Ethics, Technology, and Posthuman Communities

As long as technology has been interpreted as an expression of practical reasoning and an effort to alter the conditions of human existence, ethical language has been used to interpret and critique technology’s meaning. When this happens technology is more than implements that are expressions of human intelligence and used towards practical ends in the natural world. As Frederick Ferre points out, technology is always about knowledge and values—what people want and what they want to avoid—and to the extent that technology increases power, one has to ask whether technology and/or the use towards which it is put is ethical. The ethicality of technology is based on whether that technology threatens or enhances the good for human beings. Therefore, any understanding of technology is never removed from ethics. Beyond the ethical evaluation of technology, technology is critiqued in light of whether it enhances or diminishes what it means to be human.

Interpreting technology’s practical uses and effects with ethical language has added a symbolic element to the development and use of technology. Technology is both implements picked up and used for practical purposes and implements picked up and used for symbolic purposes. The symbolic aspects of technology point beyond the ethicality of technology towards the expression or validation of an understanding of what it means to be human. Technology is in the unique position of being a material example of practical and symbolic understandings of the good for humans and what it means to be human. By and large these are humanist visions of what it means to be human. Humanist philosophy depicts the human body as natural and organic, and human beings as unique individuals possessing an inherent dignity that emerges from a shared human nature. The humanist vision is reflected in the words of J. P. von Praag who defines humanism as an attempt to “provide a coherent answer to the questions of human existence … by the realization of everyone’s possibilities in devotion to a common humanity.” As a result, humanist evaluations of technology depend on whether technology diminishes or enhances human nature. In their book Postmodern Theory, Best and Kellner challenge humanism’s universal applicability, arguing that “humanist discourse postulates a universal essence as constituent of human beings which operates to enthrone socially constructed male traits and activities (such as reason, production, or the will to power) as essentially human.”

Humanist philosophy is now in the position of having to respond to technological developments that bolster the posthuman claim that technology is constitutive of identity. The response by humanists has been to suggest a human nature that is entirely at odds with technology or a human nature primed for hybridity and interfaces. In both perspectives, the ethicality of technology is based on how it enhances or diminishes human nature and the social relationships and responsibilities that emerge from it. The singular focus on how technology affects human nature has resulted in little attention being paid to the (un)ethical uses of technology. Even less attention is
paid to the notion that technology is a site of protest against interpretations that alienate and marginalize those who either do not have access to technology, use technology to surpass the limitations imposed by the body, reconstruct or augment an undeveloped or damaged part of their brain or body, or use technology to challenge humanist notions of the good of human nature. In humanist treatments of the ethicality of technology, human nature is treated as a given constant and remains unquestioned. The result has been uncritical investigations about the meaning of technology. Though they employ ethical language, humanist critiques of technology have less to do with technology and ethics than they do with restating their view of human nature in an ethical language so as determine who can and cannot be a member of the moral—and therefore human—community. When this happens, ethics becomes identity politics and fails to give an adequate accounting of technological (ab)use. Most confusing of all is that while humanists agree that there is a shared human nature, they do not agree as to its content, prompting widely divergent humanist reactions to technology.

Posthumanism, as a response to humanist interpretations of technology, does little better in providing a critical and nuanced evaluation of technology. Posthumanism, emerging as it does from poststructuralism, denies that there is such a thing as human nature. That idea has been further developed by technological posthumanists such as Kurzweil (1999), Moravec (1988), and Paul and Cox (1996), who each argue that in the absence of a human nature, there are no restrictions or limitations on how humans can configure themselves. The only limitation humans have to overcome is the organic body. Technological posthumanists rush to embrace technology as that which saves us from humanism and frees understandings of what it means to be human from humanism’s essentializing and normativizing grip. They imagine a future where the human body has been left behind and humans are free to configure and augment themselves however they see fit. In doing so, posthumanism has not articulated a comprehensive ethics for how individuals should respond to technology or how these digital people should interact with one another and those who remain carbon-based. Contrasted with humanism, technology is always a moral good because it allows the individual to escape humanism’s transcendent sameness. In his book *High Tech/High Touch*, John Naisbitt details the confused and ambivalent relationship that has resulted from humanism’s and posthumanism’s failure to develop a comprehensive ethics of technology:

> Most of us have a relationship with technology that rebounds from one extreme to another. One moment we are afraid of it, one moment we are inspired by its power. One day we begrudgingly accept it for fear of falling behind our competitors or co-workers, the next day embracing it enthusiastically as something that will make our lives or business better, then feeling frustrated or annoyed when it fails to deliver.

The emphasis on human nature or the rush to expand human capacity and functioning in its absence has made it difficult to develop a comprehensive critical theory of technology—either a humanist one that does more than reinscribe already established values by providing a map for negotiating the complexities and singularities of technology and that to which technology gives rise, or a posthumanist one that is actually a map.

What is needed if there is to be a critical theory of technology is a posthumanism that articulates the best of humanism—reason, individuality, and respect for others—without requiring belief in a shared human nature that marginalizes and alienates others. While one would think speciesism or
anthropocentrism would at least bring people of different genders, races, ages, religions, and sexual orientations together, the idea of a shared human nature—no matter how broadly conceived—has the effect of being more exclusive than inclusive. Humanism, though it claims to speak for all humans, imposes limits on what characteristics and traits qualify as human. What is needed is a critical theory of technology that does not repeat the essentialisms of humanism and does not lead to the anarchy, solipsism and amorality that some technological posthumanisms invite. This proposal would be a reconstructive posthumanism that would be arbitrated by the possibility of solidarity among individuals who assume responsibility for the uniqueness of the other, a uniqueness announced by the practical and symbolic uses of technology that point towards new understandings of what it means to be human, the good for humans, and what defines a moral community. This reconstructive posthumanism is found in merging Levinas’s ethics of responsibility for the other with the posthuman view that while subjectivity and technology are culturally determined, together they resist normalizing and essentializing views of both. Understanding that on an individual level, the practical and symbolic uses of technology make the individual other and other than human, Levinas’s definition of solidarity as a quest for justice emerging from responsibility for the uniqueness of the other allows for a critical theory of technology that considers the ethicality of the technology, the individual who uses that technology, and their vision of what it means to be human and live among others. Two examples, one technophobic, the other technophilic, demonstrate the ways that a humanist understanding of what it means to be human either fails to articulate a sophisticated response to technology or uses ethical language to reinforce its own normativity and in doing so can be used to marginalize and exclude people.

