

Cloning People and Jewish Law: A Preliminary Analysis

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A person without knowledge is surely not good;
he who moves hurriedly blunders; *Proverbs (Mishle)*
19:2.

Preface

The relationship between modern technology, biomedical ethics and Jewish law has been well developed over the last fifty years. As has been noted in a variety of sources and in diverse contexts, Jewish law insists that new technologies — and particularly new reproductive technologies — are neither definitionally prohibited nor definitionally permissible in the eyes of Jewish law, but rather subject to a case-by-case analysis. Nonetheless, every legal, religious or ethical system has to insist that advances in technologies be evaluated against the touchstones of its moral systems. In the Jewish tradition, that touchstone is halacha, the corpus of Jewish law and ethics. This short paper is an attempt to create a preliminary and tentative analysis of the technology of cloning from a Jewish law perspective. Like all preliminary analyses, it is designed not to advance a rule that represents itself as definitive normative Jewish law, but rather to outline some of the issues in the hope that others will focus on the problems and analysis found in

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this paper and will sharpen or correct that analysis. Such is the way that Jewish law seeks truth.

In the case of cloning — as with all advances in reproductive technology — the Jewish tradition is betwixt and between two obligations. On one side is the obligation to help those who are in need, particularly exemplified by the specific obligation to reproduce, thus inclining one to permit advances in reproductive technologies that allows those unable to reproduce to, in fact, reproduce. On the other side is the general moral conservatism associated with the Jewish tradition's insistence that there is an objective God-given morality, and that not everything that humanity wants or can do is proper; this specifically is manifest in the area of sexuality, where the Jewish tradition recognizes a number of halachic doctrines which restrict sexual activity. In addition, the Jewish tradition advises one to pause before one permits that which can lead down a variety of slippery slopes whose consequences we do not fully understand and whose results we cannot predict.

It is the balance between these various needs that drives the Jewish law discussion of all assisted reproductive technology. In that spirit this paper is intended to be a preliminary analysis of the problem of cloning.

I. Introduction

An analysis of the implications of cloning found in Jewish law really contains within it three distinctly different problems in need of resolution. The first one discusses whether the cloning process is permissible (*mutar*), prohibited (*assur*), or a good deed (*mitzvah*). However, the determination of whether any particular conduct is good, bad or neutral is not dispositive in addressing the second issue: the familial status of an individual (re)produced through cloning in relationship to other humans generally, and other members of this person's "family"

specifically.¹ Finally, even when conduct is permissible or perhaps even a mitzvah, Jewish law recognizes that the (rabbinical) authorities of every generation have the authority to temporarily prohibit that which is permissible based on the perception that this intrinsically permissible activity could lead to other more serious violations.² Perhaps cloning is such a case.

Section II of this article will review the current state of technology and science as it relates to cloning. Section III will address the question of who is the family of the clone according to Jewish law, and Section IV then proceeds to address whether cloning is permissible, prohibited, or a good deed.³ Section V will address the questions of cloning and public policy from a halachic perspective.

1. A discussion of the status of individuals produced by cloning in relationship to other members of their "family" is vital to answer a number of issues in Jewish law, such as: Is a clonee a legal child of the clonor? Is the clonee the legal sibling of the clonor? Is the clonee human? All of these status determinations have nothing to do with the question of whether such conduct is prohibited or permissible or even a good deed which fulfills religious obligation. In every Jewish law discussion, it is not sufficient to address whether such conduct is permitted, prohibited, discouraged, encouraged or neutral; one must also discuss the results of such conduct, even if a violation of the law entails. Indeed, status determinations are unrelated to a violation of Jewish law. Thus, one classified as a lunatic (*shoteh*) who has sexual relations with a sibling who is also a legal lunatic, produces a child who is a *mamzer*, even as there is no sin.

2. See Rambam, *Mamrim*, 2:1-9.

3. Because of the nature of the Jewish law discourse, section III and IV appear to be in reverse order, as it would appear more logical to discuss permissibility before consequences. However, because in Jewish law the permissibility of any activity is frequently dependent on the consequences, this order is adopted.

II. Cloning: The Scientific Background

Cloning, until now the subject of the fictional analysis of the type found in the book *The Boys From Brazil*, has become a medical reality with the recent cloning of a sheep. Indeed, there is no doubt that in a very short number of years it will be medically possible to clone human beings, and there is already an extensive discussion about whether such conduct should be permissible.⁴

In order to discuss cloning, one must understand what exactly is cloning. In essence, every human being currently in the world is the product of a genetic mixture of that person's mother and father. One's father provides half of one's nucleic genetic material and one's mother contributes the other half; this genetic material is united in the process that we call fertilization, which normally happens after intercourse, but can also happen in a petri dish after in vitro fertilization (called IVF). A child bears a genetic similarity to his mother and father but cannot be genetically identical to either one of them, as each of them has contributed only half of their genetic materials. Every person has, along with his or her nucleic DNA, mitochondrial DNA which is not located in the nucleus of the cell but in the cytoplasm. This mitochondrial DNA is inherited solely from one's mother through the egg that she provides and is identical to hers; mitochondrial DNA creates certain proteins needed to function. A father contributes no mitochondrial DNA to his children. As noted in an editorial in *Nature*, a woman suffering from a mitochondrial disease might be able to produce children free of the disease by having the nucleus of her egg implanted in a donor's oocyte, thus providing the same chromosomal

4. See, e.g. Mona S. Amer, "Breaking the Mold: Human Embryo Cloning and its Implications for a Right to Individuality," *UCLA L. Rev.* 43:1659 (1996).

genetic code, but with disease-free mitochondrial DNA.⁵

Siblings who are not identical twins share some of the genetic materials of their parents; however, since each sperm and each egg take a different set of material from the parents, each sibling has a unique genetic makeup based on a combination of portions of their parents' genes different from that found in their siblings. (All children of the same women have the same mitochondrial DNA, which has a higher mutation rate than nucleic DNA.) Identical twins, however, are the product of a single fertilized egg of a unique genetic makeup which splits in half after fertilization, leaving two fully formed zygotes which develop into two fully formed — but genetically identical — siblings.⁶ These two children share an absolutely identical genetic makeup and until recently represented the only case available in which two people could have an identical genetic makeup.⁷

In the current state of cloning technology, genetic material is taken from a person and is isolated from that person's cells. It is then introduced into the nucleus of an egg/ovum whose own nucleic genetic material has been destroyed, so as to produce an egg/ovum that contains a full set of genetic material identical to the nucleic genetic material of the person whose genetic material was donated. If the genetic material is taken from one person, and the egg is taken from another, the non-nucleic genetic material of the clonee will be that of the egg

5. "Clone Mammals ... Clone Man," *Nature*, 13 March 1997, at page 119. This is not cloning in the common use of the term, but, in fact, is a form of neo-cloning.

6. Both the nucleic and the non-nucleic DNA are the same.

7. Such identical twins can be artificially induced by blastomere separation. The propriety of such separations, while widely debated in the popular press would seem not controversial in Jewish law, if done for the sake of procreation and as a "last" alternative when other egg sources are not available.

donor, and not the gene donor, whereas the nucleic genetic material will be from the gene donor. (The exact role of non-nucleic DNA in character formation is unknown at this time, and one is simply uncertain as to how close the phenotypical resemblance will, in fact, be; however, the current state of technology indicates that the vast amount of one's genetic characteristics are determined by one's nucleic DNA.) A woman could avoid this problem and produce a "full clone" by using her own genetic material and one of her own ova/eggs in the cloning process; that clonee will have the exact same DNA makeup as its clonor.

