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Techno-Apocalypse: Technology, Religion, and Ideology in Bryan Singer's H+

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Produced by Bryan Singer (producer of *X-Men* and *The Usual Suspects)* and made available exclusively through YouTube, *H+: The Digital Series* (2012–2013) offers its viewers a science fiction vision of a technological apocalypse. At the heart of the narrative is a computer implant, the H+, which is integrated with a user's nervous system. The implant can provide all of the communication possibilities, the information, and the entertainment of a web-enabled computer but from inside the brain. Images and text are overlaid via the user's visual cortex. Sound is experienced via the auditory nerves, and so on. The nano-implant communicates through the equivalent of a broadcast WiFi network with few places lying outside of coverage. Created by Irish biotech company Hplus Nano Teoranta, the H+ quickly becomes ubiquitous, with about a third of the world's population being implanted via a saline injection to the top of the spine. The series explores the apocalyptic consequences of this technology being corrupted. This chapter examines how the series represents the role of technology in society. Initially, the series appears to offer a cautionary outlook. However, in its treatment of the relationship between technology and religion, *H+* supports, albeit very subtly, radical transhumanist visions for the future of technology and humanity. Moreover, the series ultimately promotes a conservative, elitist, and alienating ideology.

H+ episodes vary from around two minutes to six minutes in length. It is tempting to think that short episodes were intended to attract people with little time or attention. However, to get even a basic grasp of the story, viewers need to become committed investigators. The timeline for the story spans from seven years before the "event" to two years afterward in locations across the planet. As well as the forty-eight weekly episodes, there are embedded annotations that offer crucial story hints. Short clips called "fragments" provide additional story information or emphasize fleeting and easily missed plot details. There are "behind the scenes" and "the making of" clips, as well as interviews with the cast and crew. Finally, the series is accompanied by official Facebook and Twitter accounts, blogs, and even fake company websites[1]. Perhaps what is most remarkable in

terms of the narrative is that its episodes can be viewed in any order. As John Cabrera, co-creator of *H+* told *Wired*, "YouTube viewers essentially curate their own content so you could form your playlist to watch *H+* through the eyes of one character, in chronological order, in reverse-chronological order, by geographic location" (qtd. in Hart). The hope was that "audiences take *H+* into their own hands" (Cabrera qtd. in Hart). *H+* is not bite-sized television for the web. It is a digital series where the affordances of internet technology are central to how the story is told, distributed, and experienced.

From the outset, the series describes transhumanism as "an international movement that supports the transforming of the human body and thereby the human condition through advanced technologies" ("Driving Under"). Despite foregrounding the movement, however, the series does not explicitly enter into its more extreme visions. For example, one such visionary, Ray Kurzweil, a pioneer in artificial intelligence (AI) and Google's Director of Engineering, has become synonymous with the idea of the singularity. This describes an apocalyptic moment when technological evolution will outrun human control and outstrip humanity's physical and mental capacities (Dinello 23). The singularity can be understood as an apocalyptic moment in two senses; the final destruction of the world and, in the archaic sense, the revelation of new knowledge. Other leading transhumanists have put forward similar visions of the end of humanity as we know it. Generally, transhumanists envisage that, through a combination of genomics, nanotechnology, and robotics, humanity will be surpassed by a posthumanity. In many predictions, computer technology, rather than the unaugmented human body, will be the substrate for consciousness. Indeed, the rejection of the body is central to radical or "upper case transhumanism" (Hefner 158). Echoing the dichotomous thought of Descartes, the body is seen as merely the profane and corruptible host to sacred consciousness (Dinello 22). Like Christians and Gnostics before them, "the prophets of our techno-future reject the organic body and view technology as salvation from that death-susceptible host of our potentially eternal mind" (Dinello 9). In transhumanism's most extreme prophecies, people may cease to exist, but consciousness, via computer technology, will become godlike. For

Kurzweil, and prominent transhumanists like Max More, Hans Moravec, and Marvin Minksy, the techno-apocalypse is a probable and potentially positive development[2]. *H+* does not explicitly deal with these visions for humanity's future but, I argue, it does support them. This claim, however, initially appears difficult to defend since the series opens by highlighting risks and anxieties attached to technology.

