only those having the correct combination are implanted. Barring lab errors, PGD, like abortion, is 100% effective. There is also the less-certain technique of pre-fertilization separation of sperm into X- and Y-bearing spermatozoa followed by IUI (intra-uterine insemination) or IVF with the desired sperm. The sperm-sorting technology was originally developed by the U.S. government, invented by a Department of Agriculture scientist for the purposes of selecting sex in livestock. The Genetics and IVF Institute in Fairfax, Virginia, developed the technology for humans (known as “MicroSort”) and currently has an exclusive license. It has a fairly high rate of success, but is not 100% effective. It offers this service only for the purpose of “family balancing”—that is, having a child of one sex after having a number of children of the opposite sex.

When sex selection is done for medical reasons—say, preventing the birth of a child with a particular genetic defect that is sex-linked—the procedure is generally viewed as ethical and acceptable. But sex selection for non-medical reasons has generally not been accepted as an ethical practice in Western countries. One concern is that the sex selection techniques could lead to a wildly skewed number of males and females in society. Another is that sex selection is a form of sexism—that is, that it regards one gender as inherently superior to the other. Allowing the procedure for family balancing—that is, guaranteeing both sexes in the family—and prohibiting it for the first child tries to speak to these concerns. R. J. David Bleich points out that the Talmud itself offers advice on how to ensure a child of a particular sex—let us put aside the question of their scientific efficacy—and therefore concludes that “the primary halakhic concern is not with regard to the decision to engage in sex preselection but with the method to be employed in effecting sex determination.”¹

Some others see allowing the use of PGD for sex selection as a slippery slope to eugenics, as the same technique can be used to test for other genetic traits. Once we allow parents the option to choose the sex of their child for non-medical reasons, they say, will we not be forced to permit to allow choosing among embryos for those traits they believe will give their children their best chances in life?

In 1999, the Ethics Committee of the American Society of Reproductive Medicine concluded that PGD used for sex selection to prevent the transmission of serious genetic disease is ethically acceptable. The use of PGD for non-medical reasons was problematic and should be discouraged because it poses a risk of unwarranted gender bias, social harm, and results in the diversion of medical resources from genuine medical need.² In 2001, the Ethics Committee concluded that sex selection aimed at increasing gender variety in family should not be prohibited or condemned as unethical in all cases. If the social, psychological and demographic effects of such use of preconception sex selection are found to be acceptable, then other non-medical uses of preconception sex selection might be considered.³

Subsequently, Robertson reported that the ASRM Ethics Committee reaffirmed its previous conclusion that initiating IVF and PGD solely for non-medical sex selection “should be discouraged.” The interest in choosing the sex of offspring is not necessarily strong enough to justify the creation and destruction of embryos for that purpose, he explained. He added that there has not been sufficient ethical and social debate as to whether there are circumstances in which embryos (even if none were destroyed) may be created and selected for transfer on non-medical grounds alone and concluded that these issues deserve close attention in the future.⁴

Gleicher and Karande reported the conclusion of the institutional review board (IRB) of The Center for Human Reproduction, arguing in the same issue of *Fertility and Sterility* that “Gender selection for non-medical reasons either is or is not ethical. If the ASRM maintains its official position that it potentially is (in reference to preconception techniques), then one has to reach the same conclusion for all applicable techniques and leave it up to the patients which to choose.” They conclude that “selected information and limited access to only one procedure option, especially if it is the qualitatively inferior one, appears, though currently the formal ASRM position, of questionable validity.”⁵

While ethical guidelines suggest limiting the number of fertilized eggs implanted after IVF to limit the eventual necessity of multifetal pregnancy reduction, no attempt is made to minimize the number of eggs harvested or then fertilized through IVF. In virtually all IVF labs, the disposal of fertilized eggs that are not implanted is at the discretion of the couple and can include instructing the laboratory to ethically destroy unused embryos, donate them to other couples or to research, or have them cryopreserved.

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As a general statement, halakhic Judaism welcomes with enthusiasm the new opportunities to help couples overcome the pain of infertility. However, it has its own ethical concerns that might limit the applicability or acceptability of various therapies and protocols. While the position is not universally endorsed, halakhic Judaism generally allows IUI and IVF (using the gametes of the married couple) to overcome infertility problems. Untransplanted fertilized embryos have no halakhic standing and may be discarded.

There is, however, vigorous debate among halakhic authorities regarding the use of donor gametes, especially donor sperm. In one view, donor sperm violates the exclusivity of marriage to such an extent that it should be rejected as too akin to adultery. In the other view, the absence of any physical sexual contact leaves the process as ethically neutral; but even those who permit donor gametes do so hesitatingly. IVF may be further disruptive than IUI regarding normal marital relations, but it is also further removed from association with adultery, as third-party semen is not introduced into the reproductive tract of a married woman.

A minority of halakhists maintain that a child born through artificial insemination or IVF has no halakhic relationship to the genetic father. The majority view, however, is that child has the same relationship to his or her genetic father as if conception had occurred naturally. This means that in the case of donor sperm, the child relates to the social father as a foster child, as Halakha sees contemporary adoption as foster parenting. The child is not considered the natural child of the social parents, as in American law, but their ward. A fear regarding donor sperm is that the child might unwittingly marry a half-sibling. For this reason, some halakhists prefer that the sperm come from a gentile donor, as under Jewish family law, a child has no halakhic sibling relationship to a paternal half-sibling if the father is a gentile.

While Halakha may see no intrinsic flaw in wanting a child of a particular sex, it does not indiscriminately waive religious prohibitions otherwise in effect to realize this goal. The personal desire to have specifically a son or daughter does not in and of itself override the halakhic imperative to maintain natural marital relations. Hence R. Yitzhak Zilberstein, who regularly contributes responsa to the Israeli Medical Halakha Group, rejects IVF for sex selection (flow cytometry not having been developed at that time): “[Normally] God joins with man and wife [in creating a child],” he writes “but here it is the doctor’s hand [instead].” It is simply absurd, he maintains, to consider putting aside the general halakhic concerns to allow one to bring into the world an infant which, according

to some halakhic authorities has doubtful halakhic status as the father's legal child, has doubtful status as the legal heir, and whose only certain status is that of a male or female baby. That notwithstanding, he continues, "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 which affects the couple, it is difficult to forbid the suggestion [for genetic screening through PGD]."⁶

It is important to note that it is the mental anguish of the parents that creates a compelling situation that allows for the genetic screening and, in a sense, creates the medical need. It is such an approach that allows many halakhists to allow abortion of a fetus diagnosed with Tay Sachs disease. It is the parents' legitimate distress rather than the child's medical condition that creates the compelling situation necessary to allow the abortion.

The medical use of sperm sorting for sex selection in cases of sex-linked genetic diseases such as hemophilia was confirmed by R. Shelomo Zalman Auerbach. He opposed sex selection for family balancing.⁷

Rabbinic aversion to sex selection for non-medical purposes was confirmed recently when the Israeli Ministry of Health would allow sex selection for family balancing for a couple with four children of the same sex if an ethics committee including a psychiatrist concludes that withholding such approval would cause damage to the mental health of at least one of the parents or the future child. Rabbinic authorities were quoted as condemning sex selection for personal parental satisfaction as antithetical to traditional Jewish values.⁸

Two idiosyncratic cases regarding sex selection offer examples of when Halakha would take a more lenient approach than the secular medical society. Both concern cases of donor sperm and each emerged from the fact that the social father is not considered the halakhic father of the child.

One case concerned the halakhic consideration of *yibud*, which prohibits unrelated men and women from being alone together in a closed room unobserved by a third party. Adopted children are halakhically unrelated to their social parents, and therefore some halakhists consider the prohibitions of *yibud* as applicable to them. For this reason, some halakhists discourage adoption in general. Other authorities argue that the deep psychological sexual taboos that exist in normal families are to be found in those families where the child was adopted at birth and therefore waive *yibud* considerations in such families.

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In the case of donor sperm, the child is halakhically related to the mother but not to the social father. The mother has no *yibud* prohibitions with either a male or female child. But those who apply *yibud* prohibitions to adoptive families would impose them on living relationships between the social father and a female child—but not a male one. The halakhic authority who had allowed the donor sperm also insisted on sex selection for a male child to avoid *yibud* problems and allow for the regular social interaction common to biological families.

The second case concerned a child would not have the same status as a *Kohen* that the social father had. A *Kohen* has special public duties and rights in the synagogue. Within a religious community, it is obvious who is a *Kohen* and who is not. The social father here was concerned that every member of the community would thereby know that the child was not his genetic son, destroying his privacy in the matter. He therefore requested PGD to guarantee a daughter.

