

“A Time to be Born and a Time to Die”
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Texts for Session 3: Genetic Engineering

Genetic Engineering: “a process of inserting new genetic information into existing cells in order to modify a specific organism for the purpose of changing one of its characteristics” [United States. Environmental Protection Agency, “Terms of Environment: Glossary, Abbreviations and Acronyms]

You shall not let your cattle mate with a different kind; you shall not sow your field with two kinds of seed; you shall not put on cloth from a mixture of two kinds of material.

Leviticus 19:9

... one who combines two different species, thereby changes and defies the work of Creation, as if he is thinking that the Holy One, blessed be He, has not completely perfected the world and he desires to help along in the creation of the world by adding to it new kinds of creatures.

Nachmanides on Leviticus 19:9 (13th c, Spain)

God blessed them and God said to them, “Be fertile and increase, fill the earth and master it; and rule the fish of the sea, the birds of the sky, and all the living things that creep on earth.”

Genesis 1:28

AND SUBDUE IT. He gave them power and dominion over the earth to do as they wish with the cattle, the reptiles, and all that crawl in the dust, and to build, *and to pluck up that which is planted*, and from its hills to dig copper, and other similar things. This is included in what He said *and over all the earth*.

Nachmanides on Genesis 1:28

...we, too, need not refrain from intervening in matters relating to human reproduction. And this thinking has guided contemporary halakhic authorities, including those representing the Reform responsa tradition, who have generally supported the use of advanced techniques to assist human reproduction (artificial insemination, in vitro fertilization), as well as such procedures as human stem cell research and cloning. Every one of these technologies could be viewed as a violation of the natural order, an imposition of human will upon that which ought to be reserved for Divine authority. Yet the affirmative rabbinical attitudes suggest that we Jews do not necessarily view them as such. Rather, we can perceive them as the application of human

reason, itself gift of God, toward finding remedies for human infertility and treatments for disease.

CCAR responsa 5768.3

Rabbi Yoḥanan would go and sit by the entrance to the ritual bath. He said to himself: When Jewish women come up from their immersion for the sake of a mitzva, after their menstruation, they should encounter me first, so that they have beautiful children like me, and sons learned in Torah like me.

Babylonian Talmud, Bava Metzia 84a

Rabbi Ḥama said that Rabbi Ḥanina said that Rabbi Yitzḥak said: One who places his bed facing north to south will be rewarded with male children...

Babylonian Talmud, Brachot 5b

We learn that the ability of a physician to prevent illness is a greater proof of his skill than his ability to cure someone who is already ill.

Maimonides, Mishneh Torah

By extension, we would expect an even more permissive attitude concerning an embryo which, because it exists outside the womb, is not defined as a “fetus.” This is indeed the case. One leading contemporary halakhist rules that it is forbidden to set aside the laws of Shabbat in order to save the life of an embryo in a petri dish, even though we are permitted to violate Shabbat on behalf of a fetus. In a ruling which touches directly upon our own she’elah [question], R. Chaim David Halevy permits a hospital or clinic to discard “excess” embryos created for purposes of IVF, explaining that the prohibition against abortion relates only to the fetus and not to an embryo maintained outside the womb...

The absence of an explicit prohibition against destroying an embryo does not in and of itself justify the act of destruction, any more than the definition of an early-stage fetus as “mere water” automatically permits an abortion. Like the fetus, the zygote is not a legal person. Yet it most definitely is a person “in becoming,” possessing all the necessary genetic information; it lacks only gestation, development in utero, to realize its biological potential. Rather, just as we require some warrant, however “slim,”¹⁶ to abort the fetus, so too we should seek some positive reason to argue on behalf of the destruction of this microcosm of the human being.

CCAR responsum 5757.2 (Reform)

Another argument favoring the permissibility of gene surgery or genetic manipulation is the fact that a sperm or ovum or even the fertilized zygote is not a person. Thus, gene manipulation is not considered as tampering with an existing or even potential human being, since that status in Jewish law is only bestowed upon a fetus implanted in the mother's womb. One can also argue that any surgery performed on a live human being must certainly be permitted on a sperm or ovum or fertilized zygote. For example, if a surgical cure for hemophilia, Tay-Sachs disease or Huntington's disease were possible, it would surely be permissible. Hence, it should certainly be permissible to cure or prevent these diseases by gene surgery.

Dr. Fred Rosner, "Gene Therapy and Genetic Engineering in Judaism", Reprinted from Biomedical Ethics and Jewish Law, *published by KTAV in My Jewish Learning*

Rabbi Moshe Feinstein, who permits standard IVF and the consequent destruction of embryos to treat infertility, states emphatically that no room for leniency exists regarding the destruction of gametes when the parents' motive is simply to prevent the birth of a child with a disease, "For the child [at risk of disease], it is better to be born [even with the disease] than not to be born at all because those who are born will attain Olam Ha-ba—The World to Come. Therefore, even though this may cause great pain and significant burden to the father and the mother, [the destruction of gametes as part of a process to prevent disease] is not permissible."