The technophobic view sees technology as a threat because of its inherent capacity to alienate individuals from our common humanity and shared social situation. In this view, technology obscures or distorts human nature, or technology creates circumstances in which people no longer have to interact face-to-face, allowing for a moral distancing that diminishes our obligations and responsibility to others. Ian Barbour writes that from the technophobic perspective, technology leads to an obsession with things and that “such an obsession with things distorts our basic values as well as our relationships with other persons.” This will lead to a forced uniformity in society that threatens individuality and spontaneity, and will provoke an increased emphasis on efficiency and rationalism at the expense of imagination and creativity. J. David Bolter goes a step further, arguing that technology could do more than distort our humanity; it could change it altogether. Where he sees human nature as defined by Western humanism, the creeping specter of technology would forever transform humans into quantifiable data, leaving humans with a new definition of themselves as data/information processing machines. A slightly less alarmist note is struck by Hubert Dreyfus in his book On the Internet. Technology, he writes, will not so much alter what it means to be human as it will diminish the skills that humans developed to differentiate themselves from other animals and machines. According to Dreyfus, technology left unchecked will diminish human ability to acquire skills and judge information by its quality instead of quantity, and as feelings of anonymity and nihilism sink in, technology will lead to a life without meaning.

Francis Fukuyama’s Our Posthuman Future articulates each of these elements of technophobia relative to what he perceives as the ramifications of the biotechnology revolution on human nature, society and ethics. The central argument of Fukuyama’s text is that any change to human nature...
inevitably and irreversibly changes values, the latter being derived from the former. Fukuyama believes that the increased technologization of biology will cause our ethics to wither as the shared human nature that binds individuals and communities together is fractured and multiplied. As a result, the social fabric will be torn to tatters as the change in human nature changes our conception of human rights. Biotechnology, therefore, does more than threaten our own understanding of ourselves, it also threatens how we treat—and are treated by—other people. Fukuyama’s solution to the threat posed by our impending posthuman future is to politicize the debate. Scientists and theologians are not equipped professionally, nor do they possess the authority, to determine how these technologies should be developed and utilized. Since biotechnology threatens to undermine the understanding of human nature that is the foundation for liberal democracy, liberal democracy should respond by passing laws and establishing political institutions to regulate biotechnology.

Fukuyama locates three places that will be changed irrevocably by biotechnology. The first is in our own understanding of what it means to be human. He writes that biotechnology “will alter human nature and thereby move us into a ‘posthuman stage of history’” and “this is important … because human nature exists, is a meaningful concept, and has provided a stable continuity to our experience as a species.” Fukuyama’s definition of human nature is that it consists of qualities like rationality, sentience, consciousness, and sociability coming together to form a complete human being. Fukuyama suggests that humans need this shared human nature and the traits that define them as human so that they can participate, contribute, and have a stake in the development and implementation of technologies that threaten human biological integrity and civil society. It is his position that ethics are derived from—and for the protection of—these individual traits and the complete human they form. Fukuyama’s argument is that any change in our common humanity becomes more than a change in our conception of ourselves when it threatens our moral values and the possibility for ethical discussion and decision-making.

The second threat posed by biotechnology is in relation to our shared moral values and ethics. It is apparent to Fukuyama that “human nature is what gives us a moral sense, provides us with the social skills to live in society, and serves as a ground for more sophisticated philosophical discussions of rights, justice, and morality.” Instability comes from any alteration to our shared human nature, which is another way of saying that difference leads to instability by creating a situation where communication and dialogue become impossible. He writes that “we vary greatly as individuals and by culture, but we share a common humanity that allows every human being to potentially communicate with and enter into a moral relationship with every other human being on the planet.” Being different will create different values, thereby making the negotiation of competing values impossible or interminable.

Finally, posthuman changes to our common human nature and the moral values and ethics implied therein moves into the political realm, both as a threat and resolution: “The more science tells us about human nature, the more implications there are for human rights, and hence for the design of institutions and public policies to protect them.” It is important that we protect “the full range of our complex, evolved natures against attempts at self modification,” because “we do not want to disrupt either the unity or the continuity of human nature, and thereby the human rights that are based on it.” Fukuyama insists that “it is the democratically constituted political community, acting chiefly through their elected representatives, that is sovereign in these matters and has the
authority to control the pace and scope of technological development” that will protect us from our posthuman future.21

By ‘posthuman’ Fukuyama means those individuals who have had their genetic make-up altered and as a result, are somehow more, different, or after those that have not been genetically re-engineered. Our future posthumans are children who take Ritalin to compensate for learning disabilities, though he imagines that one day perfectly normal children will take psychotropic drugs to get ahead and the elderly will use genetic engineering to extend their lifetimes, grow new organs, and reverse the effects of Alzheimer’s disease. The elderly human becomes a posthuman threat when biotechnology allows them to age but not grow; Fukuyama writes:

People grow mentally rigid and increasingly fixed in their views as they age, and try as they might, they can’t make themselves sexually attractive to each other and continue to long for partners of reproductive age. Worst of all, they just refuse to get out of the way, not just of their children, but their grandchildren and great-grandchildren.22

Those who have not been genetically re-engineered still possess whatever it is that has always made humans human, while posthumans do not; more than that, they are a moral, financial, and political risk to humans. His solution is that society must erect political blocks and prohibitions against posthumans.

