

Biotechnology as religion

Leigh Turner

Since the early days of the Human Genome Project, numerous scholars have explored how genetics often serves not just as a scientific research program, but also as a theology or quasi-religious belief system. Dorothy Nelkin, a longtime observer of popular understandings of genetics, drew attention to “promotional metaphors” characterizing the genome as “The Book of Life” and the Human Genome Project as the quest for the “Holy Grail”¹. Nelkin noted the spiritual aspects of “genetic essentialism” in which genes are imbued with all the properties of the person or self. Developing this line of analysis, Brian Alexander’s book² explores the prophets, disciples and spiritual creed of biotech.

Many individuals draw a bright line between religion and the sciences. Religious narratives, according to this account, contain beliefs about the universe, the creation of the cosmos and notions of afterlife and resurrection. Science, in contrast, is asserted to provide not value-laden beliefs, but factual understandings of the world denuded of theological or religious significance. Popular accounts of genetics, however, do not merely include scientific understandings of natural processes. Rather, genetics—and biotech more broadly—has all the social power of a belief system or surrogate religion.

Although religious understandings extend far beyond notions of immortality and models of an afterlife, many religious traditions provide an important existential function. They provide followers with notions of

a life beyond death. Human existence does not end at the moment of death. Rather, the soul crosses into another world—heaven, hell, purgatory or some other place—and the material body is either reconstituted or rendered irrelevant. In part, many sociologists of religion argue, religions provide belief systems that negate the finality of death and transience of the person. What doctrines of resurrection and transmigra-

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tion of souls once offered, the mythology of biotech now provides.

Within religious traditions, spiritual narratives concerning immortality typically include a journey to another world. Within the belief systems of transhumanists, posthumanists and other technological enthusiasts, biotech offers the prospect for life extension and (more fancifully) even immortality within this world. We can recognize how biotech serves as a surrogate religious system whenever we encounter technological enthusiasts convinced that somatic cell nuclear transfer, stem cell research and regenerative medicine, gene therapy, artificial organs and prosthetic implants will enable researchers to slow or reverse aging processes and permit humans to lead prolonged lives³. The identification of aging genes, the creation of long-lasting artificial organs and prostheses and the use of telomerase and stem cell therapies will all supposedly enable individuals to avoid the harmful effects of aging and escape mortality⁴. Fantasies about artificial intelligence

and advanced robotic technologies are often added to such biotechnological dreams. Technoevangelists refer to the prospect of achieving immortality through downloading human minds into computers or using cybernetic technologies to create human-machine cyborgs with long-lasting, replaceable parts.

Traditional religious cosmologies place eternity on some other plane of existence. Biotechnological fantasies locate immortality here on earth. Both religious mythologies concerning immortality and biotechnological fantasies about controlling aging and conquering mortality respond to understandable human anxieties surrounding death. Death represents an end to human existence, the destruction of the self and the breaking of social bonds. Religious notions of resurrection and eternal life and popular biotechnological fantasies about creating immortal bodies both respond to fears about death, impermanence, human vulnerability and the dissolution of the self. Both religious theological frameworks and quasi-religious biotechnological fantasies suggest that aging and fragility can be conquered and death overcome.

Many biotech enthusiasts have no interest in traditional religions. They identify themselves as atheists, agnostics or ‘brightists.’ Religion, for them, offers no framework for salvation. Instead, biotech provides a surrogate religious narrative. Biotech offers the prospect of a this-worldly form of life extension. In some respects, what could be more different than belief in theological dogmas and enthusiasm for developments in life sciences research, biotech, robotics and artificial intelligence? ‘Science’ and ‘religion’ are often juxtaposed as polar opposites. However, science and technology can very easily provide surrogate religious systems promising many of the insights and rewards offered by traditional religious cosmologies.

Biotech, in a similar manner to many religious movements, has its charismatic

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prophets, enthusiastic evangelists and enrapt audiences. Like religions, it offers a comforting message of salvation. Instead of imagining a day of rapture when the dead rise from their graves to begin eternal life, biotech enthusiasts imagine the era when medical technologies provide a renewable, largely imperishable body.

Many religious beliefs carry little threat of

individual or social harm. However, religious cosmologies can have pernicious consequences. Belief in an afterlife can lead cult members to commit mass suicide. Notions of a glorious afterlife can lead believers to treat this-worldly existence with contempt. Similarly, biotech fantasies about immortality can have disturbing consequences. Trusting individuals can purchase costly

'antiaging' products that have no discernable effect upon the prolongation of life. Enthusiasm for biotech can create unrealistic expectations about the capacity of biomedicine to control illness and aging. Belief in the imminent arrival of radically innovative biotech therapies can create unhelpful expectations when individuals or their loved ones show signs of illness or aging. An obsessive quest for the elixir of immortality can build a cult around the youthful, un wrinkled body.

Biotech is not just an assemblage of research programs and techniques. In a scientific and technological era, biotech also offers a surrogate religious framework for many individuals. We might want to explore

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the dangers associated with turning biotech into a belief system. With little reason to think that the biotechnological rapture of posthuman bodies is imminent, we might want to start paying more attention to how biotech enthusiasts prey upon deep-rooted fears and anxieties and offer familiar messages about how death shall be no more. The religion of biotech needs to be challenged by debunkers and skeptics as 'antiaging' potions and nostrums become increasingly popular and profitable.

1. Nelkin, D. *Public Understanding Sci.* **3**, 25–31 (1994).
2. Alexander, B. *Rapture: How Biotech Became the New Religion* (Basic Books, New York, 2003).
3. Hall, S.S. *Merchants of Immortality: Chasing the Dream of Human Life Extension* (Houghton Mifflin, New York, USA, 2003).
4. West, M. *The Immortal Cell: One Scientist's Quest to Solve the Mystery of Human Aging* (Doubleday, New York, 2003).

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