

To clone or not to clone - a Jewish perspective

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Abstract

Many new reproductive methods such as artificial insemination, in vitro fertilisation, freezing of human embryos, and surrogate motherhood were at first widely condemned but are now seen in Western society as not just ethically and morally acceptable, but beneficial in that they allow otherwise infertile couples to have children. The idea of human cloning was also quickly condemned but debate is now emerging. This article examines cloning from a Jewish perspective and finds evidence to support the view that there is nothing inherently wrong with the idea of human cloning. A hypothesis is also advanced suggesting that even if a body was cloned, the brain, which is the essence of humanity, would remain unique. This author suggests that the debate should be changed from "Is cloning wrong?" to "When is cloning wrong?"

(*Journal of Medical Ethics* 1999;25:105-107)

Keywords: Cloning; ethics; religion; Judaism

"A human being - born of clonal reproduction - most likely will appear on the earth in the next twenty to fifty years, and conceivably even sooner."¹

James D Watson, PhD, Nobel Laureate

The headlines of February 23, 1997 said it all: "Scientist reports first ever cloning of adult mammal".² This was something that was supposed to be impossible because adult tissue, and by extension DNA, had always been assumed to be terminally and irreversibly differentiated.³ There had been hints that the prevailing dogma was wrong, including work we had done demonstrating for the first time that an adult mammalian organ could be transformed into another organ in situ.⁴ Still, few scientists believed that the cloning of an adult mammal was possible, let alone technically feasible. It should be noted that there is very little difference among mammals with respect to DNA; meaning the cloning of human beings now poses no significant technological hurdles. With this scientific bombshell⁵ came a series of hasty declarations, including a United

States presidential ethics commission recommendation to enact a limited ban on human cloning and a law declaring it illegal in California. The title of a very recent newspaper article: "On cloning humans, 'never' turns swiftly into 'why not'" demonstrates that the issue of human cloning is now being reexamined.⁶ This paper asks the question: "Is cloning morally wrong?", and tries to answer it from a Jewish perspective.

One might argue that the issue of cloning is a highly technical, modern problem and an ancient religion would, therefore, be an inappropriate place to turn for help. However, the Jewish tradition offers an extremely rich history and a unique tradition of scholarly debate that has lasted for many millennia and covers an enormous range of topics. For example, regarding human artificial insemination, which didn't exist in ancient times, there is an obscure midrashic account of the birth of Ben Sira, the third century author of the Proverbs of Ben Sira. The term "midrash" means investigation and its purpose is to explain the biblical text from an ethical point of view. This particular midrashic story describes how Ben Sira's mother became pregnant after immersion in a ritual bath where a left-over drop of sperm had fertilised her ovum. Because of the fact that Ben Sira is quoted in *The Talmud*, which is the transmission of the oral Torah to the people of Israel, it can be extrapolated that Ben Sira's origins were not enough to render him "un-Kosher" and that artificial insemination must therefore be permissible.

A logical place to begin the investigation of the ethical permissibility of human cloning is *The Bible* and one doesn't have very far to go to find the first clue. "And the man gave names to all cattle, and to the fowl of the air, and to every beast of the field; but for Adam there was not found a helpmeet for him. And the Lord G-d caused a deep sleep to fall upon the man, and he slept; and He took one of his ribs, and closed up the place with flesh instead thereof. And the rib, which the Lord G-d had taken from the man, made He a woman, and brought her unto the man."⁷ This sounds suspiciously like cloning and one might

reason that if G-d had done it, it must be okay. Still this isn't technically cloning because you could never make a woman from a man because of the difference in the two sex chromosomes (men are XY while women are XX) and it could be argued that precisely because G-d did it, it is forbidden (ie only G-d has the right to create life).

Fables and legends

In the Jewish tradition there are also many fables and legends that, while not literally true, are still felt to contain truths. One of the most famous is the four-hundred-year-old story of the Golem. The Golem, a powerful giant, was created out of clay and brought magically to life by Rabbi Judah Loew (the Maharal of Prague) to save his people from the violence and death that had resulted from the "blood lie", a preposterous rumour that Jews were using the blood of Christian children to make their Passover matza. The Golem, with brutal strength, single-handedly repelled the mob that had descended on the ghetto to wreak havoc. The creation of the Golem, though an act of man, was felt by most Jews to be a good thing and was not so different from how G-d had created the original Adam: "Then the Lord your G-d formed man of the dust of the ground, and breathed into his nostrils the breath of life; and man became a living soul". But what of the life that was created? After all, when the Golem had fulfilled his purpose and brought security to the Jews of Prague, Rabbi Loew undid his spell and returned the Golem to lifeless clay. Does this mean that the "life" that the Maharal of Prague created was any less holy or sacrosanct?