Through the stimulation of that egg, it is induced to behave like a fertilized egg and then starts the process of cellular division that leads it to behave as if it is a newly fertilized egg with genetic materials from a mother and a father. It divides and reproduces, and when implanted into the uterus of a gestational mother, the zygote will grow and develop into a fully formed fetus which will eventually be born from the uterus of its gestational mother. It is important to recognize that in the current state of technology, all fertilized eggs — including cloned ones — are implanted in a uterus and are carried to term like all normal pregnancies. (In theory, the gene donor, the egg donor and the gestational mother could all be the same person, if the clonor is a woman. Obviously, a man can only be a nucleic DNA donor.)

The child that is born from this gestational mother is genetically identical to the donor(s) of the genetic material and bears no genetic relationship to the gestational mother.⁸ It is

8. This is not the same as asserting that the gestational mother has no impact on the development of the child. Without a doubt the gestational mother has a significant impact on the development of the fetus through her hormonal releases and other environmental factors through the placenta.

not a combination of the genetic material of two people (the mother and father). It is instead identical to the genetic makeup of the one who donated the DNA (or perhaps the two women who donated the nuclear DNA and mitochondrial DNA). It is as if, on a genetic level, this person produced an identical twin, many years after the first person was born.⁹ It is genetically impossible to distinguish cells of the clonee from cells of the clonor, as their genetic makeup remains absolutely identical. Indeed, there is no reason why this process could not be done from the cells of a person who is deceased.

III. Status Issues Related to One Who is Cloned

This entire area of endeavor is so new that there is little if any halachic consensus whether (a) it is permissible and (b) what the status of the offspring might be. What follows is my own speculation as to those problems which Jewish law would have to resolve in order to arrive at a halachic decision.

A. Who is the Clonee's Family

The Jewish legal tradition would, in my opinion, be very much inclined to label the gestational mother (the one who served as an incubator for this cloned individual), as the legal mother of the child, as this woman has most of the apparent indicia of motherhood (see *infra*) according to Jewish law. While this child bears no genetic relationship to its gestational mother, particularly when the clonee is a male, there are no other possible candidates whom Jewish law could label the mother.

One might, at first glance, question this result. However, consider the case of a woman born with no ovaries, who as an infant is given an ovary transplant. Twenty years later, this woman marries and has a child. Who is the legal mother of

9. This is not quite true when the genes are implanted in the egg of another, as the non-nucleic DNA would be different.

the child? I am convinced that Jewish law acknowledges that the women who received the ovary transplant — who had a sexual relationship with a man, and whose body ovulated, conceived, implanted, nurtured and bore this child — is the halachic mother of the child, even though she bears absolutely no genetic relationship with the child.¹⁰ Thus, this child would have a maternal relationship with the woman who bore him. It appears to me that:

- 1) If conception occurs within a woman's body, removal of the fetus after implantation (and, according to most authorities, after 40 days) does not change the identity of the mother according to Jewish law. The mother would be established at the time of removal from the womb and would be the woman in whom conception occurred.
- 2) Children conceived in a test tube and implanted in a host carrier are the legal children of the woman who gave birth to them since parturition and birth occurred in that woman, and conception is not legally significant since it occurred in no woman's body.
- 3) Children conceived in a woman who had an ovarian transplant are the legal children of the woman who bore them.¹¹

According to my analysis, rule two would govern this case, and it would appear, the gestational mother would be the legal mother according to Jewish law.

However, in the last five years quite a robust discussion

10. This issue is discussed at great length in an article by this author "The Establishment of Maternity and Paternity in Jewish and American Law," *National Jewish Law Review* III:117-152 (1988).

11. Ibid.

within Jewish law has developed as to whether a child can halachically have two or more mothers. According to Rabbi J. David Bleich, a number of halachic authorities would be inclined to rule that it is possible for a child to have two mothers according to Jewish law, and, in a case of surrogate motherhood, both mothers are to be considered the mother. Rabbi Bleich reports that the late Rabbi Shlomo Zalman Auerbach adhered to this view.¹² If such were the halacha, there would be little doubt that the one who contributed the genetic materials would also be considered the mother according to Jewish law were she a woman — as her contribution is clearly greater than the egg donor, who is considered a mother by this analysis. Indeed, it is quite possible to argue that both the clonor and the egg donor, who contributes the mitochondrial DNA, would be considered "mothers" according to Jewish law by this analysis, which assumes that more than one mother is possible. The logic behind naming the one who contributes the nucleic genetic material as the mother seems persuasive if one considers the egg donor to be a mother in surrogacy cases. If one maintains that a woman who contributes an egg and does not carry the child to term to be a mother according to Jewish law, certainly one who contributes all of the genetic materials — twice as much as is normally contributed by the mother — is considered a mother according to Jewish law, by these same authorities. The rationale for labeling the contributor of the egg/ovum as the mother would seem to be that the contribution of either the mitochondrial DNA or the egg itself is enough of a contribution that — within a system that labels any woman who contributes as "a mother" — this person too is a mother.

On the other hand, if one agrees with those authorities

12. Rabbi J. David Bleich, "In Vitro Fertilization: Questions of Maternal Identity and Conversion," *Tradition* 25:4, Summer 1991 82-102, at pages 86-88.

who label the gestational mother as "the only mother" to the exclusion of all other mothers and the ovum donor as of no legal significance according to Jewish law, one is uncertain as to what is the result in this case. The contributor of the genetic material still lacks the indicia of motherhood according to this school of thought; however, unlike the typical mother, who contributes but half the genetic material, this woman contributed all of the genetic material, and thus has a greater claim to parenthood than an egg donor in the case of surrogate motherhood.¹³ Nonetheless, the weight of this line of reasoning argues that Jewish law focuses on parturition and birth, and labels the gestational mother as the "real" mother. This result should govern the case of cloning also — the birth mother should be the "real" mother according to Jewish law.

If the donor of the genetic material is a man, it would appear that the above logic about who is the mother is even more persuasive in determining who is the father. A man who reproduces through in vitro fertilizations contributes only half of the genetic material through his sperm, and is still considered the father according to normative Jewish law (even though there has been no sexual act and no clear procreative activity). Certainly in this case, the fact that the man contributed all of the nucleic genetic material would appear to be enough to label this person the father according to Jewish law, and to state that this person has fulfilled the commandment to be fruitful and multiply, or its rabbinic analog.