In both cases, the need for donor sperm had obviated the halakhic concerns regarding interrupting normal marital relations. In both cases, we are dealing with despondent people who are suffering mental anguish in fear of either, on the one hand, a family situation that will be devoid of the normal interactions of natural families or, on the other hand, intense embarrassment and invasion of one's privacy. The fact that there are alternate halakhic opinions regarding both the applicability of *yibud* restrictions or the wisdom of maintaining the secrecy of the donor gametes does not diminish the reality of their anguish or its relevance within their halakhic world view, which should not be derided. The desires for both family intimacy and personal privacy stem from generally healthy concerns and are unrelated to any sexist biases.

In the *yibud* case, the man had azospermia after being treated for cancer. Eggs were obtained from his wife in the hope of finding some sperm using testicular aspiration, which could then be used for ICSI (intracytoplasmic sperm injection). In theory, once that possibility failed, the eggs could have been discarded and IUI done with donor sperm. This, however, was impractical for a number of reasons. Those eggs, already obtained and waiting, were like pregnancy knocking at the door, so to speak, while canceling and then converting to IUI at some time in the future involved more of facing the unknown, especially given the fact that pregnancy rates with IVF are four to five times higher per cycle than those with IUI. In addition, halakhically, IVF is considered less objectionable than is IUI in cases of donor sperm. It was not PGD considerations that motivated the creation of these embryos

through IVF. R. Yigal Shafran, Director of the Jerusalem Rabbinat's Department of Medicine and Halakha, who had been among those condemning sex selection for personal parental satisfaction as antithetical to traditional Jewish values, indicated that in his opinion this *yibud* case would come under the rubric of situations deemed permissible by R. Auerbach.⁹

In the *Kohen* case, presented originally more than a decade ago, R. Aharon Lichtenstein, Rosh Yeshiva of Yeshivat Har Etzion in Israel, gave the following opinion:

In principle, the suggested procedure is no more problematic than artificial insemination from a gentile donor and, indeed, is probably less so. Inasmuch as I accept the view of the *matirim* [those who permit it] (at least in situations of distress, such as this) with respect to the latter, I see the proposed procedure as at least equally *mutar* [permitted]. . . .

Given the facts you set forth on the technical plane, and inasmuch as in cases of adoption (admittedly slightly different) experience has shown that at some point it is best that a child be told the truth, I have serious doubts about the wisdom of perusing this course—especially, as it's only a fifty percent *safek* [uncertainty]. But I understand the complexity of the issue and the feelings it arouses, and the couple must of course decide for itself.¹⁰

When a similar case had occurred in Israel a few years ago, the Israeli Health Ministry's legal adviser, Mira Hivner-Harel had allowed the procedure at Hadassa Medical Center in Jerusalem on an ad hoc basis, no legal position being in effect at the time. "In light of the fact that we are concerned with an individual for whom the halakha and religion are his guiding principles . . . there was room to agree to his request," she said. "We are dealing with a family that would not have any children had we not allowed them to select the sex of the fetus. Sometimes we have to adapt our decisions to the spirit and traditions of the people."¹¹

The ASRM Ethics Committee conceded that there has not been sufficient ethical and social debate regarding the circumstances in which embryos (even if none were destroyed) may be created and selected for transfer on non-medical grounds alone and concluded that these issues deserve additional close attention in the future. Both cases presented here deal with despondent people who are suffering mental anguish in fear of either, on the one hand, a family situation that will be devoid of the normal interactions of natural families or, on the other hand,

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intense embarrassment and invasion of one's privacy. From the halakhic perspective, these may be considered compelling circumstances allowing treating these cases as those allowed on medical grounds. Indeed, in both of these cases, the rabbinic approval comes against a backdrop of disapproval of sex selection for anything other than medical reasons.

The patients' considerations stem from generally healthy concerns and are not based on any gender biases (if we take gender bias to mean extending greater worth to one gender over another). The procedure bears little risk of consequences detrimental to individuals, and represents a use of medical resources for reasons of human mental health. There is little chance of this having any major societal impact, given the idiosyncratic nature of the situation.

We should note that family balancing has a certain halakhic impetus. A man has not fulfilled the mitzvah of *peru u-revu* until he has a son a daughter (*Shulhan Arukh, Even ha-Ezer* 1:5). R. Ovadia Yosef recently ruled that PGD for sex selection could be used by a couple who had six children of one sex and who would not have any more children unless they were sure that the seventh would be of the opposite sex.¹² R. Mordechai Eliyahu permitted sex selection for a couple who had five children of the same sex.¹³ Exactly what circumstances would deserve similar permissive rulings remains to be explicated.

NOTES

This material appeared in somewhat different form in our article, "Addressing the Idiosyncratic Needs of Orthodox Jewish Couples Requesting Sex Selection by Preimplantation Genetic Diagnosis (PGD)" in the *Journal of Assisted Reproduction and Genetics* (forthcoming).

1. R. J. David Bleich, *Judaism and Healing* (Hoboken, NJ: Ktav, 2002), 129.
2. Ethics Committee of the American Society of Reproductive Medicine, "Sex Selection and Preimplantation Genetic Diagnosis," *Fertility and Sterility*, 72:4 (1999), 595-97.
3. Ethics Committee of the American Society of Reproductive Medicine, "Preconception Sex Selection for Nonmedical Reasons," *Fertility and Sterility*, 75:5 (2001), 861-64.
4. J. A. Robertson, "Sex Selection for Gender Variety by Preimplantation, Avoidance of Birth Defects Genetic Diagnosis," *Fertility and Sterility*, 78:3, 463.
5. N. Gleicher and V. Karande, "Gender Selection for Nonmedical Indications," *Fertility and Sterility*, 78:3, 460-62.
6. R. Yitzhak Zilberstein, "Selecting a Fetus for Implantation: Avoidance of Birth Defects and Determining Sex (Response to Richard V. Grazi, 1991)"

- [in Hebrew] *Assia* 8, 47-48.
7. R. Avraham-Sofer Avraham, *Nishmat Avraham* 4, 180.
 8. A. Barkam, "Orthodox and Conservative Rabbis Object to Allowing Gender Selection," *Haaretz*, 22 May 2005.
 9. R. Yigal Shafran, e-mail to Joel B. Wolowelsky, 1 November 2005.
 10. R. Aharon Lichtenstein, letter to Richard V. Grazi, 29 Sivan 5651 [11 June 1991].
 11. T. Traubmann and H. Shadmi, "Couple Allowed to Choose Baby's Gender to Avoid Halakhic Dilemma," *Haaretz* [English Edition], 18 October 2002.
 12. R. Ovadia Yosef, oral communication to Richard V. Grazi, 27 November 2005.
 13. R. Moshe Erenreich and R. Yosef Carmel, *Be-Mar'eh ha-Bazak* 5:104, 206.

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There are several issues that need to be evaluated when discussing the use of scientific advances to help actualize the dream of a couple having a family.

While *posekim* overwhelmingly endorse the use of reproductive technology to help overcome issues of infertility or genetic challenges, there are several halakhic considerations involved in the use of IUI and IVF.¹ This is especially true when the IVF procedure involves donor gametes, surrogacy, or when conception happens posthumously.² These issues are too complex to be discussed here. My comments will focus on the specific halakhic issues concerning PGD.

Checking a fertilized egg for genetic anomalies or for gender raises two primary questions. First, if in the process of checking the fertilized egg a decision is made not to implant the egg either due to genetic anomalies or that the egg does not represent the desired gender—what is to happen with such a fertilized egg? In the case of gender selection,

where the fertilized egg is healthy but the “wrong” sex, the preferred method would be cryopreservation, which is a form of freezing at -80°C to -196°C that suspends fetal development (as well as all biochemical reactions) and allows the fertilized egg to be kept in this state indefinitely. This will allow the fertilized egg to be used in the future for stem cell research or perhaps a future pregnancy. However, a fertilized egg in which genetic anomalies have been found can be destroyed, since destroying a fertilized egg is not of halakhic concern. Fetal matter that is less than forty days old is considered by the Talmud (*Yevamot* 69b) to be *maya be-alma*—“a sack of water,” having no legal status as a fetus or a quasi human being. This explains why a woman who miscarries in the first forty days of pregnancy does not assume *tum’at yoledet* (*Shulhan Arukh, Yoreh De’ah* 194:2). Additionally, such an early miscarriage does not remove the responsibility of *pidyon ha-ben* from being imposed on future progeny (*Shulhan Arukh, Yoreh De’ah* 305:23).