Fukuyama’s text repeats all of the technophobic views of technology. Technology, left unchecked, creates a moral distance between people by suppressing individuality, creativity, and uniqueness. As people become less human and more technology, they will in turn become less humane; the inherent dignity possessed by all human beings will be harder to respect as people become more rationalized than reasonable. Fukuyama imagines that the allure of the posthuman is the promise of a longer life, increased memory and decreased chance of genetic disease. Though these things threaten our personal relationships and civil society, the fact that they make life so much easier will cause people to embrace these technologies or feel they have to in order to keep up (repeating Naisbitt’s analysis of society’s ambivalent relationship with technology). Ethics is unable to provide an adequate map with which to negotiate this situation because Fukuyama does not use ethics to determine the rights and wrongs of technology use as much as he uses ethics to determine what is right or wrong for his vision of human nature. People, though they have this human nature in common but choose to be posthuman, become unethical to the extent that their capacities undermine civil society, by modeling new ways of living that others find attractive and wish to experience. Are these people no longer human? If Fukuyama’s response to posthumanism consists of laws meant to prevent the development of drugs and technologies that make people posthuman, what is his response to posthuman people? Fukuyama characterizes those who use technology to push at the boundaries of the human as possessing the same sort of ethical blind-spots, misguided ambitions, and hubris that plagued Mary Shelley’s Victor Frankenstein. Shelley’s story is about bad science as much as it is about human unwillingness to treat people who are different as equal members of the human and moral community. Best and Kellner say of the tragic creation:

Frankenstein’s creature also shows how an inhumane society refuses to recognize difference and otherness and brutally mistreats those who appear disparate and less than fully human … and anticipatory symbol of postmodern otherness, the Frankenstein figure
thus reproaches a modernity that normalizes and homogenizes, while marginalizing or destroying those who do not fit into its established order.\textsuperscript{23}

If Frankenstein’s creature was posthuman, will posthumans suffer the same fate as Frankenstein’s creature? Already unethical, are they no longer human? As a different class of humans, would they just enjoy different, maybe ‘separate but equal’ civil recognition and rights? How is that ethical or just?

Opposed to the technophobic view of technology—in some instances no less humanist in its positing of a shared human nature and no less totalizing in its evaluation of technology—is the technophilic view. The technophilic view of technology appreciates technology’s ability to increase human capacity and functioning at the same time that it sees the incorporation of technology into daily life as a natural expression of what it means to be human. Ian Barbour points out that while the technophilic enthusiasm for technology overlooks the increased reliance on experts and environmental risks posed by technology, technology’s ability to liberate people from the confines of tradition, increase freedom, creative expression, leisure, and offer greater opportunity for choice does more to enhance and aid human existence than take away from it.\textsuperscript{24} As Bruce Mazlish points out, accepting that human nature is continuous with machines and tools puts us “in a better position to decide more consciously how we wish to deal with our machines and our mechanical civilization.”\textsuperscript{25} Technophilic endorsements of technology can be lukewarm; Bruce Grenville sees technology either compensating for human frailties or increasing human functioning. He writes, “we are constantly aided by machines, whether they are computers, vehicles, and military weapons that extend and amplify our presence in the natural world, or by medical prosthetics, such as pacemakers, artificial limbs, and eyeglasses, that maintain and reinforce our existing physical body.”\textsuperscript{26} Technophilic endorsements of technology can go as far as Paul and Cox, who in their book \textit{Beyond Humanity} argue that since technology has made our lives longer, easier, and safer, the future will consist of more intimate and complete mergers between humans and machines. Like Moravec in \textit{Mind Machine} and Kurzweil in \textit{The Age of Spiritual Machines}, they foresee a day when human consciousness will be downloaded onto a machine and live forever.\textsuperscript{27} In the technophilic view, technology enhances humanity. Breakthroughs in medicine, science, communication, and the increased material wealth are all unqualified goods.

The reason technophilics can take a stance opposite to technophobics is because technophilics have a different understanding of human nature, one that is not threatened by technology and understands what it means to be human as coterminous with tools, machines, and technologies. Chris Hables Gray affirms the technophilic view that “technology is not alien to or destructive of our individual and common humanity, it is the very definition of it. We are, simply, animals that use tools. Thus technology is a definition of our humanity, not something foreign to it.”\textsuperscript{28} Unlike technophobics, technophilics are less concerned about the distinctions between artificial and natural, organic and machinic. Like the technophobic view, the technophilic view can posit an unchanging human nature with which technology interacts. When this happens, technology is viewed differently, though no more critically. Ethical analyses of technology do little to remedy this situation; they serve as a means to furthering an understanding of human nature viewed as its own end. Because the technophilic view of human nature suggests a symbiotic relationship with technology, can ethics say anything negative about technology? Further, is anything really ever said about technology, or is technology just a different way of expressing what it means to be human?
Andy Clark’s *Natural Born Cyborg* is similar to Fukuyama’s *Our Posthuman Future* in that it demonstrates how understanding human nature as historical and unchanging leads to ethical positions about technology that are more interested in preserving that understanding of human nature than in critiquing technology, or in using that technology to engage in a critique of the human nature and worldview that technology endorses or attacks (both practically and symbolically). But where Fukuyama’s view of technology is technophobic, Clark’s view is closer to the technophilic, arguing as he does for an understanding of human nature that sees the intersection and penetration of the body with technology as a natural expression of human nature that only enhances human capacity and functioning. Merging with our technologies, Clark argues, is who we are; he writes, “What best explains the distinctive features of human intelligence [is the] ability to enter into deep and complex relationships with nonbiological constructs, props, and aids.” Clark sees humans as “beings primed by Mother Nature to annex wave upon wave of external elements and structures as part and parcel of their own extended minds.” For Clark, what defines us as human is the natural proclivity and ability to create, co-opt, annex and exploit nonbiological props. So where Fukuyama saw technological/biological hybridization as a threat to human nature, Clark sees it as a necessary expression and logical conclusion of it. It follows, then, that where Fukuyama saw technology as a threat to ethics and human community, Clark expresses the technophilic view that technology can bring people closer together and create a greater degree of solidarity than would be possible if we kept technology at arm’s length.