Of course, to reach this result, one must resolve a number of halachic disputes about the duty to procreate. There are some who maintain that absent a sexual relationship, there is

13. See Rabbi Ezra Bick, "Ovum Donations: A Rabbinic Conception of Maternity" *Tradition* 28(1) Fall 1993, pages 28-45. Rabbi Bleich responded in "Maternal Identity Revisited," *Tradition* 28(2) Winter 1994. See also *Nishmat Avraham* EH 22:2 at 186 in appendix volume.

no paternity; certainly those authorities rule that no paternity is established in the case of cloning.¹⁴ There are also some who rule that absent a sexual relationship — even if paternity is established — there is no fulfillment of the biblical obligation to “be fruitful and multiply” or a fulfillment of the rabbinic obligation to “inhabit the earth”. Cloning involves no sexual relationship, and thus would not fulfill the mitzvah to procreate according to Jewish law.¹⁵

However, neither of these two approaches are considered normative in Jewish law. The vast majority of halachic authorities rule that children produced through other than sexual means are the legal children of the inseminator, and indeed such activity is considered a positive religious activity (a mitzvah) — a good deed. As Professor Irving Breitowitz stated in a recent article on preembryos:

AIH [Artificial insemination of the Husband's sperm] is generally regarded as a halakhically permissible procedure through which paternity can be established and the mitsvah of *peru u-revu* ["be fruitful and multiply," the biblical obligation to have children] or at least *la-shevet* ["to be inhabited," the rabbinic obligation to have children] can be fulfilled. By and large most *poskim* [decisors of Jewish law] have assimilated IVF [in vitro fertilization] to AIH and have permitted its utilization ... Virtually all contemporary *posekim* have concluded, first, that the egg and sperm providers do have a parental relationship with the IVF generated offspring; second,

14. See, e.g., *Tzitz Eliezer* 15:45.

15. This is analogous to the sexual relationship between a Jew and a non-Jew, which Jewish law maintains produces no legal relationship between the father and the child. Whether the father be Jewish and the mother not, or the converse, the Jewish legal tradition denies that paternity can be halachically established in such cases.

that the procedure, if undertaken for procreation by an otherwise infertile couple does not violate the prohibition against *hashhataat zera* [wasting sperm/seed]; third, that one may fulfill, through any resulting offspring, either the mitzvah of *peru u-revu* [the biblical obligation to have children], or at the very least, the "lesser" mitzvah of *la-shevet* [the rabbinic obligation to have children].¹⁶

The next sentence to Rabbi Breitowitz' article states "These will be the assumptions on which this article is predicated;" I too will predicate this article on these assumptions. Let me emphasize that these are only assumptions, not halachic decisions issued by recognized *poskim*.

Thus, in summary, it is relatively clear that Jewish law would be inclined to view the gestational mother in a case of cloning as, at the very least, likely to be the mother. This is no different than a surrogate mother – who bears no genetic relationship to the child – and yet is at the very least considered likely to be the mother, such that the child would be prohibited to marry any of the relatives of the surrogate mother who carried the child to term.

It seems logical, to this author, that when the genetic donor is a man, he would have the status of the father and would fulfill the duty to have children, either its biblical or rabbinic component.¹⁷ If the genetic donor is a woman, perhaps one

16. Rabbi Yitzchok Breitowitz, "Halakhic Approaches to the Resolution of Disputes Concerning the Disposition of PreEmbryos", *Tradition* 31:(1)64-92 (1996) at page at pages 65- 66.

17. The mitzvah of *peru-urevu*, or its rabbinic analog, *lashevet*. The argument, advanced by many, is that *lashevet* is fulfilled even when *peru urevu* is not, as *lashevet* is a result-oriented mitzvah, while *peru urevu* is an action-oriented mitzvah with a specific process.

could claim that the gene donor is also the mother in accordance with the logic of Rabbi Bleich found above, or in accordance with those authorities who label the egg donor the mother according to Jewish law in cases of surrogacy.¹⁸ There is little doubt that the genetic donor would be, at least, classified as the mother as a stricture based on doubt, prohibiting sexual relationships with her relatives or her (if the child is male). This might also be the case for the egg donor, who is the contributor of the mitochondrial DNA, whose effect on the clone has yet to be fully elaborated by the scientific community.

This leads us to one of the anomalies found within the area of establish maternity and paternity according to Jewish law. Given the fact that for the foreseeable future there will always be a birth (surrogate) mother with no genetic relationship to the child who has a tenable claim as the "real" mother of the child (absent the acceptance of the logic which recognizes that a person can have two mothers,) it will be markedly harder for a woman to be considered the mother of her cloned progeny than it would be for a man to be considered the father of his cloned progeny. The rationale for this distinction is relatively clear: since there are no other possible candidates for paternity, the man who donates sperm — or in the case of cloning, the whole genetic material — becomes the father according to Jewish law. The ovum-donating woman (or the gene-donating woman in the case of cloning) who donates the exact same thing as the man does in a case of surrogate motherhood (half the genetic material) has a harder time demonstrating her halachic status as mother, as there is another woman claiming that position — the gestational mother, who has a very strong claim in Jewish law.

18. See Rabbi Aharon Soloveitchik, "Test Tube Babies," 29 *Ohr Ha'Mizrach* 128 (1980).

This observation — that the man who provides half the genetic material is always the father, but the woman who provides half the genetic material is not always the mother, and might never be — leads to the realization that we appear to have established a normative rule of halacha: when establishing who is the mother and who is the father, halacha insists that only men can be the father and only women can be the mother. This seems consistent with the normative values found within Jewish law. While little textual proof can be found supporting this assertion — as the classical *poskim* never considered the possibility of any other rule — this seems logical.

Perhaps since the child would lack a father according to Jewish law in the case of a woman donating genetic material to be cloned and the gestational mother being the "mother" according to Jewish law — maybe the provider of the genetic material should be the "father" whether that person is a man or a woman, as providing half the genetic material seems to be enough according to most halachic authorities to label one the "father" even absent intercourse. The possibility that motherhood and fatherhood can be defined independently of the mother or father's gender is explicitly discussed by Rabbi Joseph Babad in *Minchat Chinuch* 189(1), where he discusses the case of an androgenous male who fathers a male child and then has a (homo)sexual relationship with that male child. Rabbi Babad speculates that if the male child has a homosexual relationship with his father, both are liable for incest as well as for homosexual activity. However, if the sexual relationship is with his father's female sexual organs (after all he is androgenous), Rabbi Babad speculates that "the son should be liable for sexual relations with his mother, perhaps."

Notwithstanding the presence of this very tentative analysis, there is little or no precedent for such an analysis; the classical Jewish law codes leave little room for this discussion, which seeks to define motherhood and fatherhood in reference to the

gender of the parents and not independent of the gender.¹⁹ Indeed, even Rabbi Babad's analysis seems to uncouple gender from parental status only in the case of one whose gender status is uncertain (even though he fathered a child); no such ambiguity is normally present.

B. The Identical Twins Issue

Some suggest that the relationship between the clonee and the clonor is that of siblings and not of parents. While this argument seems to have a genetic basis, as the relationship between the clonee and the clonor most closely resembles the relationship between identical twins (although in most cases the mitochondrial DNA will be different), it would appear that there are significant halachic problems with this analysis. The definition of siblings found in Jewish law is either a common mother or a common father or both. As the Talmud notes in *Yevamot* 97b, one can imagine a situation in which children are siblings in which they have no legally cognizable genetic relationship, but nonetheless are considered siblings because they shared a uterus with a common mother. Consider the case in *Yevamot* 97b:

Twin brothers who were converts, or similarly emancipated slaves, may neither participate in *chalitza* nor a levirate marriage; nor are they punishable for marrying their brother's wife [as converts lose their legal relationship with their prior family]. If, however, they were not conceived in holiness [their mother was a Gentile when they were conceived] but were born into holiness [had converted to Judaism before their birth] they may neither participate in *chalitza* nor a levirate marriage and are guilty of a punishable offense if they

19. See *Encyclopedia Talmudit*, "Av" 1:5-18 and "Aim" 2:21-26.

marry their brother's wife.