Ramban permits the violation of Shabbat to save even a 40-day or younger fetus. This is not based on the premise that it is a life or a quasi-life but rather that it is better to violate one Shabbat in order for the fetus to be saved, enabling it to celebrate many *Shabbatot* in the future. “Therefore, even with the saving of a fetus that is less than forty days old, which is not considered a living entity, you violate [the Shabbat] as is articulated by *BeHaG*.”³ The license to violate Shabbat is predicated on the fact that the fetus, although not yet considered a living entity on any level, is in a location (the womb of the mother) that provides the necessary elements for development into an entity that will eventually be a human being. Therefore, R. Hayyim David ha-Levi explains that one may not violate the Shabbat to save frozen fertilized eggs (which are always less than 40 days old), since, in the environment of a lab, fetal matter has no potential for any development.⁴ Once again, this underscores that fetal matter at 40 days old is not yet considered a life. It is for this reason that R. Zilberstein permits their disposal, especially when they have genetic anomalies.⁵

Secondly, one must question whether there a concern that the sperm used was wasted with the disposal of fertilized eggs. This issue is obviated with the recognition that the sperm expressed was used to fertilize many eggs. Those fertilized eggs passing the PGD criteria will still be used for the purpose of procreation. For this reason, R. Shelomo Zalman Auerbach permitted sperm-washing, which, by definition causes the destruction of some of the sperm expressed, provided that at least part of the sample was used for procreation.⁶

With all this, it would seem that the ability to perform PGD is permitted and without halakhic concern. Yet, there is still an overarching issue that PGD may create. When PGD is used to screen for genetic challenges, science serves as the conduit through which suffering and pain can be obviated for the child, family, and society. Using PGD for this purpose should be encouraged.

However, does the use of PGD for gender selection begin a form of eugenics? When a couple can orchestrate gender, what is next? Will we allow medical tests to screen fertilized eggs based on the couple's desires, such as hair and eye color? When do we cease to become partners of God and attempt to replace God? The gift of science must be used with great circumspect. PGD, when used to determine gender, can help navigate difficult familial situations. The use of PGD for gender selection may help a couple perform the mitsva of *peru u-revu* and in some cases, obviate a painful familial situation. An example from actual *she'eilot* is the distress of a *Kohen* having a son, who due to a sperm donation (which defines paternity) will be considered a *Yisrael* and will not receive the first *aliya* in synagogue or be involved in *birkat Kohanim*. While PGD may insure that such a family has a daughter, the implication for society is dangerous. The license given to use PGD in this manner must be closely scrutinized.

The Talmud (*Shabbat* 31a) lists a menu of questions asked to each of us after our passing in the heavenly court. One of the questions is: "*asakta be-pirya ve-rivya?*" The Talmudic framing of this question is fascinating: "Where you involved in trying to fulfill the commandment of procreation (of having a male and female child)?" Notice the phraseology of the question. It is not "*kiyamta pirya ve-rivya?*"—did you fulfill the mitsva of procreation, but rather, did you try? Having a male and female child is not in our hands. Our responsibility is to try to have both genders.

This concern seemed to resonate in a written dialogue between R. Menachem Burstein, dean of Machon Puah, and various *posekim* in Israel. Among the questions that Rabbi Burstein posed in letters to key *posekim* was the question of using PGD for preventing genetic anomalies as well as for gender selection.⁷ Sephardic Chief Rabbi Amar permitted PGD for genetic reasons, as well as for *peru u-revu*, and *shalom bayit*. However, others, including R. Yehoshua Neuwirth, R. Ariel, and R. Meir Nissim Mazouz pointed out concerns for such permissibility, except when it came to preventing genetic anomalies. R. Neuwirth warned that such permissibility creates an environment in which

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humankind begins to play God and warned against using PGD for this purpose.⁸

There is a need for the careful monitoring of how science is used in society. However, science in general and medical advancement in particular are means through which we celebrate our mission of *tikun olam* and our responsibility of *imitatio dei*.

NOTES

1. Concerns include whether one fulfills the commandment of procreation (R. Yitshak Ya'akov Weiss, *Minbat Yitshak* 1:50); can IUI be done while the woman is *nidda* (R. Moshe Feinstein, *Iggerot Moshe, Even ha-Ezer* 2:11); or the potential to alleviate this concern through removing *nidda mi-de'oraita* (R. Yitshak Ya'akov Weiss, *ibid.*).
2. Concerns about definition of maternity and paternity are discussed in a number of articles. See *Tehumin* vol. 5; R. Waldenburg, *Tsits Eli'ezer* 9:51, ch. 4:4; Kenneth Brander, "Artificial Insemination and Surrogate Motherhood through the Prism of Jewish Law," *Be-Or ha-Torah* 12, 59-65; comments of R. Elyashiv, *Nishmat Avraham* 4, *Hilkhot Pirya ve-Rivya*, p. 184; Michael J. Broyde, "The Establishment of Maternity & Paternity in Jewish and American Law," *National Jewish Law Review* 3 (1988), 117-58 (a more up-to-date version can be found at <http://www.jlaw.com/Articles/maternity1.html>).
3. Cases in which the sperm is extracted posthumously or the donor has already passed are discussed by R. Ezekiel Landau, *Noda bi-Yehuda, Mahadura Kama, Even ha-Ezer* 69; R. Shelomo Zalman Auerbach, "Artificial Insemination," *No'am* 1, 165; R. Saul Yisraeli, "Abahut be-Hazra'a she-Lo ke-Darka," *Torah she-Be'al Peh* 33 (1992), 41-46.
4. Ramban, *Torat ha-Adam, sha'ar ha-meihush, inyan sakkana*.
5. *Assia* 47-48, 14.
6. *Assia* 51-52, 56. Even R. Feinstein (*Iggerot Moshe, Hoshen Mishpat* 2:69), who considers it an act of murder to destroy a fetus at any age, would concur with the statements made regarding fetal material outside the uterus. His concern is based on the verse in Genesis (9:6) that requires the fetus to be *in utero (ba-adam)* to violate the prohibition he mentions in his responsa.
7. *Nishmat Avraham, Hilkhot Pirya ve-Rivya* 1:5.
8. To view these letters, see Kenneth Brander, "Playing God: Can I Choose my Child? PGD and Genetic Screening," 1 February 2006 [<http://www.yutorah.org/showShiur.cfm?shiurID=713523>].
9. The reference in *Nishmat Avraham* (*ibid.*) to R. Auerbach's halakhic ruling on sperm-wash limits its use to removing genetic challenges and not for gender selection. Looking at the language of this limitation may suggest that he would have the same concern for PGD when done for gender selection.

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It is a fairly well established and accepted halakhic conclusion that in many situations, infertility management through technological intervention is permissible. This is true even when semen must be collected from the husband for laboratory use, whether for testing, for concentration to increase the concentration of sperm, for *in vivo*, or even for *in vitro* fertilization.¹

The calculus that permits these lenient decisions is that the benefit that results from producing a child—or a series of children—in this way, which overrides the concerns raised by the procedures. Among other things, the positive impact on *shalom bayit*, on people's psychological well-being, and on preserving marriages, when added to the significant body of opinion found among major halakhic decisors which sees children produced in this way as contributing to the fulfillment of *pirya ve-rivya* and *shevet*,² simply overcomes the objections of those who do not see a parental connection in creating life through *in vitro* technological processes.³ This halakhic risk-benefit analysis also allows the majority of *posekim* to find the most acceptable way to proceed with the enterprise of bringing children into the world in this fashion, despite whatever concerns they may have about *hashhatat zera* or *hotza'at zera le-vatala*.⁴

Applying the same type of calculation to the question of gender selection yields a very different conclusion. From a purely halakhic perspective, choosing the sex of a child will not usually produce the same type of benefits as those just described. Once one is able to have children of any gender, the psychological distress diminishes dramatically. While one parent, or both, may be saddened because they do not have a child of a particular sex, in the vast majority of cases, this is nowhere near the psychological trauma that families face when dealing with infertility.

In fact, in my experience, when people express dramatic sorrow at giving birth only to boys or only to girls, it usually indicates that a deeper insecurity or personal psychological trauma lurks beneath the surface. I would not be inclined to use such an emotional expression as a factor that would suggest leniency without a great deal of exploration and heightened personal insight on the part of those who want to use this technology. Simply put, I am not at all sure that allowing gender selection in these cases will bring the removal of individual anguish and promote *shalom bayit* in as dramatic a fashion as suggested by the couple who claim that the lack of a child of a particular gender is critical to their happiness.

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In addition—and most importantly—the halakhic obligations involved in the mitsva of procreation are not fulfilled through the mechanism of gender selection. That may seem surprising since, as is well-known, the mitsva of *peru u-revu* is accomplished—according to the way we *pasken*—by fathering one boy and one girl.⁵ Nonetheless, the two opinions that appear in halakhic literature that describe what is actually required of an individual wishing to fulfill this mitsva either entail much more or much less than having a child of one gender and then (either through natural or scientific means) having a child of the opposite gender.