If someone watches the *H+* episodes in the order in which they were released, the first installment shows the implant's launch. It is surrounded by positive news reports and chat show banter but there are also hints of trouble. News broadcasts tell us that cybercrime has increased. A number of data centers have been hacked. In an online video, a unknown young man warns all the "adults" out there who are considering an implant that the lead programmer [Kenneth Lubahn] behind H+ not only no longer supports the device but also has been missing for weeks ("Driving Under"). There is opposition to the dominance of technology and its potential dangers. Demonstrations take place in Geneva at the death of four human test subjects in a nanotechnology trial. Jason O'Brien, the leader of a Neo-Luddite[2] cell, protests that "These scientists need to realize that we are people. We are not their toys" ("Driving Under"). Outside the headlines, an entire village in the Democratic Republic of Congo has died in an implant trial conducted by Lord Pearce Wachter (LPW) a corporate rival to Hplus Nano Teoranta ("Seeds"). Nevertheless, whether accepting or failing to see the risks, billions of people pay to be implanted with H+.

The relatively mundane vision of a pre-apocalyptic future in *H+* resonates with the place of technology in society today. In the series, implants transform society, but the outward differences are small. Many scenes appear much as they might in 2015, but rather than peering at phones, people are staring into space and moving their hands to manipulate icons that only they can see. Rather than creating a stark techno-dystopia, the technologies portrayed are believable developments on what we already know. As Cabrera put it, "Technology has become such a big part of our humanity. We have the internet on 24 hours a day, even when we're sleeping. The only leap here is that instead of the device being in our pocket, we've put it into our bodies" (qtd. in

Hart).

By representing an undercurrent of anxiety, *H+* reflects concerns about technology in reality. In November 2013, *The Economist* noted that "the combination of cameras everywhere—in bars, on streets, in offices, on people's heads—with the algorithms run by social networks and other service providers . . . is a powerful and alarming one" ("Every step you take"). We may not be far, the paper opined, "from a world in which your movements could be tracked all the time, where a stranger walking down the street can immediately identify exactly who you are" ("Every step you take"). In January 2015 a three day conference was held in San Juan, Puerto Rico, to discuss the dangers posed by artificial intelligence (AI). Elon Musk, who created SpaceX and Tesla Motors, contributed ten million dollars to fund research (administered by the Future of Life Institute) into AI safety ("Elon Musk"). Separately, in an interview at the Massachusetts Institute of Technology, Musk said that, if he had to "guess at what our biggest existential threat is," it is probably AI. He likened it to "summoning the demon" that we imagine we can control but may not be able to (McFarland). Regardless of such concerns, most of us already accept and use technologies that can trace and record our every move—and possibly anticipate our next one. *H+* successfully captures this contradictory culture of anxiety about, and acceptance of, increasingly powerful and ubiquitous computer technology.

In the opening episode, a computer virus infects the H+ implant's data network. All implanted people within network reception simply drop dead. To escape the same fate, survivors must avoid network coverage. The ensuing death, destruction, and social collapse poses questions for the viewer about the place of technology in our society. The series reveals our dependence on technologies that we may be unable to control or understand. Like hearing about the electronic vulnerability of power plants, stock exchanges, or personal pacemakers, *H+* may give us pause to think about the way technology can weaken as well as empower. For producer Bryan Singer, "That's the cautionary tale of *H+*: How much do we embrace technology that we cannot control and do not understand?" (qtd. in Hart).

Looking beyond the surface, however, it is difficult to read the series as the work of techno-skepticism that Singer claims it to be. Jason O'Brien, for example, the only character in the series to oppose technology, is weak and dubious. His hypocrisy undermines his position. He is the leader of a Neo-Luddite cell, yet he was a former professional "lab rat" who made a living from participating in medical trials. Eventually, an LPW nanite experiment left him disabled. It is, of course, ironic that as an opponent of all things technological, O'Brien is dependent on an advanced exoskeleton for mobility. He rails against LPW for his injury but accepts no personal responsibility for volunteering for hazardous trials. The Neo-Luddites have kidnapped Kenneth Lubahn, the missing H+ programmer, in the hope of winning him over to their cause. In the weeks leading up to the H+ launch, the Neo-Luddites believe that the "singularity[3]" is near, and they need Lubahn's help to prevent it ("Make Things Right"). Jason pleads with Kenneth, while he is being held in the Luddite compound, to service his painfully malfunctioning exoskeleton. He cannot have his followers see what he really is. This can be read as a reference not only to his physical condition but also to his dubious past and questionable integrity. O'Brien is the antagonist, while Lubahn is the hero who eventually purges the H+ network of the lethal virus. As the series' only techno-skeptic, O'Brien's character weakens Singer's claim that *H+* is a cautionary tale. This claim is further undermined when we consider the series' treatment of the relationship between technology and religion.