Rashi, commenting on the final words of this talmudic passage, states that the two brothers in the final case are prohibited from marrying each other's wives since they were born to the same Jewish mother and, thus, are related to each other as half-brothers, i.e., they have a legally recognized mother in common. It is critically important to realize that Jewish law only recognizes the mother as such because she gave birth to these children; her genetic relationship with the children has been legally severed by her conversion – as is the case of any convert who, upon conversion, loses all previously established genetic relationships.

Given this insistent definition for the purpose of declaring one a sibling according to Jewish law²⁰ — that individuals are required to have either a common mother or a common father (or both) to be siblings — it would be difficult to establish that according to Jewish law the relationship between the clonor and the clonee to be a sibling type of relationship, given the complete absence of common parents.

The assertion that all individuals who are genetically identical are, in fact, legally considered siblings can be readily disproved. Consider the case of natural identical twins who clone themselves respectively, producing clones who are identical genetically not only to themselves but also to the clonor's identical sibling. Surely the two clonees are not siblings to each other, or to their clonor's identical brother — to each of whom they are genetically identical! Rather, each clonee is the child of the respective clonor. Each clonee is the nephew to the clonor's identical brother, and the two clonee are first cousins. The presence or absence of a "mother" in common reinforces this sense.

20. *Shulchan Aruch, Even Haezer* 15:10.

The argument that analogizes cloning of an adult to the splitting of a fertilized egg appears incorrect.²¹ It is true that when a fertilized egg divides into two independent embryos, both of those children (who are identical twins) are considered children of the couple that fertilized the initial egg — and the second egg is not a "child" of the first. However, this type of case is different precisely because the process of fertilization and division occurs in utero, such that it is clear who is the mother of these children, and thus who is the father. To rule that the provider of the initial genetic material is not the father in a case of cloning — but rather that the father of the provider of the genetic material is the father — seems far removed from logic, as that person is completely uninvolved in the reproductive process. The one who fertilized the egg, either by providing half the normal chromosomes in the case of regular fertilization, or all the chromosomes in the case of cloning, should be considered the parent.

An elaboration of this analysis is needed. The splitting of a fertilized egg is perhaps the simplest form of cloning, the argument goes, and just like that case produces sibling relationships and not a child-parent relationship, so too, a clone from an adult should be classified as siblings, and not as a child. I believe this analysis is incorrect. What makes the identical twins siblings in the case of fertilized eggs, is the definition of siblings discussed above: a common mother and father. The fact that these children share a uterus and a common egg, and thus a mother (see *Yevamot* 97b cited above) inclines one to think that they also share a father who provided the sperm that created the first one of them, and thus they are siblings. Clonor and clonees do not share a mother (egg donor or gene provider) or a father (provider of genetic material) and

21. Fertilized eggs have been split, producing induced identical twins.

thus are not siblings, in my opinion.²²

C. Absence of Paternity and Religious Identity

One other possibility worth considering is the possibility that there is no familial relationship between the clonor and the clonee according to Jewish law. Jewish law might consider these people as categorically unrelated. There is ample precedent in Jewish law that a mere genetic relationship does not establish a legal relationship in the eyes of Jewish law. Nonetheless, once there is a clear establishment of maternity on the part of the gestational mother, as there is in the case of cloning (see above) it seems logical that the provider of the genetic material has the status of the other parent, assuming that this parent is a man, thus enabling him to fit into the category of father. It is illogical to distinguish between a man who contributes sperm to an in vitro fertilization to be the father according to Jewish law, and yet consider the one who contributes all the genetic material not to be the father. In the absence of the genetic provider being a man, one returns to the discussion about two women competing to be the mother in the case of surrogacy.²³

The question of who is the mother is seminal in determining

22. This is a significant issue in Jewish law, as it has ramifications as to whether the production of clones is a fulfillment of the mitzvah of "to be fruitful and multiply," and whether a clone can marry a natural daughter of the clonee.

23. Consider the case of the egg of a Jewish woman fertilized by the sperm of a non-Jewish man and then implanted into the uterus of a Jewish woman. Without doubt, Jewish law would assign paternity to nobody and the question of maternity within the categorization of surrogate motherhood described in Section III. The fact that there is no father cognizable according to Jewish law would in no way affect the disagreement between the two women as to who the mother is under Jewish law.

the religious identity of the child. Jewish law insists that the child of a Jewish mother is Jewish, independent of the religious identity of the father, and the child of a Gentile woman is a Gentile, independent of the religious status of its father. Indeed, in the case of intermarriage, Jewish law never recognizes valid paternity, no matter what the religion of the father is. Were one to determine that the gestational mother is the mother, Jewish law would assign the child Jewish identity and would limit paternity to those cases where the provider of the genetic material is also Jewish. In those circumstances, where the donor of the genetic material is a Jewish woman and the gestational mother is a non-Jewish woman, or the other way around, the determination of religious identity would depend on whom one labels the mother. Rabbi J. David Bleich quotes an unpublished responsum from the late Rabbi Shlomo Zalman Auerbach to the effect that, the Jewish status of such a child is subject to doubt, and he or she should be converted.²⁴ (This doubt is likely to continue even when the clonor is Jewish, and the egg donor is Gentile, as the egg donor's religious identity is also relevant, at least once one considers the possibility of multiple mothers.)

D. The Artificial Person (*Golem*)

Unaddressed until this point is the discussion of the legends in Jewish tradition about *golems*, artificial people created by mystical means. These stories tell of figures made from dirt brought to life by reciting one of the names of the Divine or by placing a piece of parchment with God's name (or the word *emet* ("truth")) on the *golem's* forehead. The Talmud (*Sanhedrin* 65b) recounts:

Rava created a man and sent him to Rav Zera. The

24. *Lechumra*; Bleich, *supra* note , at page 93-95 and note 43 at page 102.

rabbi spoke to him, but he did not answer; Rav Zera exclaimed "you are artificial: return to dust".... Rav Hanina and Rav Ohaya would sit every Sabbath eve and study the book of creation and create a calf one-third the size of a full calf, and eat it.

In the last 600 years there have been a number of accounts of *golems* created to assist the Jewish community in its various times of need.²⁵ As Rabbi Chaim Steinmetz notes "whether or not these legends are fictional is irrelevant; what we are interested in is how man's ability to artificially create life is viewed by Jewish thinkers."²⁶

The responsa literature contains a clear discussion of whether an artificially created person (a *golem*) is human or not — may it be killed, does it count in a *minyán*, can it ritually slaughter and so on. Humanness – being created in the image of God (*tzelem elokim*) – is not dependent on intelligence.²⁷ Rather, as the *Encyclopedia Talmudit* states:

A person who is born from another person – in the womb of a woman – is prohibited to be killed.

It adds:

One who is created through a mystical process or through a mixing of divine letters [if that person is

25. For more on *golems* in the Jewish tradition, see Moshe Idel, *Golem: Jewish Magical and Mystical Traditions on the Artificial Anthropoid* at 213-232.

26. Chaim Steinmetz, "Creating New Species", Unpublished ms. My thanks to Rabbi Steinmetz for sharing his article with me.