According to a number of authorities, one does not actually fulfill the mitsva of *peru u-revu* until and unless one has a boy and a girl and they grow up and each in turn produces a child—one a boy and one a girl.⁶ In that case, selecting the gender of one's progeny can provide no more than a step towards fulfillment of the mitsva—but it cannot get us to fully meet the requirements that the mitsva entails.

On the other hand, R. Moshe Feinstein holds that all of this gender diversity is beyond the ken of human activity. The only thing we can control is whether or not we make the attempt to have children. As such, we fulfill the *ma'ase mitsva* (the action required by the commandment) with *gemar bi'ah* (consummation of the marital act).⁷ According to this opinion, therefore, controlling the gender of the child does not add anything at all to the fulfillment of this mitsva in terms of one's personal requirement to act. As such, one lacks the halakhic benefit to overcome the concerns regardless of which opinion one follows.

We can provide additional support for this claim that gender selection fulfills no mitsva from the silence of the halakhic codes concerning this issue. Rabbinic literature offers several suggestions as to how to produce male offspring. These include: orienting one's bed so that it lines up north to south,⁸ scattering one's money to charity,⁹ and making *havdala* over wine.¹⁰ Regardless of how one understands these Talmudic teachings in light of contemporary scientific understanding of the mechanisms of procreation, it is still intriguing that no section in the various codes of Jewish law references these techniques.

If determining the gender of one's child were important to fulfilling a mitsva, then we should find these teachings somewhere in (for example) the *Shulhan Arukh*. Since there is no paragraph that says “if your first child is a boy, orient your bed from east to west and use *hamar medina* for *havdala*,” or “if your first child is a girl, then your bed should lie north to south and you should use wine for *havdala*,” it

seems clear that no mitsva is fulfilled by aiding the gender selection of one's children or else there would be such a discussion in the text. The analysis of the mitsva of *peru u-revu* presented here explains why our law codes lack a statute of this type.

Finally, we take note of the fact that, in principle, gender selection is conceptually acceptable to Jewish law. There are a number of sources that allow for such selection to occur.¹¹ It is only concerns about things like the mechanism of acquiring the semen needed for the gender selection process and the absence of compensating halakhic gain that lead to the negative conclusion reached here. This allows us to suggest that if a new technology were developed that avoided these halakhic concerns, the question would need to be revisited and might well yield a different answer.

It is for this reason that a *Kohen* and his wife facing infertility issues, who then conceive a child through artificial insemination by donor, could then ask that only zygotes which will grow to be girls be implanted in the wife's uterus. The need to avoid the embarrassment of having a son who would not offer the priestly benediction standing beside his father and could not receive the first *aliya* is sufficient to allow for gender selection in their case because the other concerns raised here were mitigated by the initial inability to procreate at all. Once the *in vitro* fertilization was allowed, choosing the child's gender involves a genetic examination of the zygotes created by the process to select out only those with two X chromosomes. As this involves no further halakhic violation or concern according to any recorded halakhic authority, there is no longer any reason to prohibit gender selection in this case—and every reason to permit it.

NOTES

1. Cf. R. Moshe Feinstein, *Iggerot Moshe*, *Even ha-Ezer* 2:18; see also R. Eliezer Waldenberg, *Tsits Eli'ezer* 3:27:3; R. Shalom Mordechai Schwadron, *Maharsham* 3:268; R. Ovadiah Yosef, *Yabi'a Omer*, *Even ha-Ezer* 2:1.
2. *Yevamot* 62a, cf. *Maharsham*, *ibid.*
3. Cf. *Helkat Mehokek*, *Beit Shemuel* and *Turei Zahav*, *Even ha-Ezer* 1:8 and see R. Yitshak Yaakov Weiss, *Minhat Yitshak* 1:50 and *Tsits Eli'ezer*, *ibid.*
4. Cf. *Iggerot Moshe*, *ibid.*, *Tsits Eli'ezer*, *ibid.* and 15:45, *Maharsham*, *ibid.* and *Yabi'a Omer*, *ibid.*
5. *Yevamot* 61b, 62a, Rambam, *Mishne Tora*, *Hilkhot Ishut* 15:4; but see *Me'iri*, *Yevamot* 61b and *Arnei Nezer*, *Even ha-Ezer* 1.
6. See *Yevamot* 62b, Rambam, *Ishut* 15:5 and *Shulhan Arukh*, *Even ha-Ezer*

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- 1:6. See also discussion in *Minhat Hinukh*, *mitsvat ase* 1, of this and other related opinions.
7. Cf. *Iggerot Moshe*, *ibid.* based on *Tosafot*, *Bava Batra* 13a, s.v. *kofin*, and see *Minhat Yitshak*, *ibid.* and *Tsits Eli'ezer*, *ibid.*
 8. *Berakhot* 5b.
 9. *Bava Batra* 10b.
 10. *Shevu'ot*
 11. Cf. *Berakhot* 60a; *Targum Yonatan*, Genesis 30:21. 33.

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MICHELLE FRIEDMAN

The desperate desire for a son or daughter coupled with growing availability of sophisticated reproductive technology may propel observant Jews to consult rabbis (or other religiously invested persons) regarding the halakhic permissibility of pre-implantation gender selection. This is rarely a neutral topic. Mention of sex selection for any purpose other than avoiding devastating genetically-linked diseases tends to elicit discomfort, even among the most liberal minded. Persons who rally to pro-choice platforms confess feeling frissons of revulsion when asked to contemplate reproductive interventions to achieve gender preference. Strikingly, eradication of undesired conception, i.e., abortion, often registers less disturbance than does elective manipulation of the raw materials of life to create a more desired child.

On the broad social landscape, issues of sex discrimination, societal gender balance, and resource allocation deserve consideration. Preferences regarding gender vary among cultures. China and India are infamous for eliminating millions of females from their populations through use of ultrasound and abortion. On the other hand, United States prospective parents seeking to adopt, perhaps motivated by notions of girls being “easier to raise,” overwhelmingly (80%) prefer girls.¹

At the personal level, observant Jews seeking pre-implantation genetic intervention may invoke religious motives for seeking to conceive either gender. “Family balancing” takes on the additional valence of interpreting the commandment “to be fruitful and multiply” as directing a man to ideally sire both male and female children. The unique issues of

yibud and *Kohen* status evoked by artificial insemination, outlined above by Drs. Grazi and Wolowelsky, also come into consideration.

All of the above issues point to why here, as on all emotionally charged issues, the rabbi must first examine his own heart. The overview to this discussion summarizes the general tone of rabbinic disapproval regarding sex selection. Knowledge of the specific arguments and sources informing this disapproval is surely critical to rabbinic involvement. If, however, a rabbi confines his response to the parameters of the manifest *she'eilah*, he will have missed an invaluable opportunity to explore the underlying latent issues inherent in such a question. At the core of the matter are the couple's individual and shared fantasies of what conceiving a son or daughter means to them.

Only by carefully monitoring his own "emotional temperature" and coming to terms with his gut reactions and feelings can a rabbi effectively guide a couple through the religious and psychological complexities of gender choice. How does the rabbi feel about the composition of his own family of origin and of the family he has created with his wife? What measure of joy or disappointment has he experienced in these intimate spheres? Does the rabbi recoil at the notion of gender selection? Does he regard it as the first descent on the slippery ethical slope of "designer" babies or does he admire the potential of scientific progress to allow for maximally desired children?

What is the state of the congregants' marriage? Do husband and wife appear to be in synch about utilization of sex selection? If the congregants asking about pre-implantation genetic selection cite *peru u-revu* as their motivation, should the rabbi reflect on whether the couples' scrupulosity concerning this mitzva is consonant with the rest of their religious practice? Should he help them consider why they have chosen to focus on this particular commandment above others?

What are the couples' expectations of the son or daughter they wish to conceive? If they want a boy, do they hope that he will be pious, studious, athletic, handsome, or "like his grandfather"? What if pre-implantation genetics succeeds in producing a son who turns out to be irreligious, a poor student, uncoordinated, homely and nothing like his *zayde*? Will his mother and father be able to ascribe their son's character to the uncertainty that comes with all parenthood or will they regret that they tinkered with nature? How will their disappointment affect their son and his older sisters?

By no means should the rabbi barrage the couple with an exhaustive inventory of the above questions. Rather, an awareness of the

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breadth of potential inquiry should inform his listening once he asks, in his own language, the opening question, “Tell me how the two of you came to consider pre-implantation genetics for gender selection?” Only by plumbing his own depths can a rabbi provide the necessary environment of compassionate yet active listening required in such a sensitive matter. Such examination will surely help a couple clarify the driving forces motivating such a significant potential deployment of medical intervention and help them to come to a religiously sanctified decision.

