Chimeras and the Limits of Casuistry in Jewish Bioethics

By: ALAN JOTKOWITZ

Chimeras,[1] organisms composed of two genetically distinct types of cells, have now been routinely created in the laboratory: Researchers are experimenting using sheep as a source of human liver transplant, and scientists have developed a line of pigs that have pig blood cells, human blood cells and a combination of both. Investigators have also created mice with a human immune system and are currently developing a strain of mice with human brains. Researchers have also claimed to have developed embryos containing a mixture of human and rabbit DNA,[2] and the British government announced in May 2008 that it will allow the use of embryos derived from human-animal hybrids in medical research.[3]

These rapid scientific developments have raised ethical questions which are slowly being addressed (e.g., disposal of embryos, status of chimeras). The most pressing issue, however, is whether the whole enterprise is morally objectionable due to its blurring of the distinction between man and animal, and the problem of the creation of new species. Although much has been written on this issue

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1 In Greek mythology a chimera is a fire-spouting monster with a lion's head, a goat's body and a serpent's tail.

2 Mott, M. "Animal-human Hybrids Spark Controversy" *National Geographic News*, 2005 <http://news.nationalgeographic.com/news/2005/01/0125_050125_chimeras.html> (accessed June 1, 2008).

3 Donaldson, Kitty and Deen, Mark. "British Lawmakers Allow Hybrid Human-animal Embryos" *Bloomberg*, 2008 <http://www.bloomberg.com/apps/news?pid=20601102&sid=a6GcXDaQOX_E&refer=uk> (accessed June 1, 2008).

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from a liberal, Catholic and Protestant perspective, very little has been written from a Jewish perspective. This is probably due to two main reasons: one practical and the other theoretical:

1. Much of Jewish bioethics was developed from the rich tradition of responsa literature. Generally, Jewish decisors do not start by writing broad philosophical tracts but develop their positions in response to queries from petitioners. The questions thus tend to be practical in nature. For example, how to define death was first debated in the modern era when eminent decisors were asked whether transplantation is allowed from a Jewish perspective. Similarly, attempts to define the beginning of life came to the forefront with the debate over abortion. It is also important to note that Judaism is not monolithic in its responses to these questions. Equally valid differences of opinions on these crucial issues continue to this day. Thus, because of the more theoretical nature of the concerns with chimeras, less attention has been paid to the pressing moral dilemmas that it raises.
2. Methodology in Jewish medical ethics relies heavily on casuistry. There is a rich literature of Jewish ethics dating back two thousand years. This material was incorporated into the Talmud and serves as the source material for much of the modern discussion. Decisions are usually reached by a careful analysis of the relevant cases and an extrapolation to modern dilemmas. Newman has perceptively pointed out that this method works well when there are relevant cases comparable to modern dilemmas.[4] In the Talmudic and post Talmudic literature there are extensive discussions of the permissibility of abortion, and hence there is much material for contemporary decisors to build upon. But regarding, for example, euthanasia and withdrawal of care, there is only limited discussion and thus its relevance is questionable. The Rama rules:

> It is forbidden to cause the dying to die quickly; such as one who is moribund for a prolonged time and cannot die, it is forbidden to remove the pillow from under him on the assumption that certain bird feathers prevent his death.

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[4] Newman, L. "Woodchoppers and Respirators: The Problem of Interpretation in Contemporary Jewish Ethics" *Modern Judaism*, 1990 10:2:17–42.

> So too one may not move him from his place. Similarly, one cannot place the keys of the synagogue beneath his head [because of the belief that their presence may hasten death] or move him that he may die. But if there is something that delays his death such as a nearby woodchopper making noise or there is salt on his tongue, and these prevent his imminent death, one can remove them, for this does not involve any action at all, but rather the removal of the hindrance to death.