For Clark, the practical purpose of technology is to extend and enhance human capacity and functioning in the world. Necessarily, this will mean increased contact and interaction with other people—some with more or less access to technology, and some who incorporated more or less technology into/onto their body or daily lives. Unlike those who see the increased artificiality and constructedness of human communication diminishing the possibility for authentic and meaningful contact between people and who would as a result “seal the exits, batten down the hatches, and foil the invading digital enemy,” Clark responds that his understanding of human nature primed for hybridization “is an attempt to preempt precisely this species of response.” He believes that there is “no point batting down the hatches; the fluids are already mingling and have been at least since the dawn of text and probably since the dawn of spoken human language. This mingling is the truest expression of our distinctive character as a species.” Becoming more at one with technology will allow individuals to experience more of themselves, that is, more aspects of themselves though they themselves will not be different from what they were:

An individual may identify himself as a member of a wide variety of social groups, and may … explore in each of those contexts a variety of forms of embodiment, contact, and sexuality … The task is to merge gracefully, to merge in ways that are virtuous, that brings us closer to one another, make us more tolerant, enhance understanding, celebrate embodiment, and encourage mutual respect.

Accomplishing this, Clark believes, it becomes necessary that we “understand ourselves and our complex relations with the technologies that surround us. We must recognize that, in a very deep sense, we were always hybrid beings, joint products of our biological nature and multilayered linguistic, cultural, and technological webs.” To be able to recognize those who have not
technologized their biology, and to be able to relate to them in an ethical way, Clark suggests that the fear that increased technologization of society leading to alienated, anonymous and nihilistic existences could be answered by biologizing technology. Making technology more biological, meaning more incorporated into the body, so that contact between people remains contact between humans, would ensure that technology is contributing to human good. Once again it is the case that the ethical evaluation of technology is in light of an understanding of human nature that, the author argues, should not, could not, and does not have to change. What would mar Clark’s vision of our hybridized future would be if those who had incorporated more technology into their lives and/or onto their bodies came to see themselves as (ironically) more natural than those who resisted technology, or did not have access to either the technology or the wealth to purchase it. Humanity, already defined by qualitative distinctions, would be segmented by quantitative distinctions. In this society, these Luddites would be more than anachronistic; technological progress would be an unquestioned moral good that helps people realize their human nature. How could those that resisted, protested, or were for some reason unable to participate in this march toward hybridity be considered fully human and an equal member of the human community?

Clark believes that technology expands the range of human capacity and functioning, both practically and symbolically, by subsuming technology, technological artifacts and use to an expression of human nature. Clark distinguishes between two types of technologies: the transparent, which through design and frequent use fade from consciousness into the background to become a natural part of the body, and the opaque, which in design and use constantly call attention to their separateness from the body. Anyone who has learned to drive a manual transmission can understand how the transition from opaque to transparent technologies works. Clark is convinced that transparent technologies will be the ones that will perpetuate themselves, and be perpetuated into the future, so there will be pressure on scientists and technicians to design technologies that can become transparent. As technologies come “under cultural-evolutionary pressure to increase [their] fitness by better conforming to the physical and cognitive strengths and weaknesses of biological bodies and brains,” it is more likely that they will be designed to conform to the understanding of human nature articulated by Clark. In his call for technologies to become more transparent so that human/technology hybridization can be more seamless, the symbolic aspect of technology here effaces the technology—specifically its artificiality and constructedness—so that a particular understanding of human nature can be rearticulated. In every instance of technology use what is being reinscribed is not technology or the creativity, reasoning, and skill that went into creating that technological artifact, but a vision of the human that reduces technology to a further expression of human nature. If that is the case, no technology can ever be unethical because it will fit seamlessly with a human nature that emphasizes incorporation and hybridity. None of this addresses the question of whether the particular uses towards which these technologies is put are ethical. A watch is just as much an example of a transparent technology as a handgun, but a handgun brings with it a fair amount of ethical ambiguity in terms of its use even as it does nothing to challenge the vision of human nature articulated by Clark. Clark’s effort at establishing a way of critiquing technology fails to engage technology as much as it fails to provide a robust ethical analysis of technology.

What both Fukuyama and Clark fail to realize—or realize all too well—is that technology changes how individuals understand themselves and one another. For both Fukuyama and Clark, preservation of human nature depends on establishing, encouraging, and limiting relationships with
technology that do not challenge both their respective articulations of what it means to be human and the possibility of an ahistorical, unchanged and universally shared human nature. To that end, Fukuyama and Clark argue that remaining human can only be accomplished if people avoid (or resist) becoming posthuman. Clark even goes so far as to say that posthumanism, under further review, is actually a more complex expression of our hybridizing human nature. Clark writes, “There has been much written about our imminent ‘post-human’ future, but if I am right, this is a dangerous and mistaken image. The very things that sometimes seem most post-human, the deepest and most profound of our potential biotechnological mergers will reflect nothing so much as their thoroughly human source.”

