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Introduction to the Transhumanity Debate

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Chapter 1
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In 2006 the Edge Foundation invited over one hundred distinguished scholars to respond to this prompt suggested by Steven Pinker: "The history of science is replete with discoveries that were considered socially, morally, or emotionally dangerous in their time; the Copernican and Darwinian revolutions are the most obvious. What is your dangerous idea?" (Edge 2006) The responses at www.edge.org are fascinating but let us consider for the moment that there are dangerous ideas and expand the set to include any ideas, not just from science, that break out and threaten established ways of thought and social norms. In their time, monotheism, predestination, manifest destiny, Nietzsche's overman, racial purity, and social darwinism did just that. String together a few dangerous ideas and you have a dangerous ideology, for example, the last few concepts were key components of Nazism. The political philosophy behind democracy brings together the dangerous ideas of equality, liberty, and universal rights.

The ideologies mentioned above, especially discredited Nazism, no longer have the element of surprise, their novelty mitigated by exposure and time. So, what dangerous ideologies today have the power to shock? I believe that transhumanism fits the bill. The "singularity," "natural-born cyborgs," and "proactionary principle" (all described later) are provocative ideas and the clarion call to use technologies to alter the human species makes transhumanism most daring. Opponents go so far as to claim that this ideology poses a grave threat to humanity.

The first article of the Transhumanist Declaration at the Humanity+ website [the doing-business-as name for the World Transhumanist Association (WTA)] holds that "Humanity stands to be profoundly affected by science and technology in the future. We envision the possibility of broadening human potential by overcoming aging, cognitive shortcomings, involuntary suffering, and our confinement to planet Earth." (Humanity+ 2010) In a previous statement the WTA declared: "We support the development of access to new technologies that enable everyone to enjoy **better minds, better bodies** and **better lives**. In other words, we want people to be **better than well**" (World Transhumanist Association 2008, original emphasis).

The transhumanists offer a hopeful vision at a time when things could be better, should be better. We face interminable war, food and water shortages, global warming, economic instability, senseless violence, and many of us have little faith that current social institutions can handle these problems. Contrast the daily feed of bad news with upbeat headlines about promising breakthroughs from science and medicine, for example, "Newly Created Microbe Produces Cellulose and Sugars for Biofuels," "Gene Therapy Restores Some Vision In Nearly Blind Patients," and "Microchip That Can Detect Type and Severity of Cancer Created." I readily admit that after hearing about another bombing, mass shooting, casualties from the drug war, etc., etc., the technology stories give me a lift. Rather than showing humanity for being stupid, destructive, and juvenile, these stories provide examples of intelligence, creativity, and maturity. Transhumanists assert that this is what we do best as a species. Why shouldn't we embrace our strengths and use technologies to uplift the human race?

It is a seductive message, nevertheless critics counter that after the twentieth century with its gas chambers, chemical and nuclear warfare, and environmental pollution, no responsible person should accept without question the belief that we will find deliverance through science and technology. Corporations and the military, mainly interested in profit and weapons, sponsor much research and development. Technological disasters occur and fixes backfire. Why place humanity in greater jeopardy? I believe that we must be as willing to face such doubts as we would embrace hope, and a good place to start is the transhumanity debate.

Presenting the Transhumanity Debate

I will be using the label, "transhumanists," as a catchall for a variety of notable figures, many of whom accept this descriptor and all of whom advocate human enhancement. "Conservationists" is the term that I have chosen for their opponents because of their stand to conserve human nature and institutions. One of the more fascinating aspects of this social debate is the diversity within this opposition camp. Social conservatives, theologians, secular humanists, and environmentalists have found common cause in their preference for conservation. For instance Bill McKibben, a noted environmentalist, admires humans for their natural endowments and does not wish to see us compromised by artificial enhancements. Others want to conserve a time-honored way of life, a traditional understanding of *Imago Dei* (image of God in human), or the liberal state.

Around the turn of the millennium, influential scholars representing faith and secular traditions began to single out transhumanists for criticism. Ray Kurzweil, multi-millionaire inventor and entrepreneur and tireless promoter of human transcendence, received the most attention. He has written best sellers on the topic and in 2009 released the movie, *The Singularity Is Near*. He is the Chancellor of the Singularity Institute. Its mission is to prepare leaders to understand and manage advancing technologies for the greater good. Kurzweil intends to live long enough

to reach the point when aging and disease will be conquered and to this end he partnered with Terry Grossman, M.D., to develop an anti-aging regimen of a specialized diet, supplementals, and chemical i.v. treatments. They have marketed a line of longevity products and have written a health book, *Transcend: Nine Steps to Living Well Forever* (2009).