This paragraph is the primary Jewish legal source relating to the care of a dying patient. But, as should be obvious to the reader, it is difficult to apply this ruling to modern palliative care for a number of reasons.

a. How does one define "dying" in an age of mechanical ventilation, left ventricular assist devices and dialysis? Due to the advance of modern medicine the dying can be kept alive for a prolonged period of time. Are such people therefore no longer considered dying?
b. The above medieval ruling deals with practices that, from a modern perspective, are difficult to understand. One is not allowed to move the pillow but one is permitted to remove the salt from his mouth. How do these "treatments" relate to modern medical care such as the use of antibiotics and insulin, not to mention mechanical ventilation or artificial nutrition? Do new therapies prevent the dying process, or are they akin to the feathers of the pillow which one is not allowed to remove? Or perhaps they belong to another category altogether? Brody has already commented on the difficulty in distinguishing, in the contemporary medical setting, between removing impediments to death and hastening it.[5]

Rabbi Joseph B. Soloveitchik, perhaps the most eminent Orthodox Jewish philosopher of the last fifty years, has argued forcefully that a genuine Jewish ethic is rooted in halakhic (legal) pers-

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[5] Brody, Baruch. "A Historical Introduction to Jewish Casuistry on Suicide and Euthanasia" ed. Baruch Brody. *Suicide and Euthanasia: Historical and Contemporary Themes* (Dordrecht: Kluwer Academic Publishers, 1989) pp. 39–75.

pective.[6] In other words, the attitudes and values that emerge from the details and minutiae of Jewish Law are what determine a Jewish ethic. Rabbi Immanuel Jakobovits, the founder of the modern discipline of Jewish medical ethics, expounds on this theme by commenting:

> Secular medical ethics is the effort to turn ethical guidelines or rules of conscience into law, i.e., into legislation. Attempts are made constantly to choose ethical insights and then to gradually distill these into legislative laws adopted by different legislatures; Jewish medical ethics does the reverse. We determine law or legislation, distill it, and then come to the conclusion that it contains certain ethical guidelines. Thus Jewish medical ethics derives from legislation. It does not lead to legislation. We look at legislation as rulings of law that have been given, i.e. halakhah which means law or legislation and then try and extrapolate ethical rules from the legislation. Therefore the Jewish concept of medical ethics is the very reverse of that commonly accepted in civilized countries of the world.[7]

Thus when faced with the issue of chimeras, where there is no relevant precedent literature, the methodology breaks down. In these instances, Bik has suggested that the rich Talmudic folklore literature can serve as a fertile source of insight into the Jewish view of modern moral dilemmas not dealt with directly by traditional legal texts.[8] For example, much has been written from a Jewish perspective on the ethical permissibility of human cloning, but all of these authors are keenly aware of the lack of traditional legal sources on which to base their respective arguments. There is, however, one ancient legend that many authorities feel is relevant to the discussion. The Talmud tells the story of Rava who created a man *ex nihilo* and sent him to his colleague Rav Zeira. Rav Zeira spoke

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6 Soloveitchik, Joseph. "The Halakhic Mind" (New York: Simon and Schuster, 1986).

7 Jakobovits, I. "The Role of Jewish Medical Ethics in Shaping Legislation" ed. Fred Rosner, *Medicine and Jewish Law* (Northvale, NJ: Jason Aronson, 1990), pp. 1–18. For further discussion see Jotkowitz, A. "On the Methodology of Jewish Medical Ethics" *Tradition*, 2010, 43:38–55.

8 Bik, E. "Ovum Donations: A Rabbinic Conceptual Model of Maternity" *Tradition,* 1993, 28:28–45.

to the man but he did not answer [implying he was mute], thereupon Rav Zeira exclaimed "You are a creation of one of my colleagues; return to your dust."

Bleich, among others, infers from this legend that a human clone endowed with speech would have the full status of a human being and there is nothing inherently wrong with human beings using their scientific and technological know-how to create one.[9] Notwithstanding the fact that one does not normally learn halakha from aggadah, Rabbenu Tam, for example (*Sefer HaYashar* 619), maintains that if there is no halakhic source one may learn from midrash. But there are certainly limitations in applying the above legend to questions relating to modern human cloning. The Talmud relates this story in the context of the potential powers given to select righteous individuals, not ordinary scientists. In addition, there is nothing in the legend that is relevant to the discussion of making a genetic copy of another human being.