NOTES

1. <http://www.comeunity.com/adoption/boys/index.htm>.

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JUDAH GOLDBERG

Conventional thinking in the realm of halakha often carves up the world of permissible action into two domains: *devar mitsva* and *devar reshut*. *Devar mitsva* describes actions that reflect a particular Divine command and, while the degree of obligation thus imposed can vary, by definition, the term implies an external, moral pressure that exerts itself upon human decision-making. *Devar reshut* on the other hand, refers to the rest of human activity about which halakha makes no specific demands and, one would think, ought to be “ahalakhic,” irrelevant and invisible to the world of halakha.

Yet, when we examine the halakha, we find countless sources that ascribe legal weight to moral or religious considerations that do not embody any particular Divine injunction. To cite a simple example drawn from “reproductive halakha”: *Terumat ha-Deshen* (263) famously rules that one may compromise on the obligation to bear children throughout one’s life in order to avoid antagonism between family members. Though there is certainly no narrow mitsva that prohibits potentially “rocking the boat,” *Terumat ha-Deshen* nonetheless believes that this concern overrides a rabbinic commandment of continued procreation.³³

Far from *devar reshut* being unambiguously ahalakhic, what emerges is a category of “halakhic values” that, on the one hand, demand nothing in particular and, on the other hand, can carry such halakhic weight that they occasionally trump all else. The phenomenon, in truth, is quite familiar to even the casual student of halakha, as it underlies such basic principles as *hefsed merubab*. How else can we describe halakha’s flexibility in the face of economic pressures, considering the fact that no mitsva commands us specifically to protect our financial resources?

However, I worry that at times we overlook this subtler layer of the halakhic system and too easily dismiss any consideration that doesn’t blatantly assert itself as a classic *devar mitsva*. For instance, an excellent review of the ethics of gender selection by R. Joshua Flug offered the following midway summary about a couple who seeks to “fill out” its family with a child of a second gender:

Since the benefits of gender selection vis-à-vis the mitzvah of *P’ru Ur’vu* are highly questionable, and the given procedures are not obligatory, the claim of a couple desiring to undergo these procedures for mitzvah purposes is not much greater than the claim of a couple desiring to undergo these procedures for non-medical, non-mitzvah purposes. Therefore, the remainder of this article will address the permissibility of gender selection for elective purposes, equating those who have mitzvah intentions with those with non-mitzvah intentions.³⁴

Let us say that we accept R. Flug’s assessment that the commandment to procreate would not obligate artificial sex selection, or even the more radical assertion that the use of sex selection might not constitute at least voluntary fulfillment of that commandment. Is a couple’s aspiration for at least one child of each gender, then, necessarily nothing more than a whim, devoid of spiritual content, moral value, and halakhic force?

To the extent that the mitsva of procreation is result-oriented (regardless of whether having one son and one daughter itself constitutes the fulfillment, as some commentaries maintain,³⁵ or just sets the quota at which point one is no longer biblically required to engage in the procreative act, as others argue),³⁶ I’m not convinced that a couple’s preoccupations with this goal, even above and beyond the calling of halakha, are morally neutral. At the very least, we can say that they are unusually driven to imitate the Holy One Himself, Who “male and female created them,”³⁷ and from whose example *Beit Hillel* derive our own obligation.³⁸ They seek to engage in “*yishuvo shel olam*” and to leave a legacy, as one parent of a single-sex family put it to me, of at

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least “one *ben Torah* and one *bat Torah*.” Could there not be religious meaning, and thus halakhic value, to their mission, even if it will not help them fulfill any of the 613 commandments?

I readily admit that I do not know the definitive answer to these questions. Moreover, even if I could articulate an authentic spiritual yearning underlying sex selection and demonstrate its representation in halakhic sources, I would in no way have proven that such a desire should override the significant halakhic problems that sex selection involves. I will assert, though, that the types of questions I pose here are fundamental to so-termed “halakhic ethics,” whether in regard to sex selection or to other modern dilemmas that cannot be indexed to a specific *se’if* in the *Shulhan Arukh*. Admittedly, pursuing them presents a formidable challenge, first and foremost in developing a methodology of analysis that is at the same time legally rigorous and religiously inspiring. Without such intellectual effort, though, we risk missing perhaps the richest part of the Divine message and ultimately shrinking our imagination for genuine spiritual ambition.

NOTES

1. Some *Rishonim* claim that this is not a classic rabbinic commandment at all. See, for instance, the terminology used by *Ma’or ha-Gadol* and *Milhamot Hashem* to Yevamot 62b. However, rather than undermine my point, I believe that this would only serve as another example of *Hazal* occupying themselves with something that resides in that vague but wide domain between *mitsva* and *reshut*. Furthermore, the legal weight it then carries, such as whether one may sell a Torah scroll for the purpose of continued procreation, could be instructive. See the aforementioned sources and *Shulhan Arukh Even ha-Ezer* 1:8.
2. R. Joshua Flug, “A Boy or a Girl? The Ethics of Preconception Gender Selection,” *Journal of Halacha and Contemporary Society* 48 (2004), 5-27.
3. R. Yosef Babad, *Minhat Hinukh, mitsva* 1.
4. R. Moshe Feinstein, *Iggerot Moshe, Even ha-Ezer* 2:18. R. Flug quotes R. Feinstein’s responsum as another strike against gender selection, as according to R. Feinstein, a man does not fulfill his *mitsva* of procreation through intrauterine insemination, but at best exempts himself from the obligation. However, in this responsum, R. Feinstein also endorses the use of intrauterine insemination for the sake of procreation. Thus, to my mind, it is not clear what conclusions to draw from this responsum for our present discussion.
5. Genesis 5:2.
6. See *Yevamot* 61b.

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BEN GREENBERGER

Issues regarding reproductive rights have drawn much attention in Israel. Recent developments include: legislation providing for public funding for infertility treatments; recognizing surrogate motherhood contracts; and judicial decisions recognizing a fundamental right to parenthood in various contexts.

The issue of sex selection through pre-implantation genetic diagnosis (PGD) first gained public notice in Israel as a result of the Ministry of Health's decision to allow the use of PGD to prevent the familial and societal complications that might otherwise have arisen if a male child had been born from an anonymous sperm donor to a *Kohen* father. Approximately one year later, the Ministry of Health issued an administrative ruling (Ruling 17/03, September 14, 2003) reflecting its concerns regarding the use of this technology for non-medical reasons. The Ministry advised that it was studying the subject and, in the interim, "no procedure shall be performed whose purpose is the selection of the sex of the child, as part of fertility treatment or in any other context, unless for the prevention of sex linked genetic defects."

Following the issuance of this ruling, a committee was established by the Bioethics Committee of the Israeli Academy of Sciences and the Committee on Genetic Experimentation in Humans of the Ministry of Health. After a lengthy study, the committee recommended that use of PGD not be allowed for non-medical purposes, except in "especially exceptional" cases and "under highly restrictive conditions and limitations." This recommendation was adopted by the Ministry of Health and resulted in the issuance of a revised ruling (Ruling 21/05, May 9, 2005), which is still in effect.

In the explanatory comments to the ruling, we find expression of the Israeli perspective vis-à-vis the moral and ethical dilemmas involved: the medical risks to the mother, the status of the embryos of the sex not chosen for implantation, prevention of gender discrimination, protection of demographic balance, and the significant costs involved.

The Ministry therefore ruled that a permanent National Committee be established for the purpose of ruling on each and every request for permission to employ PGD. The multidisciplinary committee includes a clinical psychologist, medical ethicist, social worker, lawyer, physician, and a rabbi.

Of particular note are the ruling's provisions regarding the criteria to be considered by the committee in making its determination (Sec-

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tion 2, my translation from the Hebrew):

2. Selection of the sex of the child for non-medical purposes:

2.1 As a rule, selecting the sex of the child for a non-medical purpose—is forbidden, but may nevertheless be permitted in extraordinary and exceptional circumstances, and only after obtaining in advance the written approval of the National committee.

2.2 The National Committee is authorized to approve the aforementioned procedure if, and only if, it concludes in its judgment that *all* the following conditions have been met:

2.2.1 There exists an actual, discernable risk of significant injury to the mental health of the parents or any one of them, or to the child to be born, if the procedure is not performed.

2.2.2 The applicants have at least four children jointly of the same sex, and have no children of the other sex; except in extraordinary circumstances and for particular reasons that will be noted by the Committee in its decision.