Rabbi Shlomo Zalman Auerbach, on the other hand, permits the destruction of gametes and even embryos as long as the intention remains to produce a healthy child. "[The destruction of embryos following genetic] screening is not considered wanton destruction since it is for the purpose of healing in order to be able to fulfill the mitzvah of 'be fruitful and multiply.'"

Adding nuance to these broad positions, Rabbi Aaron Mackler notes that many modern halakhic authorities permit aborting a fetus with a severe genetic disease or deformity. If the disease screened for using PGD is so severe that, were the fetus to carry that disease the parents would abort, then certainly "selective non-transfer of an early in vitro embryo would be preferable to abortion of a more fully developed fetus in utero."

... In the final analysis, the creation and likely destruction of embryos as part of PGD is not a sufficient concern to prohibit the technology on halakhic grounds. It should, however, heighten our caution as we consider employing this technology in an increasing number of cases to select for or against a wider range of traits. The benefits of each particular use of PGD need to be weighed against the harm which follows from the active creation of embryos which will have no opportunity to develop into life. The emphasis that Jewish tradition places on the sacred value of potential life suggests that many situations may not overcome this threshold.

Committee on Jewish Law and Standards, Even Ha-Ezer 1:5 (Conservative)

We find such a balance, as we have with respect to other controversial technologies, in the distinction between medical and non-medical applications. Given that Jewish law and tradition offer no clear prohibition against the technologies of human genetic modification, there is no

justification for rejecting their use for legitimate medical purposes. The practice of medicine is a mitzvah; it partakes of pikuach nefesh, the act of saving human life, which our tradition recognizes as our highest moral obligation. To turn our back upon these newly-developed treatments for disease would accordingly be a senseless, self-destructive act in violation of that mitzvah. The better response is one of gratitude: we ought to give thanks that science has improved our ability to relieve human suffering. On the other hand, to the extent that these technologies are to be employed for non-medical ends, our attitude would be more restrictive.

CCAR responsa 5768.3 (Reform)

Nachmanides reminds us that physicians are granted license to perform invasive procedures only when their intention is to heal. He writes “The permission [for doctors to practice medicine] is permission to perform a mitzvah, the mitzvah to heal, and it is considered in the category of preserving life.”

Rabbi Moshe Feinstein builds on this argument asserting that a medical act which has no possibility of healing constitutes “interfering with a divine decree.”

Committee on Jewish Law and Standards, Even Ha-Ezer 1:5 (Conservative)

"Blessed are You, Eternal our God, Sovereign of the universe, who makes creatures different."

Talmud Yerushalmi Brachot 9:1

R. Shelomo Goren ... cites Genesis 5:3 (“When Adam had lived for 130 years, he begot a son in his likeness, after his image”), and remarks: “(I)f we permit genetic engineering, it is possible that the human being will no longer produce children after his own image and likeness but rather according to the image chosen by scientists...”.

CCAR Responsa 5768.3 (Reform)

When you have eaten your fill, and have built fine houses to live in, and your herds and flocks have multiplied, and your silver and gold have increased, and everything you own has prospered, beware lest your heart grow haughty and you forget the ETERNAL your God—who freed you from the land of Egypt, the house of bondage; ... and you say to yourselves, “My own power and the might of my own hand have won this wealth for me.”

Deuteronomy 8:16-17

‘In the past, Adam was created from earth and Eve was created from Adam. From now on, “In our image, in our likeness” – a man will not [produce offspring] without a woman, nor will a woman without a man, nor both of them without the Divine Presence.’

Bereshit Rabbah 8:9

Our conclusion above that Jewish law is reluctant to permit self-endangering behavior when one cannot say with confidence that there will be a real benefit directs us not to set the standard much lower either. Consequently, PGD should be permitted only to select against chromosomal abnormalities and genetic mutations which cause diseases that a) the fetus will very likely manifest should it be carried to term; b) are fatal or associated with a severely debilitating condition; and c) have no effective therapies at present. Some examples include Tay-Sachs Disease, Cystic Fibrosis, Fragile X Syndrome and Spinal Muscular Atrophy...

PGD with the intention of bearing a child with a lowered disease risk (e. g., a child without BRCA1&2 mutations) does not, as a rule, fall within the bounds of the permission granted by this teshuvah. However, in extreme circumstances when the mental anguish of the parents is overwhelming and cannot be relieved through non-directive genetic counseling, individual rabbis may factor in the benefit of preventing the parents' mental anguish when making individual decisions. -PGD for other purposes such as to select the sex of a child or to choose other traits is not permitted.

Committee on Jewish Law and Standards, Even Ha-Ezer 1:5 (Conservative)

We cannot, therefore, draw a hard and fast general rule that distinguishes between acceptable and unacceptable use of prenatal genetic diagnosis (PGD) in all cases. What we can say is that in the cases described in our she'elah [question], where PGD would be employed to produce children with "increased height or intelligence," the procedure would serve a decidedly non-medical purpose. These are goals of enhancement; they are not legitimate therapeutic responses to disease. As such, we would counsel against them. True, these enhancements would involve a choice among existing embryos rather than the directed genetic modification of any of them. They are, however, "enhancements" just the same, and of a piece with the technologies of human genetic modification that we have discussed, and over which we have expressed our deep concern, in this teshuvah.

CCAR Responsa 5768.3 (Reform)