The threat they see from posthumanism is the solipsism and nihilism that would result from people failing to believe they possess a common trait or nature that links them to every other person. Fukuyama and Clark are examples of what Gray sees as true of humanist technol o technophobics and technophilics: “the technological and scientific changes that have produced postmodernism physically and qualitatively threaten our very humanity.” Both Fukuyama and Clark are what Michael Heim would call “naïve realists” who “ground the essence of humanity outside the realm of technologies” because they are afraid of “losing autonomy over bodies.” This fear is responded to via the “positing essentialist concepts of the natural as a pre-given boundary not to be transgressed by science and technology.” As a result, Fukuyama and Clark are unable to offer an understanding of technology that deals with human nature, ethics, and technology in a comprehensive way.

A comprehensive and critical theory of technology can avoid technophobic and technophilic generalizations by approaching technology as neither enhancing nor diminishing what it means to be human. This third, more nuanced view considers technology to be neither naturally ethical nor unethical. Best and Kellner suggest that “a critical theory of technology should begin with a healthy skepticism regarding technophilic celebrations of new technologies … [and] will also resist technological dystopia and claims that computers and other new technologies are our damnations, that they are vehicles of alienation, mere tools of capital, the state, and domination.” The moral worth and nature of any given technology is determined by the use towards which it is put. Put more succinctly, technology does not kill people, but people can kill more people with technology; at the same time, technology allows individuals to reach out and help more people. Best and Kellner continue:

A critical theory of technology will at once maintain critical and skeptical positions; reject essentialist, determinant, and fixed definitions of ‘human nature’; and embrace life—enhancing scientific and technological innovations carried through with ethical responsibility.

A critical theory of technology will serve as a map with which people can navigate the multiple meanings and possibilities an increasingly technological society presents. Best and Kellner believe the provisional map that a critical theory of technology could provide is necessary because the world is not completely and immediately transparent to consciousness. The goal of a critical theory would be the creation of a more humane society; to that end, theory would provide “weapons for social critique and change, to illuminate the sources of human unhappiness, and to contribute to the goals of human emancipation and a democratic, socially just, and truly ecological society.”
A critical theory of technology begins by embracing the symbiotic relationship between people and technology. As much as people create and determine technology, technology creates and determines people. Therefore, this critical theory of technology is thoroughly posthuman. However, it is not the posthumanism of Paul and Cox who imagine that a new, more enlightened ethics will naturally grow out of the increased mental and physical capacities that will be possible when biology is fully technologized. It is a posthumanism in keeping with the suggestions made by N. Katherine Hayles, Chris Hables Gray, and Best and Kellner: that in light of social constructions of what it means to be human, posthumanism is an opportunity to rethink the human and “to dispatch the illusions of modern thought (including essentialist notions of the subject) and the normalizing practices that these allowed.” This is a posthumanism that repudiates “Enlightenment optimism, faith in reason, and [the] emphasis on transcultural values and human nature,” in favor of “the countervales of multiplicity and difference.” It would be a posthumanism that reflects on how what it means to be human has been constructed and decides what is worth keeping:

In one important sense, the ‘posthuman’ means not the literal end of humanity, nor the dramatic mutations in the human body brought on by various technologies. Rather it signifies the end of certain misguided ways of conceiving human identity and the nature of human relations to the social and natural environments, other species, and technology.

Posthumanism becomes a reconstructive project that combines community, rights, and solidarity with difference, contingency and non-foundationanism.

The ethical dimension of this critical theory is tied to the symbiotic relationship between technology and subjectivity. Lisa Blackman writes in “Culture, Technology and Subjectivity” that “human subjectivity is entirely constituted through signs and discursive relations; technology is articulated and organized through particular discursive relations. It is the relation between these two which are key to exploring the possible transformative reproductive potentials of new technologies.” For Blackman, that technology and human subjectivity are “traversed by, and [have] inscribed within [them], culturally embedded values, beliefs and way of making sense” means “seeing neither the human subject as pre-given, nor the technology and its effects as predetermined.” The symbolic meaning of technology emerges as a new and unique claim of what it means to be human by the person who has picked up that technological artifact and combined its practical use with a larger claim that its use is good for them as a human, and by extension, good for the community. The combination of the individual, the practical use of technology and its symbolic meanings are not for others to determine, but for others to respect. As long as technology aids, assists, and disrupts subjectivity formation, the question is not whether the assistance or disruption is ethical, but whether the practical uses towards which technology is put is ethical and whether the vision of what it means to be human is in keeping with the goals of a reconstructive posthumanism (solidarity in responsibility for the uniqueness of the other).

This critical theory of technology may not sound too different from humanist reactions to technology; the ethos of a reconstructive posthumanism has seemingly replaced humanist understandings of human nature as the unchangeable and unquestioned constant in the equation that relates humans, technology and ethics. If that were the case, the principles of plurality, difference
and tolerance would so dominate ethical decision-making that the critical edge would be lost. For a reconstructive posthumanism to be a critical theory of technology, what has to be added to the emphasis on humanist individuality, uniqueness and respect for the other is a conception of ethics that not only makes respect for the other and respect for otherness its main characteristic, but also creates the conditions for the creation of a moral community animated by a continuing debate about—and revision of—understandings of what it means to be human in response to the symbiotic relationship between technology and subjectivity constitution as a form of resistance against normalizing humanist discourses about human nature.

Levinasian ethics, brought to bear on the way the practical uses and symbolic meanings of technology make new claims about what it means to be human, establishes a critical theory of technology that allows for rigorous and nuanced criticisms of the ethical dimensions of technology and the world technology shapes and is shaped by. Three aspects of Levinas’s thought stand out in this regard: what Levinas says defines the ethical response to the encounter with the other; Levinas’s distinction between ‘saying’ and ‘said’; and the concern for the third party that Levinas suggests is the foundation for a just society.