27. For an elaboration on this, see Eleazar Fleckeles, *Teshuvot Me' Ahava* 53, who discusses whether a significantly deformed child is human, and concludes that obviously it is. For a tentative contrary assertion, see Ya'akov Hagiz, *Halachot Ketanot* 37-38 which is responded to in the *Mishnah Berurah* 329 s.v. *ela*.

killed] the one who kills him does not violate the prohibition to murder (*lo tirtzach*).²⁸

Yet other halachic authorities focus on the fact that these artificially created "people's" (*golem's*) origins are non-human, or that they are specifically divinely created, or that a *golem* is both specifically divinely created and a deaf-mute.²⁹ Indeed, Rabbi Samuel Adels Maharsha, commenting on *Sanhedrin* 65a, could easily be understood as ruling that a *golem* that can speak and appears human, is, in fact, human — a result that appears very intuitive to this writer.³⁰ Indeed, support for the proposition that "humanness" is determined by human function in cases where apparent definition of humanness — birth from a human mother — does not apply, can be found in an explicit discussion of humanness in the Jerusalem Talmud (*Niddah* 3:2). That source states:

Rabbi Yasa states in the name of Rabbi Yochanan: "If [a creature] has a human body but its face is of an animal, it is not human; if [a creature] has an animal body, but its face is human, it is human.

This would indicate that when the simple definition does not apply, one examines the creature for "human" features. However, the Talmud continues:

Yet suppose it is entirely human, but its face is animal-like, and it is learning Torah? Can one say to it "come and be slaughtered?" [Rather one cannot]. Or consider

28. *Encyclopedia Talmudit*, "Adam" 1:165. See also *Chacham Tzvi* 94. *She'elat Yavetz* 2:82 quotes others who compare such a creature to an animal — it is alive, but not human.

29. Compare *Darhei Teshuva* on *YD* 6:11, Maharsha, *Sanhedrin* 65a, *Sidrai Taharot*, *Ohalot* page 5a, *Tzafnat Paneach* 2:7.

30. For more on this, see Azriel Rosenfeld, "Human Identity: Halakhic Issues", *Tradition* 16:3 197 at page 58.

if it is entirely animal like, but its face human, and it is plowing the field [acting like an animal] do we come and say to it, "come and perform levirate marriage [*yibum*] and divorce [*chalitza*]?" [Rather, one cannot.]

The talmudic conclusion seems to be simple. When dealing with a "creature" that does not conform to the simple definition of humanness — born from a human mother — one examines context to determine if it is human. Does it study Torah (differential equations would do fine for this purpose, too), or is it at the pulling end of a plow? By that measure, a clone, even one fully incubated artificially, would be human, as it would have human intellectual ability and human attributes.³¹

However, it appears to this writer that these stories about fully artificial people are of no relevance in cases of AIH/D, IVF, or cloning since the fertilized egg is implanted in the uterus of a woman, who gives birth to a child and is the legal mother. Thus, a clone, no less than any other "born" child, meets the prima-facie test for humanness and is human.

To the extent that the mystical stories have something to contribute to the approach of Jewish law to this topic — itself a matter of significant dispute as noted by Maharsha, above — that discussion will have to wait for the invention of a full human incubator, thus allowing a child to be born without any implantation into a human.³²

31. This might however, indicate that a fully incapacitated clone might not be human. See Rabbi Moshe Hershler, "Genetics and Test Tube Babies," *Halacha uRefuah* 4:90-95 (5745).

32. A fairly clear proof that *golems* were not considered human is the fact that they were destroyed in the *golem* tales without any thought, when their function was finished; in that sense they were not considered human, were not governed by Jewish law, and could be treated as inanimate objects.

E. Miscellaneous Issues Related to Cloning

A host of miscellaneous issues raised by this analysis can only be dealt with in a preliminary way. The first is the famous discussion generated by a series of responsa (*teshuvot*) by Rabbi Saul Yisraeli and others as to whether a dead man can legally father a child according to Jewish law, and as to who owns the genetic material of the dead person which will subsequently be used to reproduce this person.³³ Presumably, those who hold that a dead man cannot legally reproduce so as to have a paternal relationship or fulfill a mitzvah, would rule that one whose cells are cloned after death is not the father according to Jewish law. Those who disagree with this analysis would seem to disagree in the case of cloning as well.³⁴

There is little doubt that soon there will be yet another (modified) form of cloning that would permit the taking of nucleic genetic material from a variety of sources, and one need not employ the genetic material of just one person. How exactly Jewish law would view the parental, familial, or maternal status of one who has various pieces of genetic materials from a variety of sources is an issue which is little addressed. If one accepts the analysis of Rabbi Bleich that it is plausible for a child to have more than one legal mother or father — based on the fact that Jewish agricultural laws allows for a plant to have more than two legal parents — one would be inclined to view the parents of those children as the contributors of the genetic material as well as the gestational mother.³⁵ Presumably those who disagree with that analysis would argue that the gestational mother is the "real" mother according to Jewish law. In a case where there is no gestational mother³⁶ this approach would

33. See Breitowitz, *supra*, at pages 69-80.

34. *Ibid.*

35. See Rabbi Bleich, *supra*, at pages 93-95.

36. Such is currently science fiction and not fact.

argue that there is no mother according to Jewish law, or perhaps this approach would label the primary donor as the mother or father, or consider them all doubtful (*safek*) parents. Indeed, such is exactly the dilemma in the current cloning technology when the egg/ovum donor is not the same person as the contributor of the nucleic genetic material, as that clonee has genetic material from two different sources: nucleic genetic material from the clonor, and mitochondrial genetic material from the egg donor.

IV. Is Cloning Permissible, Prohibited, or A Good Deed?

The previous section's analysis was limited to the ramifications of cloning, without any discussion of whether Jewish law views such conduct as a good deed, a bad deed, or merely a permissible activity. Five distinctly different categories can be advanced in the area of reproductive activity.

1. Activity Which Is Obligatory (*mitzvah chiuvit*).

The requirement for a man to procreate by having a minimum of two children — a boy and a girl — is obligatory according to Jewish law. At least as a matter of theory, a Jewish law court can compel one to marry and have children.³⁷

2. Activity which is Commendable, but not Obligatory (*mitzvah kiyumit*).

Various authorities rule that procreation beyond the obligation to have one boy and one girl is a discretionary activity which is a *mitzvah*. According to this approach,

³⁷. *Shulchan Aruch EH* 1:3. While this is no longer done, and has not been done for 500 years (see Ramo), the rationale for not engaging in compulsion has nothing to do with the fact that this obligation is not as a matter of theory compellable in Jewish law.

such conduct is a mitzvah, but not legally obligatory.³⁸

3. Activity which is Permissible (*mutar*).³⁹

Rabbi Moshe Feinstein is of the opinion that for a woman to engage in artificial insemination with sperm other than her husband's, with her husband's consent, in order that she may have a child, in a situation in which the sperm donor is a Gentile, is permissible.⁴⁰

4. Activity which is discouraged but not prohibited (*bitul mitzvah*).

Various Jewish law authorities rule having many children a discretionary mitzvah (see rule 2, above and note) and deem the decision to stop having children after one has the minimum number required as a

38. Thus, according to this approach, a person who has already fulfilled the obligation to be fruitful and multiply and is not married is under no obligation to remarry, although such conduct is a discretionary mitzvah and should be done when possible. This explains the rulings of *Mechaber* and *Ramo*, *Even Haezer* 1:8, both of whom permit marrying a woman who cannot have children in a variety of situations, including, *Ramo* writes, to avoid disputes. Certainly, *Ramo* would not permit one to avoid having the minimum required number of children to avoid confrontation; see comments of *Gra* on *EH* 1:22 who notes this. For a contrary view, see *Rambam*, *Ishut* 15:16. For a lengthy discussion of this, see *Rabbi Yehuda Henkin*, *Benai Banim* 1:31 and 2:38.