2.2.3 The prospective parents have received genetic counseling, in which all details of the procedure, its risks and its potential, have been clarified for them, as well as the ethical considerations involved in selecting the sex of a child for non-medical purposes, including the fate of the embryos of the sex not selected for implantation, and the parents have given their informed consent in writing and their separate consent for performing the IVF procedure.

2.2.4 It has been explained to the prospective parents that in the event that the viable embryos produced are not of the desired sex, approval for an additional IVF procedure for the purpose of sex selection will not be granted, until all the viable embryos produced have been utilized for fertility purposes.

2.2.5 After considering the professional and ethical aspects, the Committee is convinced that there exists a serious justification for sex selection in the given instance.

The provisions of this ruling were met with considerable opposition from various sources.

First and foremost was the medical establishment. In a formal protest issued jointly by the various professional pediatrics associations,

concern was voiced that the Ministry had acted without consulting them and that serious ethical and medical considerations had not been sufficiently addressed. Primary among these concerns were the following:

What is the significance for the child as a commodity? What effect might there be on the attitude of the parents to the child as a result of the loss of the deterministic aspect of bringing him into the world? How will the fact that the child is no longer simply a “gift from God” affect his own mental and physical development? And will not the “slippery slope” eventually result in approval being given to all who apply, ultimately leading to where parents will be able to receive a child having predetermined genetic characteristics? . . . While we agree that sex selection is justified for medical purposes . . . we believe that the time is not yet ripe for the approval of sex selection for other reasons, such as sex balancing in the family.

In a similar vein, the Knesset office of strategic planning (“*Netsivut ha-Dorot ha-Ba'im*”) issued a preliminary report in July 2005, sharply critical of the Ministry of Health’s ruling, arguing that a matter of such import should be the subject of legislation rather than administrative rulings. The report also criticized the ruling’s specific criteria, such as the requirement of at least four children of the same sex, which it considered arbitrary, and the “mental anguish” requirement, which it considered questionable as it may raise considerable doubts concerning the fitness of the parents.

The issuance of the report resulted in Knesset hearings shortly thereafter, but no changes have been implemented to date.

Of interest is a halakhic survey conducted by the Puah Institute (*Makhon Pu'ah*) in preparation for the Knesset hearings. Halakhic authorities were presented with the various alternatives available for sex selection: (a) special diet / determining day of ovulation and timing of sexual relations (60 -75% success rate); (b) pre-fertilization sperm sorting (80 - 90% success rate); (c) pre-implantation genetic diagnosis.

The responses indicated almost unanimous opposition to PGD for most non-medical purposes:

Rav Yaakov Ariel: “There is no obligation to fulfill the mitsva of *peru u-revu* by artificial means. And if one was blessed by Hashem with only one son, then that is God’s will. If he has only daughters, someone else has only sons and *Ha-Kadosh Barukh Hu* matches between them and it is not for us to interfere in His management of

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the world. . . . If the purpose is to prevent the birth of a child with a defect, it is permissible *lekhathila*.”

Rav Dov Leor: “All the laws of the Torah were given in consonance with the laws of nature . . . and there is no obligation that man avail himself of non-natural means.” Rav Leor would allow PGD for medical reasons, and, in spite of his general observation quoted above, would allow its use if there were no other way to fulfill *peru u-revu*, or if there were already three sons (which creates a *hazaka* that only sons will be born) and the parents wanted a daughter.

Rav Yehoshua Neuwirth: “We must do our part and the rest is in the hands of *Ha-Kadosh Barukh Hu*.”

Rav Shlomo Amar: “Ramban and [*Sefer*] *Hinukh* write regarding *kila-yim* that the reason for the prohibition is that man is intervening in *ma’ase bereishit*. When there is a particular question (as for example, many daughters and no sons), a particular *she’eilah* would be necessary. It is possible that permission would be given where there is a medical need or in order to fulfill *peru u-revu*, or where necessary for *shalom bayit*. But for family planning purposes—it should not be allowed.”

Rav Avigdor Nebenzahl: “The first alternative is the best, because it does not involve *hashhatat zera* at all. The second alternative is preferable to the third.”

In summary, many of the ethical dilemmas related to PGD, such as the possible reinforcement of gender bias, the “slippery slope” toward eugenics, the discarding of human embryos, threats to the well being of sex-selected children, self-determination, and the dignity of the individual remain to be evaluated. In the meantime, the relatively liberal ruling of the Ministry of Health remains in effect.

Judge Greenberger sits on the Family Court in Jerusalem and is rabbi of Cong. Mitzpe Nevo in Maaleh Adumim.

FEIGE KAPLAN

Is the use of IVF-PGD for sex selection, morally justifiable? I would argue that it is not. Despite pronouncements otherwise, IVF-ET is not without risk. Risks associated with superovulation and multiple births are well known.¹ The potential impact of IVF-ET on the offspring is less well understood. Recent evidence suggests that manipulation of embryos for the purpose of assisted reproduction may impose inherent risks to normal development.² Epigenetic errors (heritable changes in gene expression that do not involve changes in DNA sequence), while individually rare, may impose significantly greater risk for people conceived by assisted reproductive technologies (ART), as epigenetic mechanisms are critical components of normal embryonic growth and development. Our experience is not yet adequate to know the potential long-term effects on children conceived using ART. Consider three cases: 1). Parents who are childless; 2). Parents with a high risk of having a child with a devastating illness; 3. Parents who can produce a healthy child without any reproductive intervention. Putting aside issues of inappropriate allocation of scarce resources (financial and human), the “safety” of any procedure is intimately linked to the situation in which it is being considered and to other available options. Cancer chemotherapies with toxic side effects that are not only accepted, but often strongly recommended for cancer-stricken patients would be considered patently unsafe for healthy individuals. IVF-ET, with its inherent risks, may be acceptable, indeed advisable, when the alternative is “no child” or a “fatally ill” child. No such case can be made for the “safety” of IVF-ET when there is an available option to have a healthy child by unassisted means. It is precisely for such reasons that rabbinic responsa on such matters can, should be, and are, given on a case by case basis.

A fundamental issue that needs to be addressed in any discussion of selection of preferred offspring, is that of eugenics. Eugenics, as a social philosophy, advocates improvement of human hereditary traits through social intervention. Eugenecists seek to create “more perfect” individuals and/or to alleviate human suffering through advocacy of policies that are perceived to lead to an improvement in the gene pool. Means to achieve these goals would include IVF-PGD. To determine the acceptability of any practice of eugenics requires that we distinguish ethically justifiable genetic “improvements” from those for which we would consider intervention to be morally repugnant.

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Philosopher David Heyd and bioethicist Julian Savulescu both argue in favor of the permissibility of IVF-PGD for sex selection. Interestingly, while Heyd argues that sex selection has no eugenic implications, Savulescu perceives it as a clear and important eugenic value.³

Defending the use of PGD for the purpose of sex selection, Heyd suggests that despite widespread “intuitive” objection, it can be justified in terms of parental right to autonomy in reproductive practice and that it falls within the “value” of family planning.⁴ Philosophically, Heyd considers sex selection to be a “non-issue” and certainly not inherently wrong. From his perspective, in choosing the sex of one’s child by IVF-PGD, “we do *not* interfere or manipulate the genome in any way” [emphasis in original]. Therefore, there is no “slippery slope.” The wish to choose the sex of one’s child, as an extension of the desire to have a child, is a personal or cultural preference that is in no way related to any eugenic ideal. I would argue quite the contrary, that even when carried out with no intent to alter the genome, IVF-ET is indeed a manipulation, which, as outlined above, has implications for the health of the mother and may impact on the genome of both the immediate progeny and future generations. Indeed, Heyd concedes that performing IVF for the sole purpose of sex selection (when there is no medical indication for the procedure) is morally problematic because of potential risk to the mother.

Julian Savulescu takes a much more radical approach.⁵ He defends a principle which he calls Procreative Beneficence—the obligation for couples to select the child, of the possible children they could have, who is expected to have the best life. Since it is incumbent upon us to select the “best” children, he argues, and since some non-disease genes affect the likelihood of leading the best life, we are “morally required” to use information available about such genes in reproductive decision-making. Focusing on genes for intelligence and sex selection in particular, he argues that we should allow selection for non-disease genes even if doing so increases social inequality. For him, sex selection is an unambiguous positive value. Thus, Heyd views sex selection (via IVF-PGD) as a morally acceptable expression of reproductive autonomy (with no eugenic overtones) and Savulescu perceives it as an example of the morally obligatory value of procreative beneficence.