H+'s representation of the relationship between religion and technology is central to its quiet evangelism for a radical transhumanist perspective. The series transcends any division or opposition between the religious and the technological. The character Matteo Spina, a former Catholic priest, for example, is a man of faith who also sees himself as a man of science. It appears that for Spina, and for the series itself, there is no implicit conflict between the two. Technology and religion are part of a continuum. In the episode "Meta Data," Patricio Raiz, a research scientist who worked to develop the H+ implant, argues against Kenneth Lubahn that the religious and the technological are not separate but intertwined:

RAIZ: You're not a spiritual man?

KENNETH: Well, I'm a scientist.

RAIZ: You know, there was a time in human history when God and the hand of science were the same. In fact, several ancient cultures understood the relationship between miracle and natural function better than we do. Sadly, much of that knowledge, uh, got lost in great purges.

KENNETH: Or relegated to metaphysics.

RAIZ: Some, sure. But the nervous system isn't metaphysics, it's a complex computer. And it's ready for an upgrade. Through many of the techniques we're devising here.

Kenneth goes on to argue that people can no longer compete with computers, which are "smarter" than humans. He continues that "we've created these tools, so they're a part of our humanity. And I think that is thrilling. We don't need myth and magic anymore" ("Meta Data"). In the same episode, Raiz predicts that "one day, we won't even need implants or any inorganic system for that matter. Our own nervous systems have that potential on their own." People will have the capacity for "mass storage, super computation, even an area of the brain with wireless transfer capabilities" ("Meta Data"). Raiz presents technology not as the opposite of religion but as a different path to the same truth. Kenneth initially objects, but his stance softens when he is introduced to Raiz's test subject, Simona Rossi.

Rossi personifies a connection linking the human, the technological, and the divine. She has performed miracles and has been plagued by mystical visions since childhood. These visions allow her to see into the future and, traumatically, allowed her to foresee the death of her husband. She turns to science for an explanation and a solution. Somehow, Simona can not only see the future but can also remotely access and control computers while appearing to pray. These are natural abilities. Simona has no implant of any kind. In this, she embodies the capabilities that Raiz hopes to develop in all humans. She is living proof of a connection involving humans, computers, and religious

transcendence. Through the character of Simona Rossi, *H+* supports a central tenet of radical transhumanism: the belief that human consciousness and computer technology are, in principle, the same.

The belief that human consciousness is reducible to a cybernetic system is commonplace among techno-prophets (Dinello 18). Writing in *Wired*, Jaron Lanier identified a diffuse consensus among apocalyptic techno-soothsayers. Cybernetics, the study of closed systems of communication and control, was the sole metaphor used to describe and understand reality in these predictions. In this view, people are "no more than cybernetic patterns" (Lanier). Lanier also noted the commonly held belief that "Since computers are improving so quickly, they will overwhelm all the other cybernetic processes, like people, and will fundamentally change the nature of what's going on in the familiar neighborhood of Earth at some moment when a new 'criticality' is achieved—maybe in about the year 2020. To be a human after that moment will be either impossible or something very different than we now can know." Radical transhumanists see human life and consciousness to be no more than patterns of information. In *H+* Raiz captures this in his claim that the human nervous system is simply a complex computer ready for an upgrade ("Meta Data"). Simona Rossi demonstrates the fundamental compatibility between the computer and the human mind. In the series, as in radical transhumanism, computers are presented as part of the essential stuff, not only of human consciousness but also of certain aspects of religious experience.

H+ transcends the divide between religion and technology by presenting both as parallel paths to transcendence. This appears progressive in a culture where religion and the work of science are often thought to be mutually exclusive. However, the *H+* narrative also masks a deep-seated conservatism. The series does not interrogate how people may engage with both religion and technology as forms of belief. As transhumanism demonstrates, technology may be an object of faith, i.e., belief without evidence, like belief in a traditional deity. To understand the common thread between faith in organized religion and faith in technology, it is necessary to turn to the work of Erich Fromm, the German psychoanalyst and humanist philosopher. Fromm offers the concept of

"having faith" (Fromm 35-7). Here the emphasis is on "having" as an expression of acquisition and ownership. This idea can help us to better read and critique the ideas present in *H+*. It also reveals that the series' support for salvation through technology is a manifestation of something ancient rather than new: the subordination of the individual through faith backed by power.