39. This is not to be confused with a reproductive technology that has some aspects of prohibition (*issur*) and some aspects of prescription (mitzvah) such as artificial insemination of the husband's sperm. Such activity involves a balance of whether the aspect which is proscribed is outweighed by the fulfillment of the mitzvah which is prescribed.

40. *Iggerot Moshe Even Haezer* 1:10, 71; *Even Haezer* 2:11; *Even Haezer* 3:11. Many argue with this approach, and this is not the place for a discussion of this issue, which is cited merely as an example of such conduct.

nullification of an optional mitzvah. According to this approach, one who avoids fulfilling this commandment has forsaken the opportunity to do a good deed (mitzvah) — but there are those who hold that such conduct is not definitionally prohibited.

5. Activity which is Prohibited (*assur*).

For example, an abortion for a reason unacceptable to Jewish law is prohibited.⁴¹

Thus the seminal discussion about cloning focuses on whether the obligation to be fruitful and multiply or its rabbinic analog has been fulfilled by the cloning activity. This question seems to be without clear precedent in Jewish law. One could argue that the definitional activity found in the obligation to be fruitful and multiple solely involves a man giving genetic material to produce a child who lives. Such a child is produced in this case. There is at least one mother (gestational mother) and in most circumstances there will be a father/second parent. Why then should no mitzvah be fulfilled, or at least a child born not exempt one from the future obligation to procreate? On the other hand, one could argue, that the intrinsic definition of the obligation to be fruitful and multiply or its rabbinic cognate involves the combination of the genetic materials of a man and a woman — whether through a sexual act or in a petri dish — and absent the combination of genetic material from a man and a woman, there is no fulfillment of the obligation to be fruitful and multiply.⁴² Indeed, this could be implied

41. "Abortion in Halakhic Literature", Rabbi J. David Bleich, *Contemporary Halakhic Problems* 1:325-371.

42. One could also argue that to fulfill the mitzvah of *peru-urevu* or *lashevvet*, one must engage in a sexual act, and absent a sexual act, no mitzvah is fulfilled. However, as noted above in section IV, that approach has been rejected by most decisors, and is no more (and no

from the comments of Ramban on Leviticus 18:6, which perhaps makes reference to other Jewish authorities who maintain that incest is prohibited because it eliminates genetic diversity.⁴³

It seems to this author that the first approach seems to be superior to the second. This is particularly true when the fertilized egg is implanted in a woman, thus producing a child and a birth-like process that clearly resembles the natural birth process and motherhood.⁴⁴ Indeed, even if one were inclined to argue that there is no fulfillment of the full obligation to procreate absent fertilization, maybe cloning as a form of reproduction is sufficient to exempt one from the obligation to procreate again, as for example a Gentile who converts to Judaism after having children as a Gentile is exempt from the renewed obligation to procreate as he already had children before⁴⁵ (even if these children did not convert to Judaism with their parents).⁴⁶

less) coherent in the case of cloning as it is in the case of IVF.

43. See Ramban on Leviticus 18:6, and the notes written by Rabbi Bernard Chavel who quotes an authority who adopts this view.

44. Whether Jewish law would view this case differently in a circumstance in which a child is fully cloned and went from petri dish to incubator to feeding tube without ever being implanted in the body of another seems to me to be a vastly more complex question.

45. *Shulchan Aruch Even Haezer* 1:7. As explained in *Biur Heitev* 1:11, the converted Gentile in this case is exempt from the obligation to be fruitful and multiply, because he has children who are "called after his name," even though he has not — according to Jewish law — yet fulfilled this obligation at all. A clone could be such a case exactly. Producing a clone could be a sufficient fulfillment of the obligation to procreate that — even though one has not actually fulfilled the mitzvah — one has exempted oneself from ever having to fulfill the obligation.

46. This is a dispute; compare *Chelkat Mechokek*, *Taz*, and *Beit Shmuel* commenting on *Even Haezer* 1:7.

So, too, it is important to recognize that the Jewish legal tradition limits the obligation to be fruitful and multiply to a man, and not to a woman; while this tradition recognizes that in all circumstances a woman is a necessary participant in the obligation to be fruitful and multiply, but yet for a variety of reasons outside the scope of this paper it is quite clear that the normative Jewish tradition assigns no obligation upon a woman to be fruitful and multiply.⁴⁷

Thus, when cloning involves the taking of genetic materials from a woman and putting it in the egg of another woman, while a third woman carries the child to term, one could say that no mitzvah is fulfilled (as none of the participants are obligated) and the activity itself is neither good nor bad, although the need to engage in other prohibited activity would be enough to prohibit this cloning according to Jewish law, as there is no counterbalancing mitzvah to offset even a small impropriety.⁴⁸

So far, this article has not yet voiced what might be any intrinsic halachic grounds to prohibit cloning. Indeed, a review of the cloning process does not indicate any apparent grounds to argue that there is a generic blanket prohibition against

47. *Shulchan Aruch EH* 1:13. It would appear to this writer that this line of reasoning provides an argument that the Jewish tradition does not insist on the combination of genetic material from two people — with each side providing half the genetic material as a *sine qua non* for fulfilling the mitzvah to reproduce — as the mitzvah is only obligatory on one of the two parties; the woman's contribution is necessary, but not a mitzvah.

48. It is markedly easier to argue that any conduct is prohibited according to Jewish law in cases where the scale which weighs its positive and negative components clearly contains nothing on the positive side of the scale.

cloning.⁴⁹ One would be hard pressed to define the taking of the cells necessary to genetically reproduce the person as a form of wounding (*chavala*) as the cells can be extracted without any apparent violation of Jewish law. Indeed, in that regard, cloning lacks many of the serious halachic problems associated with artificial insemination, in-vitro fertilization, and surrogate motherhood, all of which have serious halachic issues raised in terms of the fertilization of the egg by the sperm, and other related issues. Cloning — precisely because it does not involve any reproductive technology other than implantation — seems to be free of these issues.

However, this analysis does indicate that in the case where the donor of the genetic material is a woman, the best that one can categorize this activity is as permissible activity (*mutar*), as no mitzvah is fulfilled. Indeed, in a case where the proposed gestational mother is married, the fact that the clonor is a woman (and fulfilling no mitzvah) might — alone — be enough of a reason to prohibit it, since a number of halachic authorities prohibit a married woman from functioning as a gestational mother for any child other than one whose father is her husband,⁵⁰ and a plausible claim could be made that one should be strict for this approach absent a mitzvah being performed, which is not the case when the clonor is a woman. Certainly this is true absent permission from the husband.

This author does not see any substantive violation of Jewish law that definitionally occurs when one clones cells from one human being into the egg of another and implants that fertilized

49. By the term "generic prohibition," I mean an activity that definitionally violates Jewish law, such as the prohibition to kill, or the prohibition to waste seed, or the prohibition of adultery, or other specific prohibitions.

