This essay introduces the notion of transhumanist religions: their rationale, their context within the history of religions, and some fundamental constraints on their design and definition. Some of the many possible arguments for and against the design of such religions are discussed

Religions, religious feelings, and religious experiences have been prominent throughout history in almost all human cultures. Religions, or cultural phenomena which can be analyzed as religions, are still influential elements of culture in all larger human societies.

Religions that may resemble the earliest form of religions, those which anthropologists have called 'primitive' religions, continue today in some isolated societies. Later types of religions, which incorporated elements of those previous religions, have lasted for thousands of years and continue today. New religions, and new sects of old religions, continue to arise every year. Some of these new religions grow in numbers of adherents, while others eventually dwindle to none and disappear.

The evolution of religions is characterized by variations on old themes as well as the introduction of new themes. Concerns and issues that arise in any sphere of a society's culture can eventually affect religion.

In the contemporary world, one of the most prominent cultural trends is the continuing increase in the sophistication, diversity, and multiplying applications of new technologies.

> *The sheer achievement of science has caused modern man to claim that 'what no God did for his worshippers in thousands of years, he has by his own efforts succeeded in bringing about.'* (Hunkin 2004)

This has led some to observe that accelerating advances in technology may soon lead to breakthrough applications, such as dramatic extensions of lifespan and dramatic increases in human physical and mental powers, which will fundamentally alter the nature of humanity and the human condition.

The philosophies associated with a positive regard for this development, generally associated with the term *transhumanism,* have created the right conditions for the development of a new type of religion. A transhumanist religion could incorporate an anticipation of the likely consequences of highly advanced technologies, and positive views toward specific applications of those technologies, into the sphere of religion, religious feeling, and religious experience.

What is, or should be, considered 'religious' or a 'religion'?

Religions are closely related to other elements of culture, and there are no necessary hard-and-fast boundaries between religious elements of culture and other elements of culture.

In what anthropologists have called 'primitive' cultures, religions may not be distinguished as a separate category of human thought or activity. Rather, those elements of culture which we might classify as religious may be considered continuous with, and indistinguishable from, everyday life and areas of knowledge such as history, social mores, and medicine. In these cultures, religion is indistinguishable from 'what we know' and 'how we live.'

This reminds us that religion is not a universal category. But we do not need to conclude that religion is not a useful category, if we can find it useful for our purposes to distinguish religious aspects of a culture from other aspects of the culture. For example, we may need a category called 'religion' to better understand a society that displays multiple, widely divergent world views and belief systems. We may also need to discern religions in a society simply because its members perceive what they call religions.

Our criteria for distinguishing what counts as religion or religious, then, should be subjective and pragmatic, relative to our need to understand social perceptions and to organize our understanding of heterogeneous human cultures. Attempts to define religion, or to determine the distinguishing characteristics of religion, have generally failed to gather universal consensus.

The semantic boundaries of 'religion' in English seem to revolve around a prototype, namely, Christianity, along with other religions that are universally recognized as religions, for example: Islam, Hinduism, Buddhism, and Judaism. A cultural phenomenon is a 'religion' to the extent that it is or resembles one of those religions. More recently, 'religion' may be distinguished from 'spiritualities' (less institutional forms of religiosity) or personal, idiosyncratic philosophies of life.

The most prominent characteristics of prototypical religion might be said to include the following (Alles 2005):

1. Belief in supernatural beings (gods).
2. A distinction between sacred and profane objects.
3. Ritual acts focused on sacred objects.
4. A moral code believed to be sanctioned by the gods.
5. Characteristically religious feelings.
6. Prayer and other forms of communication with gods.
7. A world view, or a general picture of the world as a whole and the place of the individual therein...
8. A more or less total organization of one's life based on the world view.

9. A social group bound together by the above.

A religion need not have all of these characteristics in order to be perceived as a religion. For example, a religion does not have to concern ritual, worship of gods, or a moral code sanctioned by gods. But it is unclear how many of these characteristics a cultural phenomenon must possess in order to be perceived as a religion. Also, some of these characteristics are rather vague or circular – for example, 'religious' feelings, or 'sacred' objects.

Some definitions of religion have started instead with characterizing what should be considered 'holy' or a 'religious' experience. For example, Friedrich Schleiermacher referred to a 'feeling of absolute dependence', and Rudolf Otto to 'fear and fascination of the wholly Other.'

From the study of religious experience, we might understand as *religious* those elements of a culture which most characteristically

- involve a sense of the sacred or holy
- deal with ecstatic or altered states of mind and their meaning
- deal with ultimate mysteries of life and death, or pose solutions to those mysteries
- express the highest ideals and expectations of life, especially in an overarching framework of meaning and value in the world and human life, including profound beliefs about purpose and meaning in the universe and human beings, and human possibilities within it.[1]

What may be the simplest definition of religion is that of Clifford Geertz (1973) – that religion is what integrates world view and ethos. That is, religion is what relates the broadest and deepest possible understanding of the world with the way of life, attitudes, and beliefs that correspond to this world view in an emotional, value-laden way.

We can combine all of these insights and use them in a practical way to help us understand what may be socially perceived as religion and to help us decide what we might distinguish as religious.

