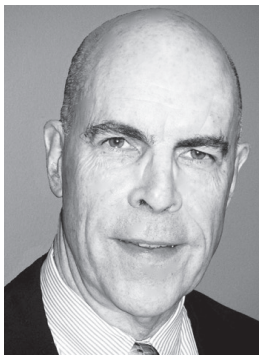


The Singularity: Technology and the Future of Humanism

By Roger A. Hughes
2015 Paxton Award Winner



Roger A. Hughes

Roger Hughes retired in 2012 after a career of thirty-five years in the fields of philanthropy and community development.

Prior to returning to his home state of Iowa, Roger was the CEO of St. Luke's Health Initiatives in Phoenix, Arizona, a public foundation with a focus on health policy and community development. While there, he authored over 80 reports on healthcare topics, taught graduate courses in Arizona State University's School of Public Policy, and received top leadership awards from various Arizona healthcare and social advocacy organizations.

Prior to coming to Phoenix, Roger was the first Executive Administrator of the Roy J. Carver Charitable Trust in Muscatine, Iowa, as well as President of the Iowa College Foundation in Des Moines. A U.S. Army veteran, Roger holds degrees in English from the University of Iowa and a PhD in Philosophy of Education from Indiana University.

Roger and his wife of 44 years, Barbara, have two children.

"We have created a Star Wars civilization, with Stone Age emotions, medieval institutions, and godlike technology."

Edward O. Wilson,
The Social Conquest of Earth, 2012

"One cannot live outside the machine for more perhaps than half an hour."

Virginia Woolf, *The Waves*, 1931

The late writer and futurist Arthur C. Clarke once remarked that the best proof for intelligent life in the universe is that it hasn't come here. He was also fond of paraphrasing the polymath J. B. S. Haldane by reminding his audience that the universe is not only stranger than we imagine, but also stranger than we *can* imagine. Presumably the inventor and futurist Ray Kurzweil, who is currently director of engineering at Google, would accept the latter of Clarke's propositions, but not necessarily the former. Not only is he working to apply his theory of intelligence to Google's search engine to render its current algorithms obsolete, but he also believes the time is approaching when humans will create artificial intelligence with vastly greater intelligence than our own, with aims beyond mere mortal power to understand.

The point at which this will occur—Kurzweil predicts by 2045—has been popularized as the Singularity: "The moment when technological change becomes so rapid and profound, it represents a rupture in the fabric of human history" (Grossman). At this unprecedented turn in our evolution, we will pass the baton to post-organic

beings—"transhumans" (transitional humans)—who will be engineered through the confluence of artificial intelligence, nanotechnology, robotics, and genetic engineering to have greatly enhanced capacities and a dramatically extended life span. Transhumans will eventually give way to "posthumans," beings "in whom a trace of the human may remain, but we may not be able to recognize it" (Zimmerman 31).

The ravings of a deluded futurist? Hardly. Some of the planet's brightest and most respected inventors, scientists, entrepreneurs, artists and others are investing their time, talent and money to bring this vision to fruition. Not everyone shares Kurzweil's optimistic launch date of 2045, but this zealous band of "Singularitarians" shares a belief that not only is it possible, it is desirable, if guided prudently. Technology, they maintain, can shape and transform history. Humans are one step on the evolutionary ladder, not the end of it. Our technological progeny will colonize the universe. It is their—and our—destiny. Kurzweil describes it in almost messianic tones: "Once we saturate the matter and energy in the universe with intelligence, it will 'wake up', be conscious and sublimely intelligent. That's about as close to God as I can imagine" (*Singularity*, 375). Whether we ought to pursue the Singularity—to say nothing of whether it is even feasible—is a question of some dispute. To see why, we need to take a closer look at humanity's relation to technology itself and, more importantly, at what we take to be the meaning of "who we are" in the first place, a question Kurzweil himself believes will be the primary

political and philosophical issue of the twenty-first century (*Age of Spiritual Machines*, 229). Before we transfer ourselves without remainder into this brave new world, we should be clear on where it is we think we are going, what we are seeking, and what we may be leaving behind.