The ethical response to the face-to-face encounter with the other is tied to Levinas’s response to humanism and anti-humanism. In “Humanism and Anti-Humanism: Levinas, Cassirer and Heidegger,” Levinas scholar Richard Cohen details Levinas’s understanding of his ethics as a humanism; both Levinas and humanism emerge from a worldview “founded on the belief in the irreducible ‘dignity of man,’ a belief in the efficacy and worth of human freedom, and hence also of responsibility.” Cohen goes on to say that, “for Levinas, the dignity of man arrives in and as an unsurpassable moral responsibility to and for the other person. And moral responsibility for the one who faces leads to the demand for justice for all those who do not face, for all others, all humanity.” Levinas says that ethics begins at the moment of encounter with the other’s individual uniqueness. The ethical response to the other is for the subject to become responsible for preserving the differences between the subject and the other. The differences between the subject and the other cannot be reconciled, nor are they reconciled by a higher truth. The other always exceeds and transcends the idea of the other; these are differences that no general theory of the human can resolve. Levinas maintains that “between me and the neighbor there gapes a difference which no unity of transcendental apperception could recover. My responsibility for the other is precisely the non-indifference of this difference.” The moral responsibility to preserve the otherness of the other supersedes the worldview or understanding of the human in which the encounter with the other occurs. The moral responsibility to preserve the other is still more important than even the understanding of the other suggested by this worldview or understanding of the human. Only via substitution, where the concerns of the other are substituted for all other concerns, can violence against the other be avoided. Levinas defines violence as the transformation of faces “into objective and plastic forms, into figures which are visible but de-faced; the appearing of men: of individuals, who are certainly unique, but restituted to their genera.”

Levinas’s opposition to humanism is the reduction of the other to “their genera” even one as generic as “human.” In Ethics, Politics, Subjectivity Simon Critchley is more explicit than Cohen in relating Levinas to post-structuralism. Agreeing that the problem with humanism is its normativizing universalisms, Critchley proposes that “humanism should not begin from the datum of the human being as an end-in-itself and the foundation for all knowledge, certainty, and value;
rather, the humanity of the human is defined by its service to the other. Levinasian ethics is a humanism, but it is a humanism of the other human being.” 61 But Critchley does not see Levinas as ignoring the post-human and anti-humanist stance that emerges from post-structuralism; instead, that the subject is “undoubtedly and massively determined by the contexts—sociohistorical, psychobiographical, linguistic, biological—into which her or she is inserted” 62 does not obviate ethical responsibility for the other. What these contexts reveal is that the subject is subject to efforts to determine the meaning of the human. The encounter with the other emerges out of these contexts; the singularity of the other calls their aspirations toward universality into question. For Levinas, the most humane humanism is defined by responsibility for the other person as they are encountered face-to-face, not responsibility for a general notion of humanity.

Recognizing that both technology and humans determine and are determined by culture and the discourses that attempt to define what it means to be human, the practical and symbolic uses of technology become ways of resisting these discourses. Technology becomes a tool for—in some instances chipping away at, in other instances obliterating—more specific and specialized discourses about human functioning and meaning and the generic understanding of humanity to which they point to. In Levinasian terms these discourses are the *said*, while the effort to relativize them or call into question their universality is a *saying*. Levinas writes that “behind every statement of being as its being, the saying overflows the very being it thematizes in stating it to the other.” 63 Where the saying is the exposure to alterity—exposure to the other—the *said* “is a statement, assertion or proposition of which the truth or falsity can be ascertained.”64 Saying breaks through and relativizes the *said* by putting the *said* in question, performing a constant deconstruction of its themes. 65 Eventually, every saying congeals into a *said*, alterity is absorbed into thematization, and that is why “saying must be accompanied immediately by an unsaying, and the unsaying must again be unsaid in its manner, and there, there is no stopping; there are no definitive formulations.” 66

Technology, as saying, becomes an occasion to reflect on what constitutes the human, understood as said. Fukuyama’s and Clark’s definitions of human nature are a said that they are protecting against unsayings and re-sayings made possible by technology. Posthumans have become other by saying, re-saying and unsaying what it means to be human vis-à-vis their use of technology to alter and extend human reach, capacity and functioning in the world. Rather than being a threat to human nature, as Fukuyama understands technology, or as nothing other than an expression of human nature, as Clark suggests, in the hands of the individual, technology becomes a tool for announcing, achieving, or pleading for individuality in a world marked by sameness. Critchley summarizes the relationship between saying and *said* as explorations of “the ways in which the *said* can be unsaid, or reduced, thereby letting the saying circulate as a residue or interruption within the *said*.” 67 The ethical moment of reconstructive posthuman, and what makes it a critical theory of technology, is its understanding of the symbolic meanings of technology as a saying that interrupts the *said* of human nature and the good for humans, thereby linking technology and subjectivity to ethics. Re-saying, unsaying, saying again what it means to be human might be the most important ethical moment of all. It is the moment that determines the ethical response to the other, the moment of decision about inclusion or exclusion in the human community, the moment it is decided whether the future is more just and open, or if we go forward perpetuating the same intolerances, the same violence against those who are other. Technology’s most important—and ethical—aspect is the way it forces reconsiderations of reified understandings of what it means to be human. This is an
encounter with those who suffer, an encounter with the other in his/her/its misery, calling out for a compassion whose form is responsibility. Not exposing understandings of what it means to be human is the worst imperialism; to re-say, unsay and say the human again, to respect the dignity of the other, is the definition of a reconstructive posthumanism which is a more humane humanism. Richard Cohen clearly elucidates the relationship between ethics, responsibility, and a more humane humanity:

The transcendence of meaning—and the dignity of man—derives from the absolute moral priority of the other person, that is to say from the humanism of the other. Before it is a function of being or enmeshed in culture, the significance of signification lies in ‘saying,’ in the excellence of moral responsibility and obligation. To be for the other otherwise-than-being and before culture, to serve the other morally, and to serve all others in justice, here lies the ultimate exigency of meaning and the dignity of human kind.