50. See Rabbi Yaakov Breish, *Chelkat Yaakov* 3:45-48. Similarly, see Rabbi Yechiel Yaakov Weinberg, *Sridai Eish* 3:5.

egg into a gestational mother.⁵¹ In those circumstances where the clonor is a man such that he fulfills the obligation to be fruitful and multiply or its rabbinic cognate and he cannot fulfill the obligation otherwise (including through AID/H or IVF), cloning might be classified as a good deed (*mitzvah kiyumit*); in those circumstance where the clonor is a woman, cloning could be classified as religiously neutral, neither prohibited nor a mitzvah, simply permissible, depending on the desires of the parties.⁵²

A. Permission to Clone

The question of property right ownership in one's own DNA sequence needs to be addressed, as scientifically there is no reason why a person needs to consent to being cloned. Cells could be extracted without a person's consent, or even,

51. One writer recently suggested that there was a problem with killing the nuclear material in the unfertilized egg, as this is a type of abortion. This seems to be mistaken, as the egg/ovum is removed from the egg donor prior to fertilization. As ably demonstrated by Rabbi Breitowitz, there might be serious halachic problems associated with destroying eggs after they are fertilized, but not before they are fertilized; Rabbi Breitowitz, *supra*, at page 67.

52. The fact that this activity might be a mitzvah if the genetic donor — the clonor — is a man, does not indicate that such cloning must or should be done according to Jewish law. There is a wealth of literature indicting that a man is under no religious duty to engage in any reproductive technique other than that found in the course of normal marital relations. Just as artificial insemination, even by the husband's sperm, is not halachically obligatory, so too cloning would certainly not be obligatory in the Jewish tradition. The most that could be said about it is that cloning might be encouraged in the Jewish tradition when it is the only way for a man to reproduce. This is quite a bit different than the obligation to procreate through marital relations with one's spouse, which is a duty — an obligation according to Jewish law.

perhaps at some point, a person could be DNA sequenced such that one could duplicate their genetic code without the need for extracting anything from that person's body. It would appear to this writer that a person's right to physical integrity is sufficiently well established in Jewish law and tradition that there is no need to demonstrate that Jewish law would prohibit one from assaulting another to get cells from their body to clone.⁵³ (However, if that were done — notwithstanding the violation — the resulting child who was cloned would still be a human being, entitled to all protections granted all people, just like a child conceived through rape is a human, with no stigma.)

However, the right to control one's own genetic information absent a physical intrusion is much harder to justify exactly in the halachic tradition. It would seem to this writer that taking a person's genetic information through a scan or from cells naturally shed from a person while they function — is not much different than taking a person's literary accomplishments without permission (but with attribution). The question of whether one can copy another's invention, book, insight, quote, Torah ruling or genetic code would seem to be the same issue. The vast majority of halachic authorities accept that Jewish law has some notion of patent and copyright which prevent one from taking ideas which another creates, even if nothing is physically taken: however, where this prohibition precisely comes from and what it is based on differs significantly from decisors to decisors, and is based on such diverse concepts as excommunication (*cherem*), theft, implied conditions, limited sales, secular law, common commercial practice, and others commercial law concepts.⁵⁴

53. See *Shulchan Aruch, Choshen Mishpat* 420:1-3.

54. For a survey of these issues in the context of patenting a non-human life form, see Arie P. Katz, "Patentability of Living within

V. The Slippery Slope and the Denigration of Human Beings

Many have argued that the problems with cloning have nothing to do with the technical issues relating to cloning, rather it is the fear that the individuals produced through cloning will not be considered human by society and will lead to a number of gross violations of normative [Jewish] laws and ethics, such as the harvesting of organs from these people, their use for human experimentation, slaves, or other prohibited activities.⁵⁵ The correctness or incorrectness of this assertion of prospective ethical violation of the clonees' rights as humans created in the image of God is difficult to evaluate in the Jewish tradition. There is no doubt at all that a person produced through cloning, and born of a mother, is a full human being according to Jewish law and tradition and is entitled to be treated — must be treated — as such by all who encounter this person.

This author is hard pressed to find any rational halachic argument that could justify the categorization of a person produced through cloning as not human. Indeed, an examination of the rationales for explaining why a *golem* is not human indicates that the absence of a human parent does not necessarily make one non-human — and a cloned child clearly has a mother, at the least. Even those halachic authorities who insist that absent a sexual act, no mitzvah is fulfilled, in situations such as IVF, have given not a scintilla's worth of indication that the individuals produced through such processes are not human.

Some fear that that society will mislabel such individuals

Traditional Jewish Law: Is the Harvard Mouse Kosher?," 21 AIPLA Q.J. 117 (1993) which reviews many different theories of Jewish patent and copyright law while discussing patenting life forms.

as something other than human, and engage in activities tantamount to murder or enslavement, by treating these individuals as organ sources, or as individuals to be experimented upon, or as forced labor. One could imagine a rabbinic authority, aware of the possibility of ethical lapses in our society, arguing that as a temporary measure based on the exigencies of the times that cloning should not be engaged in until such time as the appropriate educational activity can teach people that clones are human beings entitled to be treated with full and complete human dignity.⁵⁶ However, this type of prophylactic rule which argues that permitted activity should be prohibited in light of the ethical failures of the times is not the same as asserting as a normative rule of halacha that such conduct is prohibited. Rather it is a temporary measure to prohibit that which is intrinsically permissible.⁵⁷

55. Indeed, consider the case of a woman who suggested conceiving a child — in order to abort it and obtain fetal-brain tissue to help treat her father, ill with Parkinson's disease.

56. It has been reported to this writer that such is the position of Rabbi Lau, the current chief rabbi of Israel, although I have been unable to verify these reports. News reports state that "Israeli Chief Rabbi Meir Lau said the cloning of living creatures is prohibited by Jewish religious law. 'The use of genetic engineering to create life is totally prohibited,' the rabbi said during a conference at Tel Aviv's Bar-Ilan University." See *AFP-Extel News Limited, AFX News* March 5, 1997. However, subsequent reports indicate that the "Chief Rabbinate doesn't reject genetic engineering in principle, but limits must be set, Chief Rabbis Eliahu Bakshi-Doron and Yisrael Lau told the Knesset Science and Technology Committee at Hechal Shlomo on Monday;" *Jerusalem Post*, April 2, 1997, Pg. 3 "News in Brief."

57. *Ho'ra'at sha'a, le-esur davar mutar.*

A recent article reported:

Rabbi Moshe Tendler, professor of medical ethics, talmudic law and biology at Yeshiva University in New York, sees other potential good use for human cloning. In theory, the Orthodox scholar might permit cloned children when a husband cannot

The same is true about arguments against cloning grounded in efficiency. Some have argued that halacha should prohibit cloning because so much human reproductive material has to be expended to produce a single clone. Whatever the merit of this argument, it is likely the march of scientific progress will vastly reduce the inefficiency of this process. More significantly, normative halacha does not view the death of pre-embryos in the process of attempted implantation as violative of halacha. That is exactly what embryos are to be used for.⁵⁸

It could be argued that cloning should be prohibited based on the various talmudic dicta that seem to praise the importance of genetic diversity.⁵⁹ This, however, seems to paint with too broad a brush. It is clear that the Jewish tradition views the natural process of reproduction as the ideal, for a variety of reasons, including that it allows for genetic diversity, with all other methods to be used only when normal reproduction is unavailable. Cloning, for a variety of reasons, falls far short of the ideal. However, to claim that a single case of cloning as an alternative to infertility should be prohibited based on this analysis is no more persuasive than to claim that halacha should forbid artificial insemination or IVF since it is less than ideal. The correct response should be that these less than ideal methods

produce sperm. But he believes that the danger of abusing the science is too great to allow its use. As a Jew, he lives in the historical shadow of the Nazi eugenics program, in which people with 'undesirable' traits were weeded out of society, forbidden to have children and ultimately killed...."The Talmud says that man has to learn to sometimes say to the bee, 'Neither your honey nor your sting.' Are we good enough to handle this good technology? Of course we are, if we can set limits on it. And when we can train a generation of children not to murder or steal, we can prepare them not to use this technology to the detriment of mankind."