Humanity's Relation to Technology

Technology, let us say, is the purposeful and rational development and application of means to achieve a given end. Whether it is a tool, a machine, a method, tangible or intangible, simple or complex, technology is driven by the highest degree of efficiency and rationality possible at any given stage of development and by ever improving degrees of order and control. This definition, which extends beyond the common sense notion of technology as material tools, brings into focus the instrumental or use value of technology, and can even be said to encompass the immateriality of human language (which we are now racing to materialize as human language technology employed in machines) as the most glorious and useful of all technologies developed over the course of human history.

According to hard-core technological determinists, technology follows its own internal logic (efficiency, rationality, order, control) and, once set in motion, is the primary determinant of social, cultural and economic change. The pervasiveness of technology in our so-called postmodern age, its growing dominance in all aspects of our lives, feeds this sense that technology is the cause of which we are the effect, and even promotes an attendant abject helplessness and resignation, as in the “we-don't-control-the-machine, the-machine-controls-us” lament. Free will is out the window in this scenario, although some “soft” technological determinists believe that while technology may

be omnipresent, it is not entirely omnipotent. As we become increasingly aware that technology can create as many problems as it solves, humans still have a chance to change the game plan.

In that vein, perhaps a more accurate, though considerably more messy and complex, approach to viewing the relation of humans to technology is social constructivism: investigating how technology both shapes, and is shaped by, social, cultural and economic change. For example, the documented impact of fossil fuels on global climate change has precipitated research and development in an array of new energy technologies to reduce dependence on coal, oil and natural gas. What makes the development of these new technologies more complex, however, is the interplay between existing economic interests and infrastructure—the social and economic relationships that prop up entire nations and the vested interests of powerful people and organizations—and a growing awareness that unless we speed up development of new energy technologies, humanity, like the proverbial frog, will eventually be unable to climb out of the global pot of water set on slow boil.

If it were
technologically
possible, why
wouldn't we want to
transcend our
current species?

Technology is not developed in a vacuum. It arises out of relationships between social, cultural and economic forces on a finite planet, where opportunities for some—developing housing and commercial tracts, using industrial techniques to raise animals for human consumption, increasing the efficiency and profitability of all manner of enterprise—can create

problems for others, and not just humans: millions of extinct species, loss of resilient and diverse natural habitats, global warming and, of course, loss of jobs through the mechanization of work. The sheer scale and pervasiveness of technological and economic development, particularly since the Industrial Revolution in the late eighteenth century, and its attendant impact on the biosphere, the realm of life, have led some to proclaim that we are now living in the Anthropocene, “an informal geologic chronological term that marks the evidence and extent of human activities that have had a significant global impact on the Earth's ecosystems” (“Anthropocene”). Humanity, it seems, not only lives in nature, but is also increasingly a force of nature by virtue of the application of technologies to alter the environment.

Today, the so-called technosphere (that is, the developed world, those parts of the world substantially altered by human technology) is viewed by some as an ecosystem in its own right, and is evolving much more rapidly—exponentially, according to Singularitarians—than the biosphere, which is unable to react to the technosphere fast enough to maintain equilibrium. The technosphere now occupies most of the land area of the planet. With its relentless focus on efficiency, order and control, who is to say it will not expand to occupy the entire world?

Technological optimists frame the problem of how humans will continue to thrive in a depleted biosphere as an opportunity to develop and apply new technologies to speed up biological evolution by introducing genetically engineered organisms. In one scenario, biology will move from a biological to a technical substrate. So will humans. According to recent surveys, nearly half of the world's artificial intelligence (AI) experts expect human-level machine intelligence to be achieved by 2040, and 90 percent say it will arrive by

2075 (Cookson). This will lead to a far higher level of superintelligence that will be applied to enhancing, then transforming human evolution itself.

But in the Singularity's desired trajectory, what is the difference between machines becoming human, and humans becoming machines? And where in the transition from human to transhuman to posthuman do we put the contrast between the inhuman and the humane?

What Does It Mean To Be Human?

To explore that question, we will briefly consider the history of humanism, which is first and foremost concerned with human beings—their needs, desires, and experiences. Humanism is less a particular philosophical system or set of beliefs than it is an attitude or perspective, which in turn informs subsequent philosophies and systems of belief, all with human beings at the center.