Transhumanism and religiosity

Technology is not a way of life or belief system, but technology has come to enable ever more powerful, efficient, and creative ways of living whatever sorts of life may be believed in and chosen.

The most ambitious proposals favorable to advancing the human condition by technology have come together loosely as a movement called *transhumanism*.[2] The distinguishing concern of transhumanism – the application of science and technology to advance the human condition – is exceptional only by the nature and degree of technological applications which it discerns as likely and desirable.[3]

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[1] Adapted from King (1987).

[2] A general overview of the history of transhumanism is available in Bostrom (2005), and at http://en.wikipedia.org/wiki/Transhumanismand the powerpoint introductions at http://www.transhumanism.org/index.php/WTA/more/introduction-to-transhumanism/

[3] For example: "Transhumanism is not a philosophy with a special adoration of technology; it's just the philosophy which says that technology is a normal way of achieving our aspirations. This does not change even when you're talking about arbitrarily advanced technology." (Yudkowsky 2003).

Transhumanism is

1. *The intellectual and cultural movement that affirms the possibility and desirability of fundamentally improving the human condition through applied reason, especially by developing and making widely available technologies to eliminate aging and to greatly enhance human intellectual, physical, and psychological capacities.*
2. *The study of the ramifications, promises, and potential dangers of technologies that will enable us to overcome fundamental human limitations, and the related study of the ethical matters involved in developing and using such technologies.* (Bostrom et al. 1999)

According to the same source, transhumanism is not a religion:

> *While not a religion, transhumanism might serve a few of the same functions that people have traditionally sought in religion. It offers a sense of direction and purpose and suggests a vision that humans can achieve something greater than our present condition.*

On the face of it, transhumanism little resembles a prototypical religion. It does not distinguish between the sacred and the profane, exhibits no ritual acts, possesses no divinely sanctioned morality, offers no form of prayer or communication with divine beings, and is instantiated in only the loosest form of society.[4]

Transhumanism also allows simultaneous profession of religions such as Christianity, Buddhism, Islam, and Raelianism.[5] Most transhumanists, however, profess secular, humanist outlooks (Hughes 2005), and transhumanism excludes reliance on the supernatural in favor of the natural:

> *Unlike most religious believers, however, transhumanists seek to make their dreams come true in this world, by relying not on supernatural powers or divine intervention but on rational thinking and empiricism, through continued scientific, technological, economic, and human development.* (Bostrom et al. 1999)

However, as noted above, transhumanism serves some of the "functions" of religion, with regard to providing a sense of direction and purpose, and providing a vision of something greater than the present condition. Transhumanism concerns itself, among other things, with the prospects of "very long lifespan, unfading bliss, and godlike intelligence" (Bostrom et al. 1999). It is possible that transhumanism may come to be considered a religion in spite of such denials.[6]

Gods

Transhumanism implies the possibility of 'godlike' beings. While these godlike beings could not be 'supernatural' in the sense of being outside of what is natural, they could be 'supernatural' in the sense of attaining the fullest imaginable powers possible in nature, far beyond what humans are presently capable of.[7]

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[4] The small number of transhumanists rarely meet face to face, and even if they did, "transhumanists disagree with each other on many issues" (Bostrom et al. 1999).

[5] By contrast, U.S.A. classification of churches for tax exempt status understands membership in one religion as entailing non-membership in all other religions.

[6] See, for example, Reynolds (1993) and Alexander (2003).

[7] Indeed, if technology makes nearly everything that is imaginable possible, it presages the return of something that would very much resemble magic, as in Arthur C. Clarke's famous Third Law: "Any sufficiently advanced technology is indistinguishable from magic."

Such 'godlike' beings could include the future forms or descendants of humans today. Paralleling the distinction between polytheism and monotheism, these beings might remain divided individuals, as in Deutsch (1997), or converge into a more or less single being, as in Teilhard de Chardin, Frank Tipler (1995), and Kurzweil (2005, 390).

'Godlike' beings might also include extraterrestrial intelligences who would likewise have advanced by natural and technological means, or even more exotic entities.[8]

Ritual

Transhumanism may possess no formal, dramatic rituals, but it could be said to possess symbolic representations of shared meaning in the form of transhumanist art, which includes symbols, vocabulary, images, songs, film, and science-fiction literature.[9]

Cryonic suspension after death in order to preserve life for future reanimation, while not a ritual or even a rite of passage, is nevertheless a distinctive practice of transhumanists. Cryonic suspension requires both community and institutions.

Awe and religious feeling

Transhumanists' visions of the future include limitless improvements in themselves, their societies, and the world, visions more profound and far-reaching than even the most optimistic scenarios of old-school futurists. Surely these visions can inspire religious-like awe.

A vision of advanced technologies which could ensure one's own survival, and the survival of the entire human species or even the universe, may also inspire the distinctively religious feelings of 'absolute dependence.'

Neuroscience probably will eventually explain the ecstatic states and altered states of mind characteristic of some traditional religions, but advanced technologies hold out the possibility of enabling entirely new modes of thought and experience, thus adding to the palette of possible religious feelings.[10] People in the future may even experience never-ending "gradients of bliss" (Pearce).