How do the approaches of Heyd and Savulescu resonate with traditional Jewish perspectives on reproductive options? As traditional Jews, we do not view having children as a choice, but rather as a mits-

va, the obligation of *peru u-revu u-mil'u et ha-arets*. Since we do not perceive ourselves as having reproductive autonomy, the concept of sex selection as an extension of “reproductive autonomy” is not relevant. Nevertheless, even if this were not so, I would argue that the desire to choose the sex of one’s children through IVF-PGD, is not, as Heyd suggests, simply an extension of the wish to bear children, but a manifestation of the extent to which we are willing to use invasive procedures (harvesting eggs for IVF) and genetic technology (PGD) in order to accomplish this task. In accepting IVF-PGD for the purpose of sex selection, we are agreeing to, indeed advocating for, the creation of multiple embryos for the sole purpose of selecting our first choice and destroying those that are less desirable. Interestingly, notwithstanding a majority Rabbinic view that the non-transplanted fertilized embryo has no moral status (with respect to IVF, the rabbis are more concerned with wasting of seed),⁶ for the most part, rabbinic authorities have strongly opposed IVF-PGD for the purpose of sex-selection as inconsistent with Jewish values.⁷

To destroy a potential life for what may be perceived as a frivolous desire, even at a stage when it has no legal or halakhic status as human life, threatens basic ethical principles.⁸ Of course, we want our children to be “perfect” and we go to great lengths to shape them in the image we most desire for them. But as parents, we also understand that our children are a gift of God and we cannot justifiably (and hopefully have no desire to) control their destiny by creating multiple potential lives for the sole purpose of choosing “the best” one at the expense of all others.

The ability to accept one’s children is among the defining features of good parents.⁹ When we begin to genetically design our children, even if we begin by simply assigning their gender, we embark on a journey that, to my mind, is indeed slippery, crossing a road that can lead to a place where “childbirth ceases to be . . . an act of reproducing the human species, realized in the creation of a unique individual, and . . . become[s] a means of duplicating those who best represent a culture’s prevailing preferences and values.”¹⁰ Before embarking on such a journey, we need to ask ourselves what we are looking for in the experience of parenting and what kind of society we ultimately wish to create.¹¹

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NOTES

1. J. F. Aycillas, T. Falcone, A. C. Arroliga, "Ovarian Hyperstimulation Syndrome," *Critical Care Clinics* (1920), 679-95; A. Hourvitz, S. Pri-Paz, J. Dor, D. S. Seidman, "Neonatal and Obstetric Outcome of Pregnancies Conceived by ICSI or IVF," *Reproductive Biomedicine Online* 11:4 (2005), 469-75; B. Kallen, O. Finnstrom, K. G. Nygren, O. P. Otterblad, U. B. Wennerholm, "In vitro Fertilisation in Sweden: Obstetric Characteristics, Maternal Morbidity and Mortality," *BJOG: An International Journal of Obstetrics & Gynaecology* 112:11 (2005), 1529-35.
2. D. Rodenhiser, M. Mann, "Epigenetics and Human Disease: Translating Basic Biology into Clinical Applications," *CMAJ* (2006), 341-48.
3. Savulescu claims that Procreative Beneficence differs from eugenics since it addresses individual families and not populations as a whole. However, with respect to this discussion, I believe the term is appropriately applied.
4. D. Heyd, "Male or Female, He Will Create Them," *Ethical Perspectives* 10 (2003), 214.
5. J. Savulescu, "Procreative Beneficence: Why We Should Select the Best Children," *Bioethics* 15 (2001), 413-26.
6. J. Flug, "A boy or a girl? The Ethics of Preconception Gender Selection," *Journal of Halacha and Contemporary Society* 48 (2004), 5-27.
7. A. Sofer-Avraham, *Nishmat Avraham* 4, 180; A. Barkam, "Orthodox and Conservative Rabbis Object to Allowing Gender Selection," *Haaretz*, 22 May 2005; Y. Zilberstein, "Selecting a Fetus for Implantation: Avoidance of Birth Defects and Determining Sex (Response to Richard V. Grazi)" [in Hebrew], *No'am* 8 (1991), 47-48. Indeed, a number of *posekim* (including R. Shelomo Zalman Auerbach) have argued that while there is room for leniency with respect to *hashbatat zera* in the case of infertility or dire medical consequence, in dealing with gender selection, there is no pressing need for such leniency. See Flug, footnote 32.
8. J. Egozcue, "Preimplantation Social Sexing: A Problem of Proportionality and Decision Making," *Journal of Assisted Reproduction and Genetics* 19 (2002), 440-42.
9. R. McDougall, "Acting Parentally: An Argument Against Sex Selection," *Journal of Medical Ethics* 31 (2005), 601-605.
10. F. Bowring, "Therapeutic and Reproductive Cloning: A Critique," *Social Science and Medicine* 58 (2004), 401-409.
11. B. Steinbock, "Sex Selection: Not Obviously Wrong," *The Hastings Center Report* 32 (2002), 23-28.

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As medicine continues its frenetic pace of advance, the Torah community responds reactively to the ever fascinating and unforeseen attendant halakhic ramifications. The field of medical halakha draws on precedent from ancient to modern times to address these issues and is a continuing simultaneity of past and present analyses. Topics such as abortion, contraception and end of life issues weigh heavily on past precedent and analyses and have directly applicable legal precedent to apply to contemporary cases. The fields of genetics and assisted reproduction, however, have sparse precedent and weigh more heavily on contemporary analyses. Existing legal precedent is often elusive and new technologies often necessitate *de novo*, or at least partially *de novo*, legal analyses. In every case, however, we search for precedent, be it halakhic or aggadic. As these pre-modern sources derive from a scientific milieu quite different from our own, any potentially relevant source must be viewed in its medical-historical context, as well as analyzed for its halakhic import.

This symposium addresses one of the controversial new technologies—gender pre-selection. In an age of sperm sorting and pre-implantation genetic diagnosis, the idea of gender pre-selection is very enticing indeed, especially given our genetic understanding of gender differences and the proven accuracy of the methods, especially PGD. But while the methods are new, the concept is not. Lack of statistically proven methods, or even a rudimentary understanding of genetics, did not remotely dampen man's preoccupation with the endeavor of gender pre-selection, which is almost as old as conception itself. I hope in the near future to present a fuller annotated application of the historical lens to the pre-modern rabbinic sources dealing with gender pre-selection. For the time being, I shall have to let these brief comments suffice.

As pointed out in the introduction, the Talmud contains a number of suggestions for gender predetermination. While the suggestions are disparate and include both physiological and behavioral/religious approaches, they share the conspicuous absence of any hint of condemnation for the methods. The desire to choose a particular gender appears to receive at least tacit rabbinic endorsement.

Ancient Greek medicine associated heat, moisture, and right predominance with males and cold, dryness, and left with females. It is the right-left doctrine that has been the most consistent and persistent in the

history of preconception gender selection. Birth of a male was variously thought to be achieved by utilizing reproductive seed from the right ovary, the right testicle, or conception on the right side of the uterus.

It is noteworthy that the right-left theory, so prevalent in antiquity, is not reflected in the Talmud. Perhaps the influence of the work of Soranus, who rejected this notion, is partially responsible for this omission. Galen, however, is responsible for reviving Hippocratic theories, including the right-left doctrine and insuring their currency well into the Renaissance. Despite its absence from the Talmud, the right-left theory of gender pre-selection was widespread and persistent until modern times. It is therefore not at all surprising that we find it in rabbinic sources of the Middle Ages.

This doctrine of gender predetermination finds its expression in a curious anatomical belief found in the rabbinic literature of Middle Ages, the existence of the seven-chamber uterus. In the Middle Ages, a number of physicians espoused the belief that the human uterus was comprised of seven chambers or cells: three on the right, three on the left, and one in the middle. Furthermore, the location of the fetus within the uterus was thought to affect the sex determination of the offspring. The male embryos were believed to develop on the right, the female on the left; the embryos developing in the center would be hermaphrodites. This doctrine, which finds its expression in anatomical illustrations of this period, is virtually nonexistent prior to the Middle Ages.

Although the exact origins of the doctrine remain unclear, it is believed to have historical roots in antiquity, representing a synthesis of the right-left theory of sex determination with the theories of the mathematical significance of the number seven. The unique doctrine of the seven-cell uterus is a product of the Middle Ages and was adopted by anatomists at Salerno, as well as by the prominent anatomist of Bologna, Mondino de Luzzi (c. 1270-1326). The doctrine of the seven-cell uterus is found in the third of Scot's major works, entitled *Liber Physionomiae*, which was also variously called *De Secretis Naturae* and *De Procreatione*. The roughly twenty editions of this work that were published before 1500 are testimony to its popularity in the Middle Ages, and, in fact, Scot is likely responsible for the wide dissemination of the seven-cell doctrine. Similar to its origins, the doctrine's demise cannot be traced to a specific date. Berengario de Carpi (1470-1530) wrote in his *Isogogae* that it is a sheer lie to say that the uterus has seven chambers. Vesalius (1514-1564) likewise rejects the seven-cell doctrine in his *De Humani Corporis Fabrica*, mentioning Michael Scot by name.