Without getting sidelined by a discussion of the many varieties of humanism, we might posit some common threads or ideas. First, humanists hold that while human beings are an inherent part of nature and subject to its laws, they hold exceptional status by virtue of their rationality and sociability, and can overcome, even remake, the constraints placed on them by nature. Second, humanists believe in the unity of humankind, holding that all humans possess something in common, what is often described as “human nature” (Malik). Third, many humanists derive from this shared nature the idea that we all possess a human “essence” that transcends differences in skin color, beauty and intelligence and gives each of us inherent value. Finally, underlying all humanisms is a belief in human emancipation: the idea that humankind can transform society through the agency of its own efforts. This comes down to an accompanying belief in

human rationality and capacity for social progress, a belief that has driven much of the western political structure since the Enlightenment.

Humanism, of course, is hardly the last word on what it means to be human. To flesh out the picture, we would need to take a tour of the views of Burke, Nietzsche, Heidegger and other “antihumanists” who rejected Enlightenment rationalism and notions of social progress because they viewed the masses of humans as essentially irrational, atavistic, and a threat to civilized society. We would also need to consider the religious, those who place God, not Man, at the center of the universe, and who find the deepest sense of what it means to be human in serving God and living by His principles.

Nevertheless, by leaving God out of the picture for the moment and tracing western intellectual history from the Enlightenment on, we can get a sense of what humans took to be the “essence” of their humanity in developing western democracies over the past 400 years. An excellent summary is found in Terry Eagleton's *Culture and the Death of God*. We are meaning-seeking animals, Eagleton points out. And if we can no longer believe in God, we will find other things to believe in. The Enlightenment found it in reason, the Idealists in the human spirit, the Romantics in nature and culture, the Marxists in historical materialism and revolution, and Nietzsche in the *Urbemensch*. Others found it in the nation, state, art, the sublime, humanity, society, science, the life force and personal relationships. None of these was entirely satisfactory, and none proved self-sustaining.

The end result was postmodernism, or the systematic subversion of meaning altogether. Eagleton describes it as “depthless, anti-tragic, non-linear, anti-numinous, non-foundational and anti-universalist, suspicious of abso-

lutes and averse to interiority” (188). The central problem, as Eagleton frames it, is that the West no longer has a set of coherent beliefs that would justify its commitment to freedom and democracy. Our mixture of “pragmatism, culturalism, hedonism, relativism, and anti-foundationalism” is an inadequate defense against other humans who believe in “absolute truths, coherent identities and solid foundations,” and for whom freedom and democracy are not values to be pursued (198). If all we are left with in the West is “Man the Eternal Consumer” (190), we are left with little at all.

Repositioning the Singularity and Humanism

The “strong” Singularitarian position has a response to this grim assessment: a resurgence of the core Enlightenment pursuit of human rationality and scientific and social progress. This is a transcendent philosophy with Man as the maker and creator at the center. In some ways, it functions as a religion among certain segments of the Silicon Valley set, where all of humanity's persistent contradictions, pain and suffering are ameliorated, banished and then transformed into a glorious end of the trans- and post-human, a process some have caricatured as “rapture for nerds.” From this vantage point, disease, growing old, and dying are insults. They are not accepted as part of the natural biological order of things, but are instead problems to be solved by the application of biotechnology and other emerging techniques. And why not? The human race is a sorry mess, with our stubborn diseases, physical limitations, short lives, jealousies, violence and anxieties. If it were technologically possible, why wouldn't we want to transcend our current species? Why *shouldn't* we?

The “weak” Singularitarian position – a potential “hell” to the strong “heaven” position – supports the pursuit of transforming our lives

through these new and powerful technologies, but warns of the potential pitfalls: environmental disasters, the unequal distribution between the transhumans who can afford to enhance themselves and the billions of people who cannot, and the emergence of a race of sentient machines that may see no reason not to wipe inferior humans off the face of the earth. In light of the inherent dangers involved with the application of these new technologies, we ought to be undertaking studies of risk and reward before we embark on any ambitious technological projects.