There is also an emerging sense of awe associated with the scientific world view and the contemplation of nature. As Carl Sagan (1994) said, "a religion old or new, that stressed the magnificence of the universe as revealed by modern science, might be able to draw forth reserves of reverence and awe hardly tapped by the conventional faiths. Sooner or later, such a religion will emerge." In this sense, the entirety of nature, and every specific thing in it, may be able to be understood as the 'wholly Other,' the object of fear and fascination in characteristically religious experience.[11]

World view

Transhumanism is informed by rationalism, philosophical naturalism, humanism, and empiricism, but do these combine into a single, coherent world view, in Geertz's sense?

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[8] Bostrom (2003a) speculates on the possibility of intelligent beings simulating us and our universe. Ironically, perhaps in this scenario it is humans that could be considered 'supernatural' in the sense of being artificial products of an external nature (the nature of the simulators and their universes).

[9] See for example http://transhumanism.org/index.php/WTA/arts . Transhumanist science-fiction, also called Singularity-aware science-fiction, is a distinct genre within science fiction.

[10] Compare Bostrom's (2003b) discussion of new "modes of being."

[11] Note the nomenclatural pantheism of scientists such as Albert Einstein, and also Kurzweil (2005).

There is evidence that a comprehensive world view based on such foundations is in the process of forming. E. O. Wilson (1998) has written about a converging *consilience,* and Deutsch (1997), among others, has proposed a unified 'theory of everything.'

An all-encompassing scientific epistemology, combined with theories of sufficient provisional explanatory powers, may soon give rise to a comprehensive world view, one that explains almost everything of immediate importance and interest to human beings and which provides the methods and directions for discovering all other knowledge. Powerful, new theories about human nature, the origin and destiny of the universe, and the inner, subjective life of human beings and the human mind will vastly expand the scope of this new world view.

Ethos

In transhumanism, "critical ethical thinking is essential for guiding our conduct and for selecting worthwhile aims to work towards" (Bostrom et al. 1999).

Some transhumanist ethical values are humanist in the general sense:

> *Humanists believe that humans matter, that individuals matter. We might not be perfect, but we can make things better by promoting rational thinking, freedom, tolerance, democracy, and concern for our fellow human beings.* (Bostrom et al. 1999)

Transhumanist values include logical consequences of humanist values when applied to the prospect of advanced technological solutions to human problems such as ameliorating pain, suffering, ignorance, aging and death. They also include the application of humanist values to prevent harm and risk to human beings that might be caused by advanced technologies, especially existential disaster.[12]

Some ethical values of transhumanism, even though they are derived from "critical ethical thinking," refer back to inscrutable private values:

> *To a transhumanist, progress occurs when more people become more able to shape themselves, their lives, and the ways they relate to others, in accordance with their own deepest values. Transhumanists place a high value on autonomy: the ability and right of individuals to plan and choose their own lives.* (Bostrom et al. 1999)

Transhumanist religiosity

Those who mock more religion-like transhumanist notions as 'technorapture,' a clumsy amalgamation of transhumanism and existing religions, or a wayward appropriation of transhumanism by religion, may be missing the point of how transhumanist and religious themes and concerns have converged.

The commonality of religion-like transhumanist ideas and traditional religious ideas has not arisen phylogenetically or by hybridization – transhumanists do not come from one particular religion, transhumanists have not adopted particular elements of traditional religions, and members of traditional religions have not adopted transhumanist agendas.

Instead, whatever similarities exist between transhumanism and traditional religions must have arisen from commonalities in fundamental human ambitions, desires, and longings.

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[12] However, "the devil is in the details," as the saying goes, and it is in the specific applications of humanist values that transhumanism may either come to be considered simply the contemporary expression of humanism, or split off from a "fundamentalist humanism" (Kurzweil 2005, 415, 471). For transhumanist values, see Bostrom (2003a).

It is because of shared hopes and dreams that traditional religions and transhumanism have some similar notions.

For an example of how religious and technological concerns might converge, consider space exploration. In ancient religions, there were beliefs about spirits or gods who lived in the sky, and stories about humans who were whisked away to visit with them there, or transported there in mystical visions. This curiosity about what was in the sky and the desire to enter the sky were for so long without any conceivable method of practical implementation that the ambition was for the longest time reserved only for stories and imaginary experiences. It was not until about a hundred years ago that practical methods for bringing humans into the sky began to be imaginable, with theory and application leading in less than half a century to its implementation: human entry into 'outer space.' Soon human beings passed through the realm that had been considered the homeland of the gods, and they walked upon the surface of what had once been worshipped as a god itself.

Oddly, because traditional religions had had a long opportunity to adjust their cosmologies to avoid conflict with the conclusions of scientific astronomy, the sense of religious fulfillment which ought to have accompanied this human entry into 'heaven' was largely absent. But the themes of religion and advanced technology had converged because of their common source in human aspiration.