Due to the limitations of even folklore literature to help resolve ethical quandaries in Jewish bioethics, Mackler has suggested that Jewish ethical decision making is similar to Reflective Equilibrium (RE),[10] which is now touted as the methodology of choice in modern bioethics. RE is a method of moral reasoning that involves working back and forth between our moral intuitions about particular cases, the principles that we believe govern them and the theoretical considerations that impact on these deliberations. According to Rawls,[11] there is a constant back-and-forth between our intuitive or considered judgments and theoretical ethical principles until a morally accepted conclusion is reached. The role of the competent moral judge who is intelligent, impartial, well informed and empathetic is crucial to this process. Rabbi Soloveitchik maintains that the halakhic "competent moral judge" must have a mastery of all

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9 Bleich, J.D. "Cloning: Homologous Reproduction and Jewish law" *Tradition*, 1998, 32:47–86.

10 Mackler, A. "Cases and Principles in Jewish Bioethics: Towards a Holistic Model" eds. Elliot N. Dorf and Louis E. Newman. *Contemporary Jewish ethics and morality: A reader.* (Oxford: Oxford University Press, 1995) pp. 177–193.

11 Rawls J. "A Theory of Justice" (Cambridge, Mass: Harvard University Press, 1971).

aspects of Jewish law, accept the sacredness and totality of the halakhah and interpret the halakhah in accordance with traditional methods.[12]

Regarding chimeras, Jewish tradition has reached the limits of casuistry as there are no relevant legal precedents or even folklore that can help us analyze the ethical dilemmas. Jewish ethicists must therefore rely on their intuitive judgments and ethical principles in rendering a decision.

Potential arguments against the production of chimeras include:

1. That it disregards the welfare of animals, particularly the higher primates. According to this view, animals have a right to exist without being tampered with for the benefit of human beings. While Judaism has specific laws forbidding the pointless suffering of animals, nevertheless, there is no prohibition against using animals for the benefit of humankind. Every effort must be made, however, to avoid or lessen the suffering of animals used in medical research.
2. Religions, particularly Catholicism, that give great credence to natural theology would understandably have difficulty with the creation of chimeras, similarly to their objections to artificial reproduction. According to natural law theorists, life is meant to be created through conjugal union of a female and male of the species, and mixing of the species is a violation of natural law. While there are some adherents to natural law among Jewish ethicists, this is not a dominant position and artificial reproduction is usually viewed favorably.
3. There is a tendency among selected bioethicists to attempt to restrict man's involvement in activities that tamper with the natural order. There are limitations to what man should do, notwithstanding his technological abilities or scientific prowess. Leon Kass has argued:

> The notion of man as a creature who is free to create himself... is problematic to say the least... Moreover, the freedom to change one's nature includes the freedom to de-

[12] Soloveitchik J. B. "Community, Covenant, and Commitment: Selected Letters and Communications of Rabbi Joseph B. Soloveitchik" ed. Netanel Helfgot (Jersey City: Ktav, 2005).

> stroy (by genetic manipulation or brain modification) one's nature, and thereby the capacity and desire for freedom itself. It is literally a freedom that can end all freedom.[13]

Among religious theorists this activity is viewed as tampering with God's creation. While echoes of this theme can be found in the Rabbinic literature, there are ample sources advocating an active role for man in the ongoing creation of the world. In the thought of Rabbi Soloveitchik there is a religious imperative for man to conquer and master the world. He is charged with being a partner of God in creation to fulfill the requirement of *imitatio Dei*. Man accomplishes this through scientific genius, technological creativity and communal activity. In the words of one authority:

> The Creator has granted man dominion over the world in which he lives and over the living species that are co-inhabitants of that world. Man has been given license to apply his intellect, ingenuity and physical prowess in developing the world in which he has been placed subject only to limitations imposed by the laws of the Torah, including the general admonition not to do harm to others, as well as by the constraints imposed by good sense and considerations of prudence.[9]

4. Notwithstanding the favorable attitude of traditional Judaism towards the creative activity of man, there is a biblical prohibition against interbreeding to create new species. While technically this law would not apply to the generation of chimeras, the rationale for the prohibition might be relevant. According to Ramban, the reason for the prohibition is that God in his wisdom created specific species and man does not have the right to change this Divine plan. This principle would certainly be relevant to the creation of chimeras, branding it an ethically problematic endeavor. Rashi, however, maintains that the reason for the prohibition is unknowable.