One should not assume from this brief overview of the Singularity and its passionate proponents that it is a full-fledged technological and social movement, complete with a set of guiding principles and strategic plan. It is primarily the concern of a loose-knit, wealthy, and talented group of entrepreneurial white males. While their rhetoric is idealistic and soaring, it can cynically be argued that their more prosaic concerns revolve around making money. All the same, the Singularity's focus on an alleged watershed moment in human history when we become transhuman and, ultimately, posthuman brings into stark relief the questions posed at the beginning of this discussion: what are human beings becoming, and what are we leaving behind?

One response is that in the West at least, we are becoming instrumental objects and a shifting series of temporary selves in a vast, all encompassing and media-dominated social and economic network where identity and worth are determined by instrumental (exchange) value and not by any abiding intrinsic value. This is what Virginia Woolf referred to as "living in the machine." She thought you could live outside the machine for perhaps half an hour; over eighty years later, there are apparently millions of people who can't live outside the

machine for more than a minute or two. The logic of the Singularity and the emerging posthuman is entirely consistent with this. Technology, after all, is pure instrumental intelligence. Kurzweil, for example, defines intelligence as the "ability to use optimally limited resources to achieve goals" (*Age of Spiritual Machines*, 67). If the resources were not optimally limited, the process wouldn't be efficient and therefore not intelligent. Kurzweil calls these predicted creations "spiritual" machines, but they are machines all the same. This is the human becoming machine. It is not the machine becoming human.

What we are leaving behind in the core humanistic tradition is the notion of the human self, the conscious subject, who has intrinsic value and worth, and cannot be reduced to, or explained away as, an ensemble of instrumental means or a deconstruction of signs, symbols, social relations and structures on the cutting room floor. The postmodernists may deride the notion of the autonomous subject as "false consciousness," but it is a consciousness whose coming into being neither they nor (so far) anyone else, including the Singularitarians, can satisfactorily explain. Consciousness is ultimately a computational problem, say some of the strong AI theorists. We'll eventually figure it out and simulate it in machines. Nonsense, say others. It's a mystery. May it remain so.

As for the future of humanism, its current varieties of formulation (and even its antihumanist critique) seem inadequate to cope with, or serve as a counterweight to, the economic and technological forces sweeping our vulnerable planet. If we don't want to cede territory to those who believe there are two divisions in humanity—the redeemed and the infidels—and if we still value the principles of freedom, justice and democracy, perhaps it is time to reformulate humanism (Braidotti). We might start with taking

the longer view and begin to think of ourselves as species, and not necessarily a privileged species at that. Perhaps it is time to think of ourselves as part of the planet Earth, as enmeshed in the whole of the life force and not just a superior part of it. Finally, perhaps it is time to think of ourselves as becoming—yes—machines with extended capabilities, but which nevertheless remain sentient, aware of the condition of other species and life on Earth, and able to recognize and apply positive human values and morals to address inhuman and irresponsible behavior wherever it occurs. Put another way, humans as *humane* machines.

The traditional Enlightenment version of humanism has been a powerful organizing principle in the West for the past 200-300 years. Nevertheless, it may no longer be sufficient for human emancipation in the age of machines, whether the Singularity arrives or not. It is time for a more powerful and encompassing formulation of what it means to be human today. The search must be enjoined.

Works Cited

- "Anthropocene." Wikipedia. www.wikipedia.com.
- Braidotti, Rosi. *The Posthuman*. Cambridge: Polity Press, 2013.
- Cookson, Clive. Review of *Superintelligence: Paths, Dangers, Strategies*, by Nick Bostrom. *Financial Times*, July 13, 2014.
- Eagleton, Terry. *Culture and the Death of God*. New Haven: Yale UP, 2014.
- Grossman, Lev. "2045: The Year Man Becomes Immortal." *Time*, Feb. 21, 2011.
- Kurzweil, Ray. *The Age of Spiritual Machines: When Computers Exceed Human Intelligence*. NY: Viking, 1999.
- _____. *The Singularity is Near: When Humans Transcend Biology*. NY: Viking, 2005.
- Malik, Kenan. *The Meaning of Race: Race, History, and Culture in Western Society*. NY: Macmillan, 1996.
- Wilson, Edward O. *The Social Conquest of Earth*. NY: Norton, 2012.
- Woolf, Virginia. *The Waves*. 1931. NY: Harvest Books, 1978.

*The publication of this article is funded by
The Torch Foundation*