There have already been attempts in some traditional religions to incorporate the consequences of advanced technologies. For example, over a hundred years ago, in the Russian Orthodox Church, Nikolai Fyodorovich Fyodorov advocated 'cosmism,' which included hope in radical life extension, immortalism, and resurrection by scientific and technological methods. His 'common task' bears many similarities to the project of 'universal immortalism' among today's transhumanists. [13]

A little later, in the Roman Catholic Church, Pierre Teilhard de Chardin, a Jesuit priest and paleontologist, re-interpreted Christianity in light of evolution, with a central role for future advanced technologies. Although his Omega Point Theory was rejected by the church authorities, it has continued to be popular, and has since spread to other Christian denominations.[14]

Some decades ago, an entirely distinct religion, Raelianism, arose by reinterpreting and supplementing the 'prophecies' of several previous religions in combination with belief in cloning and extraterrestrial intelligences.

Transhumanist religion is not the only religion that will respond, either positively or negatively, to the possibilities of advanced technologies. Surely all religions will eventually either develop ways of dealing with these new phenomena, or spawn new sects or new religions to deal with them.

So in what sense could transhumanist religiosity be consistently different from any approaches that may be developed by traditional religions? The difference must lie in certain fundamental differences between transhumanism and all previous religions.

Truth

Among the characteristics of transhumanism is its acceptance of philosophical naturalism, critical rationalism, empiricism, and scientific method.

[13] For an introduction to 'universal immortalism,' see Perry (2000), or the fictional portrayal in Clarke and Baxter (2000).
[14] See Tipler (1995).

Traditional religions reflexively conserve dogmas. They may disjunctively tolerate science, by accommodating scientific discoveries on a case-by-case basis, or by reinterpreting dogmas as needed in response to scientific innovations. Transhumanism, however, incorporates critical rationalism as its very core epistemology. The religious consequences of this are rather profound.

For one thing, accepting critical rationalism as the unique 'way of knowing' means a fundamentally religious redefinition of truth and knowledge. If the best explanations put forward, in light of available evidence, must count as true knowledge of reality (Deutsch 1997), then truth and knowledge must be understood as provisional, and the creation of better theories must become a pressing project for humanity in order to deepen knowledge and expand the range of truth.

Thus, transhumanist religiosity is not dogmatic – not because of a dogma against dogmas (which would be an ironic self-contradiction), but as a logical, consistent consequence of a redefinition of religious (and all) truth as the best existing explanations (theories), which are nevertheless always in simultaneous, urgent need of improvement (to better explain reality). Not only is transhumanist religiosity not in conflict with science, it actually implies science in its world view, and it incorporates scientific projects, as well as technological innovation, in its ethos. An acceptance of dynamic, evolving theories, rather than dogmatic tenets, counts as knowledge and truth in transhumanist religiosity.

Faith

Transhumanism is characterized by belief in the "possibility and desirability" of developing advanced technologies to "improve the human condition."

This affirmation or belief is an active sort of hope and optimism rather than a propositional statement of fideistic certitude.[15] Human beings will survive, be able to deal with all obstacles and problems, and change themselves and their ways of life for the better. It is only in the context of this hope that working toward a better future and working to avoid possible dangers make sense. After all, if humanity were doomed to stagnation, devolution, or extinction, then there would be no reason to work toward a better future.

This transhumanist faith in the future requires that humans, through cooperative effort and foresight, work to build the better future. Human effort would also be pointless if a better future were inevitable by historical destiny, or vouchsafed by supernatural intervention.

Transhumanist faith is marked by its willingness to extrapolate from this principle – that once one understands the principles of what one desires, and once one has a reliable and effective way of applying those principles, then that which one desires can be realized. Thus, since every desired state of affairs can be imagined as an arrangement of known or knowable possibilities, then every desired state of affairs can be arranged, given sufficient knowledge or instrumental power. The desired states of affairs include typical aspirations of religion: eternal life, enlightenment, bliss, and so on.

For transhumanists, extrapolations from present-day science and technology lead to confidence that most, if not all, these religious-like aspirations can be achieved by a continuation of the same sort of thought and effort that have previously resulted in

[15] This optimistic perspective was defended at length by FM-2030: "Today optimism is the only rational philosophical outlook for modern individuals. We have reached a stage in our evolution at which pessimism, fatalism, nihilism are no longer valid philosophical attitudes" (Esfandiary 1970, 11).

present-day scientific and technological achievements. In fact, observation of the accelerating rate of scientific and technological advances leads to the conclusion that the realization is not far off.

The 'soul'

Almost all traditional religions are based on a theory that postulates an essential, unchangeable, and immaterial human spirit or soul. Transhumanists though, in line with current scientific thinking, suppose instead that the human mind arises from the activity of the human body's nervous and hormonal system, especially the brain. The project of 'reverse-engineering' the human brain in a computer model assumes that all of human mind, intelligence, and consciousness can be captured in the brain's physical structure and the dynamic patterns within it, that is, its 'hardware' and 'software.'[16] Thus, the religious 'soul' can be redefined along informational lines.[17]

One of the most momentous developments in the history of all religions and human civilization will surely be the completion, likely in this generation, of the scientific project to understand the human mind. Completed neuroscience will have immense repercussions for religions by allowing humans full insight into what they are and how they function as subjective minds, personalities, selves, and social beings. There will likely be many surprises and many upsets along the way, as ignorance, denial, and hypocrisy give way to critical knowledge and awareness. The consequences for private and public morality and ethics will surely be profound.