"Cloning," *Pittsburgh Post Gazette*, March 1, 1997 at A1.

should be used in circumstances where the ideal method does not or cannot work. In my view the talmudic dictum about genetic diversity stands for the proposition that wholesale cloning should be discouraged, and nothing more.

More generally, halacha denies the authority of the post talmudic rabbis to make prophylactic decrees permanently prohibiting that which is permissible on these types of grounds. This is even more so true when such a decree (*takana*) would permanently prohibit an activity which is, in some circumstances, the only way a person can fulfil the obligation to reproduce and could in a variety of circumstances have overtly positive results.

It is possible to argue that the Jewish tradition would not look askance on the use of cloning to produce individuals because these reproduced individuals could be of specific assistance to others in need of help. Consider the case of an individual dying of leukemia in need of a bone transplant who agrees to clone himself with the hopes of producing another like him or her who, in suitable time, can be used to donate bone marrow and save the life of another (and even more so, the clonor). The simple fact is that Jewish law and tradition views the donation of bone marrow at the very least as a morally commendable activity, and perhaps even morally obligatory such that one could compel it even from a child.⁶⁰ Jewish law

58. See Rabbi Breitowitz, pages 69-70.

59. See *Sanhedrin* 38a and *Berachot* 58a. Maharal also indicates that genetic diversity is part of the divine plan; see *Derech Chaim* 4.

60. See "Compelling Tissue Donations," Rabbi J. David Bleich, *Tradition* 27:4, 59-89 (1993). The rationale for this is that such donations (which are not really donations according to Jewish law, as they can be compelled) are neither statistically harmful nor particularly painful, and thus one who engages in this activity fulfills the biblical obligation not to stand by while their neighbors' blood is shed. This activity is

sees nothing wrong with the having of children for a multiplicity of motives other than one's desire to "be fruitful and multiply." Indeed, the Jewish tradition recognizes that people have children to help them take care of themselves in their old age, and accepts that as a valid motive.⁶¹ It recognizes a variety of motives why people have children; there is no reason to assert that one who has a child because this child will save the life of another is doing anything other than two good deeds — having a child and saving the life of another.

This writer suspects that to the extent that human cloning does become an available medical procedure, it will be for the treatment of profound infertility, such as in the case of a soldier who was fully castrated after stepping on a land mine, and not for any of the more controversial purposes. Just as there was great concern over how frequently and for what purposes artificial insemination would be used, and after 20 years of data we see that it is used nearly exclusively to treat infertility, I suspect that such will be the case here, too. This vastly diminishes the public policy issues associated with cloning.

V. Conclusion

In sum, one is inclined to state that halacha probably views cloning as far less than the ideal way to reproduce people; however, when no other method is available it would appear that Jewish law accepts that having children through cloning is perhaps a mitzvah in a number of circumstances and is morally neutral in a number of other circumstances. Clones, of course, are fully human, and are to be treated with the full dignity of any human being. Clones are not robots, slaves, or semi-humans, and any attempt to classify them as such must

61. *B'eyna hutra l'yada*; see *Yevamot* 64a; *Shulchan Aruch* EH 154:6-7 and *Aruch HaShulchan* EH 154:52-53.

be vigorously combated.

In addition, it would appear that the relationship between the male clonor and the clonee is that of father and child and the relationship between the gestational mother and the child that she bears is one of mother and child. Where the clonor is a woman, there is a natural tension between her status as a mother and the status of the gestational mother as a mother. While this writer is inclined to think that the gestational mother is the "real mother" according to Jewish law, there is some halachic discussion that argues that the gestational mother is not the real mother, and the genetic mother is, thus making the clonor the mother. In addition there is the extremely thoughtful opinion by Rabbi Bleich arguing that both can be the mother. Certainly the woman clonor is to be considered, at the very least, a possible mother (a *safek* mother) such that it would be prohibited for the clonee to have a sexual relationship with any of the members of the family of the genetic donor as well as the surrogate mother.

There is a natural tendency to prohibit that which is unknown, and that tendency is itself a morally commendable virtue lest one engage in activity which is prohibited as its consequences are not understood. However, prohibiting that which one does not understand is a regrettable state of affairs. This preliminary analysis is submitted in the hopes that others will comment and critique it, and Jewish law will develop an established policy concerning issues relating to cloning.⁶²

62. Rabbi Moshe Feinstein, in his responsa addressing artificial insemination, suggests that to accommodate the concerns of others who understand the halacha differently than he, and not to create illegitimacy even according to some authorities — semen from Gentiles may be used for the insemination, as that will reduce the possibility of *mamzerut* to zero. He writes this even though he personally is quite convinced that no *mamzerut* problem arises even with Jewish

Postscript

The words of Maharal from Prague speaks eloquently about the power of human creativity to reshape the universe, and how that power was given to humanity at the time of creation. He states:

The creativity of people is greater than nature. When God created in the six days of creation the laws of nature, the simple and complex, and finished creating the world, there remained additional power to create anew, just like people can create new animal species through inter-species breeding People bring to fruition things that are not found in nature; nonetheless, since these are activities that occur through nature, it is as if it entered the world to be created.....⁶³

Maharal's point is that human creativity is part of the creation of the world, and this creativity changes the world, which is proper. The fulfillment of the biblical mandate to conquer the earth (*vektivshuha*),⁶⁴ is understood in the Jewish tradition as

sperm; See *Iggerot Moshe, Even Haezer* 1:10, 71; 2:11; 3:11. See also Rabbi Moshe Feinstein, *Dibrot Moshe, Ketubot* 233-48. Such a policy — of halachic risk reduction given uncertainty — is worthy of imitation in these circumstances as well.

63. Maharal Mi-Prague, *Be'er Hagolah* pages 38-39 (Jerusalem 5731).

64. *Bereshit* 1:26. Lord Immanuel Jakobovits stated:

We can dismiss the common argument of "playing God" or "interfering with divine providence" [in reference to cloning]. Every medical intervention represents such interference. In the Jewish tradition this is expressly sanctioned in the biblical words: "And he [an attacker] shall surely cause him [his victim] to be healed" (Exodus 21:19). The Talmud states: "From here we see that the physician is given permission to heal." But such "interference" is permitted only for therapy, not for eugenics -- for correcting nature, not for improving it.

permitting people to modify — conquer — nature to make it more amenable to its inhabitants, people. Cloning is but one example of that conquest, which when used to advance humanity, might be without theological problem in the Jewish tradition.

"Will Cloning Beget Disaster?", *The Wall Street Journal*, Friday, May 2, 1997.