By focusing on the individual as a specific and unique individual, and not as an example of a generic type, reconstructive posthumanism as a critical theory of technology is able to respond to technology in a specific, nuanced and critical way. At the same time, the focus on the individual serves as a response to the essentialisms and universal aspirations of humanism. The individual, as other, is not an exception to the rule, but a challenge to its overall applicability. The individual’s announcement of itself as other and the encounter with it as other is, in one instance, aided by technology because of technology’s ability to bring people together despite great distances, and in another instance occurs because the meaning of technology and what it means to be human cannot be separated from one another. This goes beyond seeing technology as a tool, and therefore beyond seeing technology ethics as a quantitative leap beyond ethics-as-usual. Understanding what it means to be human and the meaning of technology as intertwined is a qualitative difference if for no other reason then that qualities that define each are shaped and defined in concert with one another. Technology does more than add; technology changes. Best and Kellner write, “when the self-ascribed ‘essence’ of the human is stripped away, and human beings begin to merge intimately with their machines, fusing flesh with silicon chips and steel, human identity itself comes into question.” The ethical response to these questions takes the form of responsibility for the otherness of the other, even to the point of being persecuted by the other.

If this were the final element of a critical theory of technology it would hardly serve to map the ever changing landscape of technology and humanity. Lacking a critical edge, it would resemble an infinite number of unconnected dots, each dot representing an individual making his/her/its own claim of what it means to be human. Fearing violence against the other, there would be no way to judge one saying against another, and worse than that, no way to prohibit understandings of what it means to be human and uses of technology that are harmful to others.

The critical edge of reconstructive posthumanism, and what makes it a critical theory of technology, is its emphasis on justice as the arbiter of the relationship between the individual, the other, and those that are other to the other, what Levinas terms the ‘third party.’ The third party puts limits on the measureless obligation for preserving the otherness of the other, which would otherwise be limitless. The limit placed on the other is that he/she/it cannot harm the third party; this is the birth of justice, theory, mediation and decision-making. Levinas writes:
If there was only the other facing me, I would say to the very end: I owe him everything. I am for him. And this even holds for the harm he does me: I am not his equal, I am forevermore subject to him. My resistance begins when the harm he does me is done to a third party who is also my neighbor. It is the third party who is the source of justice, and thereby of justified repression; it is the violence suffered by the third party that justifies stopping the violence of the other with violence.73

Technology used to do harm against the third party, and understandings of what it means to be human that are a violence against the third party require intervention. Responsibility for maintaining the otherness of the other is the specific criteria with which the practical uses and symbolic meanings of technology can be judged ethical or unethical. The concern for justice, which is a concern for the third party, is the beginning of community, social relations, laws and institutions formed in the settling of the saying into a said. Levinas says, “There is a certain measure of violence necessary starting from justice, but if one speaks of justice, it is necessary to admit judges: it is necessary to admit institutions and the state, to live in a world of citizens and not only in the order of the face-to-face.”74 The ethical community is a community of people that adopts and amends laws that ensure the voices of the marginalized others will be heard, not to protect an exclusionary vision of human nature. Always concerned about the violence done to the other via laws, the ethical community listens for the voices of the marginalized that reverberate beneath those laws.75 Justice then becomes a search for better justice, or put another way, justice must continually be un-said and re-said if it is going to remain just.76 Levinas believes that “justice that deserves its name, does not forget that the law is perfectible. It leaves open the possibility of a revision of a judgment once pronounced.”77 The form that justice takes in a reconstructive posthumanism is a revision of what it means to be human once a new, provisional, understanding is said.

We can no longer understand humanity or how we become human without appreciating the role played by technology. Best and Kellner write that whereas “traditionally, the riddle of human identity has been resolved through religion and philosophy,” today technology challenges and forces us to reconsider how the human body, the human community, and what it means to be human is understood.78 However, we can no longer afford to be confused or ambivalent about the role of technology in subjectivity formation and culture. Our failure to develop a comprehensive and critical theory of technology has led to confusions about subjectivity, ethics, community, and purpose. Because of its concern that the other is preserved in a society where subjectivity formation is aided by and results from the practical uses and symbolic meanings of technology, reconstructive posthumanism is an ethical, critical theory of technology that maps our increasingly technology/human hybrid society. But it can only be a provisional map as each of the terms—human, ethics, technology—faces constant scrutiny as to their meaning. Technology is scrutinized for the ways it is used and what it suggests the good for humans is. This leads to a resaying of what it means to be human so that no individual is denied access to moral and legal protections that come from being part of the human community. The result is a community that remains committed to responding to, and becoming responsible for, the voices of the marginalized and oppressed. Neither technology, ethics, nor what it means to be human is held hostage by a need to perpetuate any one understanding of any one of these things into the future. The saying, re-saying and unsaying of one forces the others to be said again. Though the encounter with the other disrupts all notions of what constitutes humanity and what counts as human, Levinas wants to maintain “the
revolutionary character of the apparition of the human” where “in the discovery of the human there is awakening of thought and contemplation” about the humane way to respond to other humans, and beyond that, respond to all other animals and the environment—all those who are weak and defenseless before human uses of technology, human notions of the good, and the hierarchy of rights and protections as decided by humans. Reconstructive posthumanism, spurred on by technology’s calling into question the definition of what it means to be human, rediscovers the humanity of the human, concerned as it is for the humane treatment of that which is other than human.