In combination with the science of mind will come technologies of mind. Technologies that enable real-time, noninvasive scans of brains; interfaces of brains with machines; and the instantiation of human and humanlike sentience on machines, will carry through the profound implications of neuroscience into myriad and astonishing practical applications.

The transcendent

Transcendence in traditional religions tends to relate to experiences of supernatural realms and entities, and accessing their mysteries. Transhumanism's world view implicitly rejects the supernatural, but it does not follow that transhumanism does not possess a profoundly religious vision of the transcendent.

Kurzweil (2005, p. 388), for example, understands the religious notion of transcendence in a material and in an evolutionary context:

> *"To transcend" means "to go beyond," but this need not compel us to adopt an ornate dualist view that regards transcendent levels of reality (such as the spiritual level) to be not of this world. We can "go beyond" the "ordinary" powers of the material world through the power of patterns. . . . It's through the emergent powers of the pattern that we transcend. Since the material stuff of which we are made turns over quickly, it is the transcendent power of our pattern that persists.*
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> *. . . Although some regard what is referred to as "spiritual" as the true meaning of transcendence, transcendence refers to all levels of reality: the creation of the natural world, including ourselves, as well as our own creations in the form of art, culture, technology, and emotional and spiritual expression. Evolution concerns*

[16] See Kurzweil (2005) Chapters 3 and 4.
[17] Compare the statement of the Society for Universal Immortalism: http://www.universalimmortalism.org/beliefs/beliefs.html.

patterns, and it is specifically the depth and order of patterns that grow in an evolutionary process. As a consummation of the evolution in our midst, the Singularity will deepen all these manifestations of transcendence.

An evolutionary view of the world can see change and advance over time as a transcendence of one pattern by another pattern. In the next step in human evolution, human beings will be able to transcend their ordinary human nature, the ordinary limitations of their minds and bodies, through increasing order, depth of pattern, and perfection of their own bodies and minds as well as their artistic, cultural, emotional, and spiritual creations. Humans will be able to rise above themselves, through themselves, by means of self-directed evolution. They will access the naturally emergent properties of higher order which may not be evident or even imaginable to lower levels of order, that is, current human beings.

The technological singularity

It is possible to see evolution as forming a kind of sacred history – an understanding of the past, and how the present came to be, which informs religious attitudes, beliefs, and behaviors. Evolution, which is a verified theory by critical rationalist criteria, functions as a substitute for the creation myths of previous religions. Those myths are regarded as failed and superseded theories. However, sacred histories are not only about origin; they are also about destiny.

The transhumanist visions of the future usually typically involve what is called the 'technological singularity.'[18] The technological singularity is the moment in the future, accelerating advance of technology (possibly following the invention of recursively self-improving superhuman intelligence), after which the course of human history is supposed to become highly unpredictable from today's perspective.

The unpredictability of human affairs beyond the technological singularity derives from the extreme speed of increases in intelligence and technological sophistication which are expected to occur at that time, along with the ensuing, cumulative advances in all fields of science and every human endeavor. Transhumanists typically expect that humans will so thoroughly transform themselves during this time that they will become incomparable to present-day humans – that is, 'posthuman.'

Some Singularitarians, especially, view the singularity as a religious event, a time when human consciousness will expand beyond itself and throughout the universe:

> *The matter and energy in our vicinity will become infused with the intelligence, knowledge, creativity, beauty, and emotional intelligence (the ability to love, for example) of our human-machine civilization. Our civilization will expand outward, turning all the dumb matter and energy we encounter into sublimely intelligent – transcendent – matter and energy. So in a sense, we can say that the Singularity will ultimately infuse the world with spirit.*

According to these Singularitarians, this expansion of consciousness after the Singularity will also be an approach to the divine:[19]

[18] The earliest use of the term singularity in roughly this sense has been attributed to John von Neumann. For an explanation of the technological singularity and a history of the concept, see Kurzweil (2005).

[19] This notion of building toward a future God has some resonances with even pre-industrial religious notions, for example, in Lurianic Kabbalah (*tikkun*).

> *Evolution moves toward greater complexity, greater elegance, greater knowledge, greater intelligence, greater beauty, greater creativity, and greater levels of subtle attributes such as love. In every monotheistic tradition God is likewise described as all of these qualities, only without any limitation: infinite knowledge, infinite intelligence, infinite beauty, infinite creativity, infinite love, and so on. Of course, even the accelerating growth of evolution never achieves an infinite level, but as it explodes exponentially it certainly moves rapidly in that direction. So evolution moves inexorably toward this conception of God, although never quite reaching this ideal. We can regard, therefore, the freeing of our thinking from the severe limitations of its biological form to be an essentially spiritual undertaking.* (Kurzweil 2005, 389)

The transhumanist religious space

As the previous discussion indicates, even if transhumanism is not perceived as a religion, it could easily be analyzed as one. Perhaps the best way to understand transhumanism in a religious context is that it implies a religion, or many possible religions.