The answer to this can be found in the commentaries on The Mishnah. The Mishnah is the collection of Jewish law and ethics that ranks second in importance only to *The Bible*. The Mishnah forms the basis of *The Talmud* and is divided into six "parts"; each "part" is further subdivided into tractates. The fourth "part", called Nezikin, contains a tractate called Sanhedrin, which deals with the courts of justice and judicial procedure, especially with reference to criminal law.⁸ The eight-hundred-year-old commentary by Rabbi Shlomo Ha-Meiri explains that there is a difference between life created by magic, as in the case of the Golem, and life created by natural processes.⁹ Cloning is certainly a natural process; therefore, any life created by cloning that is born of a mother must be a full life with all the rights and privileges accorded any human being. According to legend, the Golem created by the Maharal of Prague was actually not the first. The famous scholar, Rava, who lived in the fourth century ACE also created a Golem,¹⁰ affording the

rabbis an opportunity to address even the question of asexual reproduction. Further evidence for the correctness of Rabbi Ha-Meiri's interpretation is found in the very definition of who is a Jew. A full member of the Jewish community is any person born of a Jewish mother (or, of course, anyone who converts to Judaism). Taking this idea one step further, there does not necessarily even have to be a father. Based on similar reasoning, the State of Israel in 1996 ruled that in the case of surrogate mothers, the birth mother rather than the genetic mother is the true mother. If the genetic parents want the child to be theirs, they have to adopt the child from the surrogate mother. Because a human being that was cloned would be born via a natural process of a human mother, there does not appear to be anything wrong, at least in the eyes of Halacha (Jewish Law), with cloning.

Regardless of the morality involved, one might still argue that it is not wise to have a number of "identical" people inhabiting this planet, that this would somehow diminish the individuality of man, which is something Western society holds sacred. An article by Johnson entitled "Don't worry, your brain can't be cloned"¹¹ goes a long way toward helping to resolve this criticism. The article begins by talking about the Aborigines and how they were terrified of cameras because of the fear that someone will steal their soul. To people in the "developed" world, the knowledge that a photograph is only skin deep, makes the Aborigine's fears seem absurd. However, the fear that one's very identity might be stolen, that one could cease to be an individual runs very deep even in "advanced" societies like ours, accounting for the success of movies like *The Net*, in which Sandra Bullock's identity is erased by a computer.

Uniqueness

Both the person that was cloned and the clone would almost certainly wonder if they had lost their uniqueness, the very essence of what makes a human being special. For now, this is an abstract debate; but soon, I am convinced, this will be a very real question. The answer may be very simple. While the body may be cloned, the brain, which is the essence of humanity, will always be unique. Unlike other body tissues such as bone and muscle, which are made exactly according to a genetically predetermined plan, the brain and its neural networks grow and change with each experience. The precise layout of the neurons in the brain is what makes the difference. The neurons, which are linked to one another through junctions called synapses, form the circuitry that makes us who we are. During development, the

genes lay out the basic wiring plan in the brain according to the instructions contained in the DNA. After the human being is born, and perhaps even before, the trillions of bits of sensory input that we call “experiences” make, break, and reform the billions of neuronal connections, creating a unique pattern that could never be duplicated because no two persons’ experiences are ever the same. Even identical twins, which form when a fertilised egg splits in two, yielding two genetically identical beings, essentially nature’s clones, have very different neuronal wiring and different likes and dislikes.¹²

As Johnson notes, you could keep two identical twins in the same room and their brains would still develop differently. One twin would go around the room clockwise while the other would go counter-clockwise and their “experiences” would be different and their neural circuits would develop differently and they would develop into two separate beings. Even if someday man could do the ultimate cloning and copy, synapse by synapse, the human brain, the technological feat would be fleeting and the “identical” minds would only last for a brief instant. Suppose that neuron No 20478288 were to fire randomly in brain one and not brain two. This tiny difference would set off a cascade that would reshape the circuitry and again there would be two individuals.¹² The human mind is beautiful and immeasurably complex and it is what gives us our uniqueness.

There are many circumstances where one could argue that human cloning would be desirable, such as where there is a need to clone someone to obtain bone marrow that could save a cancer patient’s life or when there is a wish to clone the only child of a middle-aged couple who has died in a car accident. Of course there are dangers to cloning, even in the isolated cases mentioned

above; however, this does not mean that cloning itself is wrong. Many new reproductive methods such as artificial insemination, in vitro fertilisation, freezing of human embryos, and surrogate motherhood were first condemned but have come to be accepted. Perhaps the question should be changed from “Is cloning wrong?” to “When is cloning wrong?”

Acknowledgements

The author would like to thank Emily Mostov for her very helpful discussion of the text.

This work was supported by NIH Grant DK02509 and a National Kidney Foundation Young Investigator Award.

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References

- 1 Watson JD. The future of asexual reproduction. *Intellectual Digest* 1971; **Oct**: 69–74.
- 2 Kolata G. Scientist reports first ever cloning of adult mammal. *New York Times* 1997 Feb 23: 1.
- 3 Slack JMW. From egg to embryo: determinative events in early development. New York: Cambridge University Press, 1985.
- 4 Lipschutz JH, Young P, Taguchi O, Cunha GR. Urothelial transformation into functional glandular tissue in situ by instructive mesenchymal induction. *Kidney International* 1996; **49**: 59–66.
- 5 Wilmut I, Schnieke AE, McWhir J, Kind AJ, Campbell KH. Viable offspring derived from fetal and adult mammalian cells. *Nature* 1997; **385**: 810–13.
- 6 Kolata G. On cloning humans, ‘never’ turns swiftly into ‘why not’. *New York Times* 1997 Dec 2: 1.
- 7 *The Bible*. Genesis II, 20–22.
- 8 Birnbaum P. *Jewish concepts*. New York: Hebrew Publishing, 1975.
- 9 Sanhedrin 67:B. *Commentaries on Talmud Bavli*.
- 10 Sanhedrin 65:B. *Talmud Bavli*.
- 11 Kiddushin 68:B. *Talmud Bavli*.
- 12 Johnson G. Don’t worry a brain can’t be cloned. *New York Times* 1997 Mar 2: Week in Review section: 1.