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Notes>

1. This definition of technology is taken from Frederick Ferre’s *Philosophy of Technology* (Athens: University of Georgia Press, 1995), 26. Ferre writes that technology is not “(i) emptyhanded, (ii) self-justifying, (iii) disembodied, or (iv) unintelligent. Put positively, it suggests that our definition will need to stipulate that technology involves (i) implements used as (ii) means to practical ends that are somehow (iii) manifested in the material world as (iv) expressions of intelligence.”

2. Ferre, 11-12.


5. Best and Kellner write in *The Postmodern Adventure: Science, Technology and Cultural Studies at the Third Millenium* (New York: Guilford Press, 2001), “Human identity is politics writ large … The politics of human identity involve who counts as ‘human’; what privileges subsequently accrue to them; and ether or not the ‘human,’ however broadly or progressively defined, is an adequate marker for the boundaries of the human community” (268).


7. Cf. Leela Gandhi, *Post-Colonial Theory: A Critical Introduction* (New York: Columbia University Press, 1998), 48; Best and Kellner write in *Postmodern Adventure*, “Clearly human beings are a distinct group that differentiates itself from others in order to secure its own identity, in this case, from other species rather than members of its own species, as in all other forms of identity politics” (268; emphasis in original).

8. The terms ‘technophobic’ and ‘technophilic’ are used by Best and Kellner in *Postmodern Adventure*, 155-156.


13. Fukuyama writes, “Human nature, has a special role in defining for us what is right and wrong, just and unjust, important and unimportant.” *In Our Posthuman Future* (New York: Picador, 2002), 7.


15. Fukuyama, 7.


17. Fukuyama, 101-02.

18. Fukuyama, 7.

19. Fukuyama, 106.


22. Fukuyama, 9.


Intelligence (Oxford: Oxford University Press, 2003), 5.


31. Cf. Clark, 6, 10.

32. Clark, 139.

33. Clark, 139.

34. Clark, 194.

35. Clark, 194-95.

36. Clark writes, “But the most seamless of all integrations, and the ones with the greatest potential to transform our lives and projects, are often precisely those that operate beneath the level of conscious awareness … A transparent technology is a technology that is so well fitted to, and integrated with, our own lives, biological capacities, and projects as to become … almost invisible in use. An opaque technology, by contrast, is one that keeps tripping the user up, requires skills and capacities that do not come naturally to the biological organism, and thus remains the focus of attention even during routine problem-solving activities” (34, 37).

37. Clark, 6.


41. Best and Kellner, Postmodern Adventure, 273.

42. Best and Kellner, Postmodern Adventure, 157-58.

43. One could argue that posthumanism, eschewing belief in a human nature that is either threatened or enhanced by technology, already takes this approach in determining the ethicality of technology. However, believing that the ethicality of technology is determined by the use toward which it is put does not provide any sort of ethical criteria with which to determine the good (or evil) of a particular technology’s particular use. What results is less a map with which one can negotiate the intricacies and nuances of technology, subjectivity formation and society, then a series of unconnected instances of technological use and meanings that resist organization and coherency.

44. Best and Kellner, Postmodern Adventure, 163-64.


46. Best and Kellner, Postmodern Adventure, 15.


50. Gray agrees with Hayles that posthumanism “might recoup the best parts of humanism by showing that posthumanism is both a social construction of what it means to be human in the present as well as the technological construction of a new type of techno-bio-body in the near future through cyborgization.” In *Cyborg Citizen*, 15.


55. Lisa Blackman, “Culture, Technology and Subjectivity: An Ethical Analysis” in *The Virtual Embodied: Presence/Practice/Technology*, ed. John Wood (New York: Routledge, 1998), 142. Michele Kendrick has a similar understanding of the role of technology in the construction of subjectivity. Kendrick writes in “Cyberspace and the Technological Real” that “the subject is now and has been historically constructed—embodied by and against the technologies of his/her time. In this sense, technology actively intervenes in the construction and social formations of subjectivity; so, specific technological interactions, ‘assistance,’ and disruptions cause subsequent reformulations of one’s sense of self.” In *Virtual Realities and Their Discontents*, ed. Robert Markley (Baltimore: Johns Hopkins University Press, 1995), 140.

56. Blackman, 137.


58. Cohen, 15.


68. Levinas writes: “But if you *encounter* the face, responsibility arises in the strangeness of the other and in his misery. The face offers itself to your compassion and to your obligation.” In *Righteous*, 48.


70. In “Ethics and Cybernetics: Levinasian Reflections,” Richard Cohen takes the position that information technologies are morally neutral. In part, Cohen is responding to Sherry Turkle’s argument in *Life On the Screen: Identity in the Age of the Internet* (New York: Touchstone, 1997) that technology makes new self-hoods possible, a position Cohen rejects. Cohen writes, “By itself, however, like an abacus, a typewriter, or a telephone, but also like the printing press, the computer remains an instrument, a tool, an artificial aid to intelligence but not a human intelligence at all. Unlike the human, it is neither good nor evil, though it can serve both.” Though Cohen is talking about information technologies, I think it is fair to say that this is the view he holds of technology in general. As a result, he does not see Levinasian ethics playing the same role in determining the ethicality of technology that I do. However, our differences have less to do with Levinas than with the different ways we understand technology. In *Ethics and Information Technology*, vol 2. (Netherlands: Kluwer Academic Publishers, 2000), 27-35.


72. Levinas says in *Is it Righteous to Be?* “thus justice, here, takes precedence over the taking upon oneself of the fate of the other. I must judge, where before I was to assume responsibilities. Here is the birth of the theoretical. But it is always starting from the face, from the responsibility for the other, that justice appears, calling in turn for judgment and comparison, a comparison of what is in principle incomparable for every being is unique. Every other is unique” (166; also see 134).

73. Levinas, “Questions and Answers,” in *Of God*, 83.

74. Levinas, *Righteous*, 166.


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