Transhumanism as an intellectual and cultural movement has opened up the space in which one or more religions could find their cultural context. These cultural phenomena might be more readily perceived as religious and religion if they possessing those characteristics which are more typically religious or if they need to be more and more distinguished from other ways of life in a society. A diversity of transhumanist religious phenomena could either be considered a typological family of religions, or a single religion with many distinct expressions.[20]

Some small, tentative religions have already arisen in the transhumanist religious space – e.g., The Church of Virus, The Church of Mez, Transtopianism, The Society for Venturism, The Society for Universal Immortalism, the Church of the Fulfillment, and Singularitarianism.[21] We can consider them religions either because their adherents consider them religions or because they are cultural phenomena that can be readily analyzed as religions. However, it is too soon yet to tell whether any of them will persist or grow.

Diversity in the transhumanist religious space can revolve around the many differences among transhumanists, for example, with regard to styles of life, personal values, emphases, visions of the *telos* or the directed evolution of human beings, or particular preferred applications of technology.

Some of the more prominent divergences among transhumanists today involve priority values (individual liberty versus social cooperation), preferred body substrate (organic, robotic, or virtual), and the desired locus of future directed evolution (humans, human-machine mergers, or machines not derivative of humanlike mind).

If transhumanist religions recycle and translate reusable components from one or more previous, traditional religions, the resulting religions might have some superficial resemblances to their donor religions.

This diversity within the transhumanist religious space may enable the religious manifestations of transhumanism to appeal to different human or posthuman populations.

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[20] The analogies from past religions with multiple expressions would be phenomena such as schools, orders, sects, or denominations.

[21] Singularitarianism exists in at least two forms: the belief system implied in Kurzweil (2005) and the working group associated with the Singularity Institute for Artificial Intelligence. The Church of Mez, if it was ever intended seriously, is now defunct.

Objections to transhumanist religion

It would be impossible within the scope of this paper to address every conceivable objection to transhumanist religion, but at least a few major objections can be dealt with.

(1) Religions' effects and influences are generally undesirable, especially because they lead to religious wars.

Determining whether or not a given religion exerts an undesirable influence is of course a subjective matter, and criteria for determining it already imply religious or at least value-laden assumptions.

But any religious or value-laden assumptions not contradictory to transhumanism could support criteria by which, in theory, at least one transhumanist religion (possible or real) could be considered not undesirable. Therefore, while it may be arguable from within the transhumanist framework that a transhumanist religion is undesirable, it could not be argued that any conceivable transhumanist religion would necessarily be undesirable. The transhumanist religion space is simply too open-ended.

It is outside the scope of this essay to argue the nature and causes of religious wars. On the face of it, it is no wonder that feelings about such profound matters as religion (meaning, purpose, values, and ways of life) should be strong and deep. But I would suggest that religious wars may be better analyzed as wars over community identities, similar to wars over tribe, ethnicity, language, political ideology, or economic system.

While religious behaviors may be observed to play a role in religious wars, in such wars religions may serve mainly as labels for community identity. If the perception of diverging community identities is at the root of human warfare, the tendency to perceive community identities as diverging, under circumstances such as population expansion, may derive from inherited human tendencies to territorial aggression.

Relinquishing religions, then, will not bring an end to wars over other types of community identities. Relinquishing religions will also not eliminate the desire or need to understand and form opinions on religious issues, and one cannot guess the final outcome of smothering diverse opinions under the cloak of pretended collective agreement. It is advanced sciences and technologies of the human mind and body which hold out the possibility of modifying innate human tendencies to territorial aggression, if they exist.

(2) New religions cannot be taken seriously, since all noteworthy religions must be ancient traditions.

However ancient they may be, all religions have origins. The origins of some ancient religions (e.g., Islam, Buddhism) are fairly well understood, and the origins of many more recent religions are even better documented. A religion originates in the creative acts of the first believers, adherents, or practitioners of the religion. With the passage of time, the religion evolves along with a community and eventually characterizes that community. In this way, those born in the community are raised in the religion and may have a high and special regard for it, for that reason.

In general, prejudices against new religions, and biases toward ancient religions whose origins may be more obscure and mysterious, are irrational. There is no logical reason to venerate the wisdom of ancients more than the wisdom of those alive today, just because of the time period in which they lived. A realistic view of the past does not imagine ‘golden ages’ in which people of the past were wiser than people today. If one

accepts the historical observation that religions have arisen in the past and displaced previous religions, then one must accept the uniformitarian consequence that religions of a similar nature could arise in the future and displace present-day religions.

(3) No one today is worthy enough to found a religion deserving of adequate reverence.

This objection implies that religions ought to be associated with a Founder, a human being exemplary in every way that matters to the religion, a historical realization of all the aims of the religion in advancing the character and condition of its members. This Founder would serve as example, proof, and source of all the religion's wisdom, as Siddhartha Gautama (Buddha) did for Buddhism, Zarathustra for Zoroastrianism, Abraham and Moses for Judaism, Jesus of Nazareth for Christianity, Muhammad for Islam, and so on.

But not all religions, not even ancient, traditional religions, have a single Founder of this sort. The early developing theisms are an example of religions without a main Founder – for example, the ancient ethnic polytheisms and local cults found in ancient Greece and Rome – but also religions of today such as Hinduism or Shinto. New religions can arise from a single human innovator, when the religion is adopted by others, but religions can also arise from the development of a perception of distinctive identity in religious practices that already happen to characterize a community.

Obviously, uniquely talented or charismatic individuals play an influential role in all human social groups, including religious communities. But surely religion in the transhumanist religion space would have a more realistic and detached view of the role of individuals in its development and refinement.