A synthesis of humanity, technology, and divinity becomes manifest in one of *H+'s* climactic scenes. Kenneth and Simona are held at gunpoint by Jason O'Brien in an H+ data center in Alaska. Simona "prays" and connects to the network. Kenneth is then able surreptitiously to issue commands to the data center, in Italian, via Simona. When he accesses the network, Kenneth becomes immersed in an envelope of light filled with floating constellation-like patterns. He issues a command to activate "Mano di Dio" (God's Hand). This incapacitates O'Brien. O'Brien is then levitated into the air and enters a trance. There are no holographic projectors or anti-gravity devices in the data center. This is not just technology at work. It is magic, a techno-religious miracle.

As a Luddite, O'Brien has searched for "God's Hand," a legendary storehouse of all technological knowledge, with the intention of destroying it. After he has been incapacitated by Kenneth, O'Brien enters a dreamlike alternate reality. Here Kenneth tells him that he is now inside God's Hand, a sort of virtual world inside his own mind. In a parallel storyline, a physical location with supernatural properties (also known as God's Hand) is revealed to exist in the Vatican catacombs. It is worth noting that, despite the series' international story, Roman Catholicism is the only religious tradition with any relevance to the plot. Like a transhumanist trinity, God's Hand mysteriously exists across the realms of institutional religion, technology, and the human mind.

Fromm described how there is a distinction between "having faith" and "being in faith" (Fromm 35-7). Importantly, this applies to secular and religious life. "Having faith" describes a belief that is followed and professed in the pursuit of extrinsic reward, i.e., power, money, popularity, and so on. "Being in faith" describes belief that is personal, questioning and that is its own reward (Fromm 35). In its representation of religion and technology, *H+* remains rooted in "having faith." As Fromm describes it, in the "having mode," faith is "made up of formulations

created by others" (35). The acceptance of these formulations is ultimately a submission to the power of a "bureaucracy" (Fromm 35). These bureaucracies might be churches, states, or corporations, for example. With God's Hand in *H+*, religion and technology are represented by the bureaucracies of the Vatican and the H+ data center respectively. The power of religious or corporate bureaucracies can relieve "one of the hard task of thinking for oneself and making decisions" (Fromm 35). Such belief "claims to pronounce ultimate, unshakable knowledge, which is believable because the power of those who promulgate and protect the faith seems unshakable" (35). As Fromm observes, we can choose such certainty, but it demands the surrender of our psychological and intellectual independence (38). The idea of "having faith" captures *H+'s* representation of religion and technology as two sources of tangible power that offer certainty and extrinsic reward but only in return for the surrender of the individual's freedom of conscience and intellect.

'Having faith' offers extrinsic reward but it may also undermine or destroy the individual. In *H+* the fall of civilization is caused not by technology but by sibling rivalry. Attention to the story's fake company websites and video fragments reveal that Breanna (Peters) Sheehan, CEO of H+ Nano Teoranta, is the sister of Francis Peters, the villain behind the digital plague. With no place for Peters in the family business he works instead for rival firm LPW. As suggested in the final episode, Peters may have murdered a third of humanity in an attempt to demonstrate that his implant was better than the H+ ("Visions of What's Come"). Here the series suggests an ironic aspect of faith in technological salvation. Human misery is often caused, not by the frailty of the body, but by greed, envy, thwarted ambition and warped insecurity. Technology can offer no salvation while these human traits persist. If meaning and faith cannot be found elsewhere, technological salvation necessarily demands the annihilation of the individual. As Dinello wrote 'the evangelists of techno-heaven promise the reward of everlasting life in exchange for subjugation to the machine' (4).

Having faith is an alienated and alienating form of belief. This alienation is deepened by,

and is made visible through, the worship of idols. Fromm describes an idol as "a *thing* that we ourselves make and project our own powers into, thus impoverishing ourselves" (35, emphasis in original). He argues that by submitting to our own creations we "are in touch with ourselves in an alienated form" (35). In *H+*, computer technology, which is created by humans, is portrayed as a pathway to the divine. This veneration of computer technology reflects human capacity back to people as something external—and superior—to them. This is compounded by the portrayal of human consciousness as a computer in need of an upgrade. In *H+*, computers, as the dead creations of living people, become revered as a route to transcendence, meaning, and (potentially) immortality. Through this techno-idolatry, the series elevates and mystifies technology.