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[13] Kass, L. "Toward a More Natural Science" (New York: The Free Press, 1985).

5. It is plausible to suggest that there might be more of a hesitancy to create human chimeras than chimeras of two non-human species. The work of Rabbi Joseph B. Soloveitchik might be relevant to this question. Berger points out[14] that in the 1950s, R. Soloveitchik was preoccupied with the question of What is Man? In contrast to classic Greek philosophy and Christian thought, Judaism, according to R. Soloveitchik, views man as an organic being rooted in the natural world. Man is subject to the same biological processes such as birth, growth and death as are other living organisms. This is manifested in the clear vegetarian tendencies of the early chapters of Genesis and the grudging concession to allow meat eating after the story of the flood. The reason for this favorable attitude towards vegetarianism is due to the notion that all life is on a single continuum. God is the owner of all life and thus meat eating is an attempt by humans to control and consume that which belongs to God. Man is meant to live in harmony with nature. Sin, from this perspective, is regarded as a detachment from nature and leads to exile from and the loss of her blessings. Notwithstanding man's intimate connection to the natural, he nevertheless also exists very much apart from the rest of the world. R. Soloveitchik rejects the idea that man is simply another rung on the evolutionary ladder, and from a biological perspective simply a more complex organism than his competitors. He argues strongly for the distinctiveness of man which is biblically represented by the command to name the animals. This act, based on human cognition, forces man to identify himself as a unique personality. In this context God gave man stewardship over the earth and created a helpmate for Adam to combat his existential loneliness.

   At this point man also acquires the ability for ethical behavior based on the principle of human freedom as distinct from biological drives. Borrowing Buber's terms, R. Soloveitchik views mans' relationship with nature as an I - It relationship born from a common origin and fate, but man faces his fellow

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[14] Berger, M. "Introduction to Joseph B. Soloveitchik" *The Emergence of Ethical Man* (Jersey City, NJ: Ktav, 2005).

man as an I - Thou relationship based on a common future and destiny. In the words of R. Soloveitchik:

> Man as a natural being suddenly begins to discover in himself not only identity but also incommensurability with nature. Thus he enters into a new phase of viewing nature from a distance and meeting other human beings who act in a similar manner. Man can simultaneously be both unique and universal; the self is both isolated, shut off in its own paradoxical existence, but also flows into the non-self, merging with others. At this phase, the personality begins to assume shape and the ethical norm attains its full meaning. Man experiences the ethical must not as a natural necessity which he cannot flee but as a unique imperative which, if he decides so, he may disobey and ignore. By experiencing such a norm, he contrasts himself with nature and the consciousness of freedom begins to dawn upon him.[15]

This view of man, as part of nature but nonetheless distinct, has relevance to the creation of human-animal chimeras. God created man to be a unique creature trusted with the stewardship of the natural world and endowed with an ethical imperative. These new life forms might blur these divinely ordained distinctions. This theory of the uniqueness of man is also reflected in Jewish law. The principle of *kevod ha-beriyyot,* loosely translated as "respect for mankind," requires one to bury a corpse quickly and avoid displays of public nudity. Loike and Tendler[16] feel this insult to human dignity is a particular problem when dealing with the possibility of a human brain inside an animal body.

In conclusion, where there are no legal precedents to guide Jewish ethical decision making, as in the case of chimeras, decisors have to rely on moral principles derived from non-legal midrashic sources to help guide them. These component moral judges then

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[15] Soloveitchik, Joseph. "The Emergence of Ethical Man" (Jersey City NJ: Ktav, 2005).

[16] Loike, John D. and Tendler, Moshe D. "Ethical Dilemmas in Stem Cell Research: Human Animal Chimeras" *Tradition*, 2008, 40:28–49.

weigh their intuitions against these principles in reaching a decision. What do our non-legal midrashic sources suggest? Ramban's rationale behind the biblical prohibition of interbreeding suggests a negative view of creating chimeras composed of DNA from two species. Similarly, the potential insult to the notion of human uniqueness suggests a negative view of human-animal chimeras. Both of these extra-halakhic indicators call for a thoughtful pause in the relentless scientific pursuit of new life forms. ☙