Transhumanism looks to the future enhancement of human beings; therefore, it would be contradictory for transhumanist religion to view any human being today – unenhanced, beset by many weaknesses and inadequacies of the body and mind – to be a prototype of any transhumanist *telos.* Since transhumanist religion is not dogmatic, but instead committed to dynamic, evolving truth and knowledge, a Founder could not even convey a rigid program for developing such a transhuman prototype. At most, individuals could put forward provisional theories which could be tested, critiqued, improved upon, and ultimately displaced. So transhumanist religion is unlikely to have a Founder corresponding to the roles played by those in some major religions today.

(4) Humans have an innate tendency to irrationality, uncritical thinking, superstition, and fideistic 'leaps of faith,' so transhumanist religion cannot work.

An ability to believe counterfactual theories and embrace internally inconsistent beliefs might have served adaptation in the past by making humans braver or more willing to experiment. However, even if this were true, the existence today of fairly rational people, rational procedures such as logic, rational projects such as the sciences, and rational ideologies such as humanism would seem to indicate that humans have discovered methods of mitigating such innate tendencies, if they exist. These methods are at least partly effective in some people, and transhumanist religion might gain traction in at least those populations.

Just as every religion is experienced and realized differently for its different practitioners, it is likely that the understanding and practice of transhumanist religion by its practitioners would take a variety of forms, reflecting the variety in character of mind, intelligence, experience, and so on of those individual practitioners. For this reason, it is possible that adherence to transhumanist religion could spread even among populations which

diverge widely with regard to rationality, critical thinking, or superstition, as long as all those populations, in their own way, accepted the outcomes of rationality, critical thinking, and naturalism.[22]

Ultimately, advanced neuroscience and mind technology should allow human beings to overcome any innate tendencies that exist.

(5) Religion is simply a bad idea. Secularism is preferable.

This objection seems largely a matter of aesthetic taste. Certainly, many people are simply disinterested in religions, and prefer to live an almost purely secular lifestyle.

However, it might be argued that in many such cases formal, explicit religious identity has simply been replaced by a generic social life-philosophy, a private life-philosophy, a deinstitutionalized 'spirituality,' or a complex, ad-hoc redaction of acquired culture through the medium of individual choice. All of these could be analyzed as religion.

To the extent that a world view and ethos are widely shared, they may come to seem invisible, the way they are in primitive societies ('what we know' and 'how we live'). A secular culture, even a transhumanist one, might be 'religionless' in that sense.

So it could be argued that it is a matter of taste as to whether world view and ethos should be explicit and categorized. But there other matters of taste at issue here, such as the importance of being conscious and aware of our cultural lives – for example, how we think, why we think that way, and how we decide how we should live.

Would it be better or worse for us if we were unconscious about such phenomena? Whether we call it religion or philosophy or worldview or life stance or ideology or by any other name, the general model of religion continues to be a viable format for distinguishing religious differences, expressing and developing religious concerns, relating religious concerns to everyday life and practice, exploring religious feelings, and coordinating shared values.

Potential benefits of transhumanist religion

Many thoughtful people come to consider or form opinions about the concerns of religion – including considerations of larger meaning, value, and purpose in life – at some stage of their lives. Religions provide a context in which these concerns and issues can be explored and expressed. Religious practices may also help some in their efforts to achieve goals related to these issues and concerns. Religions can help societies coordinate decision-making and community action along issues of religious concern. It is thus no surprise that religions continue to be important today, since issues such as the mysteries of life, ideals, meaning, value, and purpose continue to be considered of pressing importance.

The importance of these issues and concerns, and the urgent need to make decisions about them, are only likely to be increased, not reduced, by the enlargement of human understanding and powers envisioned by transhumanism.

Humans will face enormous ethical, psychological, social, and personal challenges as they begin to experience the opportunities resulting from accelerating technology in the

[22] The differential grasp and proficiency in a religion among its adherents is often frankly acknowledged by a religion, for example, by distinguishing religious professionals, clergy versus laity, monks versus householders, or inner circle adepts versus an uninitiated outer circle.

future. As everything from the most intimate aspects of life to the large-scale functioning of societies begins to change drastically, science, technology, everyday life, and the highest and most sacred concerns of humanity will converge in a manner that is without historical precedent. Transhumanist religion may hold out the possibility of helping people understand the changes happening in the world around them and managing the difficult transition. Because future advanced technologies will interact strongly with many religious concerns, it is appropriate that at least one religion handle those concerns in ways that are compatible with transhumanism.

If a technological singularity occurs soon,[23] transhumanist religion will likely still be in its infancy when the human self-transformation to higher mentality begins. The singularity may rapidly advance the exploration of the transhumanist religion space and increase the number and diversity of transhumanist religious practices, but it may also be at this time that religion again becomes invisible, as transhumanist religion decisively displaces traditional religions for the majority of sentient beings, and becomes instead merely 'what we know' and 'how we live.'