H+ mixes techno-fantasy with religious belief. In science fiction, transhumanism is often an "important intersection between science and religion" (Geraci 156). Among science fiction writers and academics, transhumanism is frequently discussed in theological terms. Words like "eschatology," that is, the theological concern with the final destiny of the soul and of humankind, feature prominently. However, discussing transhumanism in theological terms further mystifies and symbolically aggrandizes the role of technology in society. Theology is not an appropriate lens for the understanding of transhumanism any more than it is suited to understanding, for example, nationalism or communism. Not every shared belief is a faith or religion. Unlike most faith traditions, transhumanism does not offer the possibility of a coherent moral framework. Posthuman "heaven" would be a "matter of consumer preference and sufficient funds, rather than a reward for leading a morally good life" (Dinello 24). Transhumanist visions of techno-salvation are a pseudo-religious justification of privilege. As Dinello says, "Disguising their spiritual quest as science, the ministers of machine ascension express technologically induced dreams of becoming like gods, of possessing supernatural powers. . . .While despising religion as dogmatic irrational debasement, transhumanists comfort themselves with religious goals such as personal immortality and divine power. Technologism is the new religion of the self-aggrandizing techno-elitists" (Dinello 31). There is religiosity but a lack of morality in a system where "even the most evil rich person will be

granted digital divinity, while the most saintly poor person will not"(Dinello 24). Transhumanism is a secular example of "having faith." It advances a set of beliefs that act in the service of power. As such, it is perhaps best viewed through the lens of ideology rather than theology. Similarly, the blurring of technology into religion in *H+* can be seen as an ideological obfuscation.

Computer technology companies often see their products and services as the key source of the solutions to life's problems (Morozov). This has now extended to the bigger human questions of disease, aging and mortality (Corbyn) . Computer systems offer a metaphor through which we can view life. In the current confluence between transhumanist beliefs and the bureaucratic might of Silicon Valley, technology is beginning to be seen as the stuff of life itself. Transhumanism is the radical avant grade of corporate ideology. *H+* ideologically supports this hubris. After all, the series is not just a representation of digital technology. In its form and distribution model, the series is a manifestation of, and promotion for, new information technologies. In the series, as in advertising and corporate boosterism, the computer is elevated as an idol. *H+* promotes transhumanism by portraying humanity as a cybernetic data pattern. Technology is represented as a conduit to the divine. In *H+'s* vision, computers are created by humans, but somewhere in their complex circuitry, they contain the stuff of God.

Finally, the ideological bent of *H+* is clear in the aspects of the postapocalyptic world that it represents and those that it overlooks. The apocalyptic "event" transforms global demography. The majority of survivors in the United States and Europe are young, under eighteen, while in the developing world, a disproportionate number of the dead are children. Young people in the West were not implanted on safety grounds. In Africa, on the other hand, young people were implanted in an attempt to facilitate better health care. The catastrophe also disrupted national and international power relations. European powers, for example, lie defenseless in the face of a potential colonization from their former colonies to the south. Within wealthy countries, the young, the poor and the skeptical, who have not been implanted, are left to dominate the ruins. It is ironic that the winners in this scenario are those who were never implanted. They can go where they please,

suffering none of the direct effects of the digital pestilence. However, we cannot really tell because we do not get to see them. This is *H+'s* key blind spot. The series does not show the majority who never bought into implantation. With the exception of Simona Rossi and a small band of Neo-Luddites, the unimplanted masses, two thirds of the global population, are invisible. The series' narrative is driven by characters who want to repair or further develop implant technology. Here, Singer's cautionary tale claim finally collapses. Technology is the star in *H+*. Humanity is peripheral.

Endnotes

1. For example, see www.hplusnanoteoranta.com
2. See Geraci 142, Hefner 158-59, Dinello 19.
3. The original Luddites were the followers of Ned Ludd who opposed the mechanization of the textile industry at the expense of workers' jobs in the early nineteenth century. The term has become a general, and often, pejorative description for people who oppose technology.
4. Although the "singularity" is mentioned in the series, it is not explained or dwelt upon.

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