Although two prominent anatomists explicitly rejected the doctrine in the early 16th century, it was still being quoted in the 17th century.

The doctrine is found in biblical commentaries, talmudic commentaries, philosophical works, books on prayer and customs. For example, *Da'at Zekeinim mi-Ba'alei ha-Tosafot* (*Va-Yikra* 12:2) states:

There are those who say that it is found in medical books that the woman has seven chambers [in the uterus]—three on the right, three on the left, and one in the middle. If the seed enters the chambers on the right, a male is conceived, if it enters those on the left, a female child will be conceived. If it enters the middle chamber, either a *tumtum* or androgenous will result.

There is clearly an independent tradition in rabbinic literature about the right-left theory, with applications of the doctrine that are uniquely halakhic. The notion of the greater significance of God's anthropomorphic right side or right hand is ubiquitous in rabbinic literature. Right is always preferred in religious ceremonial observance and prayer. This manifestation of the right-left doctrine is clearly not of Jewish origin.

While the right-left doctrine is reflected in the discussions of the seven-chamber uterus in the Middle Ages, it is notably absent from the laws of *petzu'a daka* and *kerut shofkha*, where one would expect to find it. Damage to, or removal of, even one of the testicles renders one a *petzu'a daka*. While the Talmud makes no halakhic distinction regarding which testicle is involved, *Rabbeinu Tam* bestowed greater halakhic significance to the right testicle. As such, if the left testicle was removed and the right remained, a man would still be permitted to marry into the *kahal*.¹

While there are a number of *teshuvot* addressing this right left distinction and the nuances of the definition of *petzu'a daka* and *sirus*, there is no mention of the belief that the right testicle begets only male progeny. Statements about the likelihood of subsequent fertility after unilateral orchiectomy are not punctuated by the notion that all subsequent children would be of one gender and, as a result, *peru u-revu* could not possibly be fulfilled.² This could reflect at least two possibilities: either rejection of the right-left doctrine entirely, or rejection of one approach of the doctrine, while still allowing for acceptance of the belief that uterine position affects gender.

Contemporary halakhic discussions effectively bypass earlier specific suggestions of gender pre-selection. The contemporary authorities who discuss these issues do not mention these earlier notions in any halakhic

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sense. It would appear that the concept of gender selection is, in itself, not objectionable, only the method is. If one could imagine a method that would in no way involve the *issur* of *hashbhatat zera*, what would the objection be?

NOTES

1. See *Hatam Sofer Even ha-Ezer* 17; *Avnei Nezer*, EH 17; *Helkat Ya'akov*, *Even ha-Ezer* 3.
2. See *Shulhan Arukh*, *Even ha-Ezer* 5:7; *Pithei Teshuva* and *Bi'ur ha-Gra*, ad. loc.

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Sex selection is readily available on a commercial basis—a simple Google search will list many clinics willing to offer the service for a fee of mere thousands of dollars—no ethical questions asked. The halakha-observant Jew, however, does need to ask at least two questions prior to embarking on this route: is there anything wrong with influencing the gender of a future child and, if not, are any halakhic prohibitions violated in the process of sex selection? The answer to the first seems to be straightforward—a preference for a particular gender is not inherently problematic. The Talmud, on several occasions, records advice for gender selection, without objecting to interference with the plan of the world.¹ Praying for a child of a particular gender is prohibited during pregnancy—but only because by then it is too late to change the outcome; praying prior to conception would appear to be permitted.²

The current technologies available for sex selection do, however, raise halakhic issues. The problems with aborting fetuses of the “wrong” sex are obvious. If abortion is forbidden for congenital defects that will generate far more stress for the parents, it is certainly forbidden here. Sperm sorting and IVF with PGD require procurement of the sperm for the procedure and raise uniquely halakhic concerns. From a Western medical perspective, obtaining a semen sample by self-stimulation is

viewed as a simple, non-invasive procedure. Not so from a halakhic perspective. Ejaculation outside the wife's body raises the question of *hot-sa'at zera le-batala* and prohibitions of masturbation. These issues have been dealt with extensively in the halakhic literature when the procurement is needed to diagnose or treat infertility.³ It is important to note that while most *posekim* will ultimately permit semen procurement to alleviate the significant suffering that accompanies infertility, it is only after significant grappling with the serious prohibitions involved.

As indicated in the introduction, such procurement would be permitted to prevent the suffering of the family that would be attendant to the birth of a child with a sex-linked disease. Similarly, if a couple are undergoing halakhically approved IVF with PGD to prevent the birth of a fetus with a non-sex-linked disease, there would seem to be no objection to testing the removed cell for gender as well and reinserting only fetuses of the desired sex. Furthermore, if experience with PGD continues to show that the risk to the fetus is not increased, it would also be hard to argue against PGD in cases where IVF is needed for other reasons, but PGD is not. To allow for family balancing, however, seems far more problematic.

Serious thought has to be given to educational interventions if lack of family balance can produce the same degree of psychological stress as infertility. One approach may involve more detailed study of the mitzva of *peru u-revu*. At the end of one's life, one is asked if one has engaged in *peru u-revu*, not if one has reached its ideal fulfillment.⁴ To require ongoing attempts at having a child spontaneously is one thing; assuming a need for extraordinary measures is another. Such study should also include at what point birth control would be permitted to a family with multiple children, but only of one gender.

I would like to raise three additional concerns that deserve further elucidation in this discussion. The first is the risk involved to the woman undergoing the procedure. In study of all pregnancies in Sweden, women who underwent IVF had an increased risk of ovarian torsion during pregnancy. They were more likely to encounter pre-eclampsia (63% increased risk), placental abruption (over twice the risk), and placenta previa (over three times the risk)—all of which pose a significant health risk to the mother. There was an increased use of interventions such as caesarean sections and induction of labor, which have their own attendant risks.⁵ Taking risks with one's health is a halakhic concern⁶ that is overridden in cases of infertility to enable fulfillment of *peru u-revu*.⁷ While R. Ovadia Yosef and R. Mordechai Eliyahu cited in the "Introduc-

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tion” permit sex selection for family balance, I wonder if the issue of risk was clearly weighed in these unpublished decisions.

There are also risks for infants born via IVF. Pregnancies achieved by assisted reproduction are at higher risk than spontaneous pregnancies for adverse perinatal outcomes, including perinatal mortality, preterm delivery, and low birth weight. This is partly due to the increased risk of multifetal pregnancy; however, in some studies, singleton pregnancies achieved by assisted reproduction are also at higher risk for these problems.⁸ Once again, taking these risks can be justified to alleviate the real psychological suffering of childlessness—but should they be undertaken to produce a child of a particular gender?

Last, but not negligible, is the cost involved in these treatments. Depending on the method chosen and the number of attempts needed to reach success, the costs range from thousands to tens of thousands of dollars. The financial burden on the family and on society in places where this is covered by insurance is also of halakhic concern. This does not even begin to mention the burden on finite medical resources and personnel. Does the end justify this expenditure of means?

The space onstraints of this symposium do not allow for a full development of these three points. Nevertheless, they deserve full consideration in the halakhic evaluation of this technology for the purpose of gender selection in the absence of a sex-linked disease.

NOTES

1. *Berakhot* 60a, *Niddah* 25b, 28a, 31a-b.
2. *Berakhot* 54a; *Shulhan Arukh*, *Orah Hayyim* 230:1 (at least once pregnancy is past 40 days).
3. Steinberg A., *Entsyklopediya Hilkhaitit Refu'it*, s.v. *Hafraya hutz gufanit*.
4. *Shabbat* 31a.
5. B. Kallen, O. Finnstrom, K. G. Nygren, P. Otterblad Olausson, U. B. Wennerholm, “In Vitro Fertilisation in Sweden: Obstetric Characteristics, Maternal Morbidity and Mortality,” *BJOG* 112:11 (2005), 1529-35.
6. See, for example, J. David Bleich, “Hazardous Procedures,” *Judaism and Healing* (Ktav, 1981).
7. A separate halakhic discussion would question whether it should be allowed in cases of inability to fulfill *la-erev al tanah yadekha*—cases of secondary infertility.
8. V. M. Allen, R. D. Wilson, A. Cheung, “Pregnancy Outcomes After Assisted Reproductive Technology,” *Journal of Obstetrics and Gynaecology of Canada* 28:3 (2006), 220-50.

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