On the other hand, it may be that different subjectivities, natures, personality-types, temperaments, shared experiences, and other tendencies will lead different individuals and societies in different directions. If each 'direction' corresponded to a separate transhumanist community with its own religion, such religious heterogeneity might amplify tendencies toward alienation of the descendant clades of posthumanity. However, it may also be that the heightened powers of communication and understanding presumably possessed by posthumanity would enable a continuing interface as a single community with a larger society with which it shared many values and principles. This 'greater posthuman family,' even if they adhered to a variety of distinct religions, might still have more in common with regard to religious concerns than humanity does today.

Next steps in transhumanist religion

The transhumanist religious space has the potential to be as different from today's traditional religions as those religions are different from their primitive precursors. But transhumanist religion will fulfill its promise only if it is fully realized in its religious dimensions, and only if it improves upon religions of the past.

Redeeming artificial design

Most traditional religions, even though they are artificial human creations, claim to have originated in supernatural sources through unique prophetic revelations or as preserved through ancient traditions. Transhumanist religion cannot give rise to such an illusion. Instead, it should emphasize and foreground this feature as an improvement over religions of the past.

Transhumanist religion can boast of being self-consciously artificial, that is, explicitly humanly designed. It is planned, designed, created, and instituted by contemporary humans for contemporary humans.

Redeeming changeability

Most traditional religions are reflexively conservative. They boast of maintaining long, unbroken traditions and preserving dogmas, rituals, and so on intact from the remotest antiquity. They also maintain faith in a fixed, eternal truth or source of truth.

Transhumanist religion holds in its epistemological core ever-shifting grounds of knowledge and truth. Its ever-changing, ever-improving world view will automatically be consonant with and incorporate the latest extensions of knowledge. These continual improvements in world view will also be linked to corresponding continual improvements in ethos or way of life.

It will be important for transhumanist religion designers to foreground this phenomenon as a positive feature, as with artificial design. The conservative religious impulse may still be exercised in the conservation of phenomena that are of continuing benefit, or neutral phenomena. But transhumanist religion will be able to boast of the continual, directed evolution of better ways of life, better habits of thinking, better values, better religious experiences, better visions of the future, better awe, and better religious practices, if it can deliver on these promises.

Diversity in religious identity

Transhumanist religion will need to form a sufficiently distinct identity so that at least its practitioners, if not the general public, will have a sense of its difference from previous, traditional religions. But transhumanist religion does not need to retain the notion of one normative ideal for religious experience, practice, knowledge, or feeling. The transhumanist religious space is far larger in its potential than the space for any other religion.

Starting over again

Transhumanist religion designers should start over again with the basic issues and concerns of religions, rather than merely continuing developments of previous, traditional religions. They would do well to become careful students of the history of religions, philosophies, ethics, and mysticism, as well as careful students of humanist critiques of all of the above, so that they do not either 'reinvent the wheel' or repeat ancient mistakes.

Connecting with individual meaning and purpose

Transhumanist religion will need to address individual concerns about personal meaning and purpose and values, and highest ideals or expectations in life. Transhumanism respects individual values, but there is a role for religions to help individuals uncover, analyze, understand, and make connections between their values, and to organize and relate values in general so they individuals can better make connections with others and coordinate values they share with others, if possible.

The humanist ideals of helping humanity and "making the world a better place" are starting points, not end points, for the development of specific personal values and ways of life, and the connection of those to communal, shared values and ways of life. Transhumanist religion is free of the need to develop a fixed ethos, but it is not free of the need to help individuals and communities form provisional ways of life, although choices may vary by individuals and communities.

Instead of designing "a moral code believed to be sanctioned by the gods," transhumanist religion could develop ways of life that best enable its practitioners to attain godlike forms. All paths leading in this direction could be considered sacred, by comparison to alternative paths.

Religious expression

If transhumanist religion spreads, it is likely to pick up practitioners and designers who are better at experiencing transhumanist religious feelings and who are better able to direct them into transhumanist art, and perhaps even symbolic drama (liturgical ritual). Transhumanist religion will need to keep the door open, so to speak, to these possibilities and encourage the development of diverse forms of transhumanist religious expression, art, and symbolism.

Religious community

Practitioners of transhumanist religion need the benefits of community, some of which can be organized along 'cyber' modalities, but some of which cannot yet be fulfilled in that way.

The development of transhumanist institutions has been spurred on by general cooperative efforts, for example, cooperatively funding or investing in scientific research and technological development, sharing knowledge about radical life extension, helping people stay abreast of scientific discoveries and technological inventions, and coordinating political involvement in technological issues or cultural involvement in matters related to transhumanism.

But more characteristically religious transhumanist institutions have formed around projects such as arrangements for cryonic suspension (as in The Society for Venturism), cultivating the hope of resurrecting all who have ever lived (as in The Society for Universal Immortalism), and hastening a technological singularity (as in Singularitarianism).

Conclusion

It is time for transhumanists to open up a new front for understanding, facilitating, and communicating tentative conclusions about the interaction of advanced technology with religious concerns.

Religious work can supplement the continuing academic, secular philosophical, and practical work that already constitute transhumanism. Transhumanist religion can provide a new context in which transhumanism can be developed, discussed, and applied.

The development of religious self-understanding and the development of a religious language might give transhumanists the tools they need to better communicate their message to others. As the singularity draws near, transhumanist religion may also become critical in helping humans make the transition to posthumanity.

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