Daniel Lyons (2009) begins his *Newsweek* article on Ray Kurzweil, *I, Robot: One Man's Quest to Become a Computer*, by citing Kurzweil's willingness to become a cyborg and ends the article this way:

> He has no doubt. None. He is utterly, completely, 100 percent sure that he is going to live forever. He will be reunited with his beloved father, and they will become immortal and spend eternity together. Nothing can talk him out of it. And that, at the end of the day, may be the scariest, or saddest, thing of all (73).

What I did not find in Lyon's article was an appreciation for the controversy that with great energy, determination, and skill Kurzweil has helped create. This is the problem when too much attention is placed on personalities. As I see it, this was a missed opportunity. Science and technology controversies abound but often they entail disputes over specific methods, facts, or effects. Not so the transhumanity debate– it is expansive both with regard to the wide range of contested issues and the overt discussion of values and beliefs. Even though the central question to this debate is whether to accept or reject technological enhancement, the contestants address this question according to their respective metanarrative of what we are and what we should become and of what constitutes the greater good. They argue about human nature, ethics, and the proper role of government. The culture wars loom and rifts are evident between secular and religious and between proponents and opponents of global capitalism. It is an interesting story!

I chose to study the transhumanity debate for two reasons, one professional and the other personal: (1) As a sociologist, I wanted to investigate a sweeping science and technology controversy—none better than this one ostensibly about the future of humanity. For this investigation I primarily relied on concepts and methods from Science & Technology Studies (STS) and the social movement literature. (2) As a parent, I wanted to deepen my own thinking about the enhancement question to better deal with a family matter. I suppose that sooner or later many parents will face the enhancement question head on. My wife and I wrestled with a decision whether or not to have our twin sons undergo human growth hormone (HGH) treatment to increase their height. Using C. Wright Mills' [(1959) 1969] terminology, this was a *private trouble* for my family. Following Mills' advice I gained a better understanding by taking a look beyond my family to study the *public issue*. I found the transhumanity debate to offer the most comprehensive discussion on human enhancement and I appreciated the diversity of perspectives and the quality of the insights. However, I also found it to be sprawling and, at times, overly polemical. I set out to identify the main substantive points and to present the debate in an orderly, constructive fashion.

Christopher Tindale asserts that

> It is often in the contrast between positions, clearly and fairly presented that we come to understand what is at stake in each. In a world of compelling social debates so resistant to resolution, where intelligent well-meaning people stand on both sides of an issue, then this kind of understanding is not just the best we might expect, it is good in itself (2004:185).

I agree with Tindale and I hope that my presentation will be as helpful for the reader as the exercise of preparing it has been for me.

In this first chapter I provide an overview of the transhumanist and conservationist positions. In the second chapter I present the transhumanists' case for transcendence and the conservationists' warnings of transgression. The opposing stands regarding whether and to what extent we should transform the mind and body are described in Chap. 3. There is more to the transhumanity debate than the juxtaposition of principles and ideas, utopian and dystopian visions. The transhumanists are not content to simply discuss the merit of enhancement, rather they are working to build a world favorably aligned. Conservationists strive to prevent this. The transhumanity controversy is as much a political act as it is an intellectual exercise. I treat the transhumanity debate as a call-to-arms by which the contestants strive to mobilize support to bring about change in policies and institutions. Accordingly, I identify rhetorical strategies just as analysts do when studying social movement recruitment and political campaigns. This is most apparent in Chap. 4 on the rhetoric of risk and Chap. 5 on the claims of inevitability. In the final chapter, I offer some thoughts on how the debate will end.

Transtechnologies and Society

Besides a preoccupation with personalities, another way to stymie an investigation of the transhumanity debate is to focus exclusively on the technologies. We do well to adhere to the STS admonition not to treat technology as an independent force. Of course, without biotechnology, neurotechnology, information technology, nanotechnology, and the associated sciences, transhumanism would not exist. The Latin prefix, "trans" denotes crossing over, and the transhumanists must be able to point to something that may serve as a likely bridge for humanity's passage. Science fiction writers offer tantalizing sketches of futuristic technologies and they pose very interesting "what-if" scenarios. However, you can't promote a dangerous ideology, let alone a social movement, on imaginary technologies such as warp drives.

Fortunately for those who yearn for radical change, biotechnology and the other advanced technologies have become so well established in the public eye that they can be enlisted to lend credence to visions of transcendence and transformation. It is important to note that even opponents of transhumanism perceive these technologies to be very powerful. The level of institutional support, for one thing, must be recognized. These technologies are backed by well-financed research

programs and directed by the best scientists and engineers in the world. Corporations and nation states compete fiercely over them. The military is interested in certain applications. The media, as I mentioned previously, bestow lavish attention. Certainly there is no history of neglect or decline to suggest that these technologies will fizzle away.

Transhumanists and their critics also understand these technologies to have the capacity to intervene or to interfere (depending on one's perspective) in life at the most fundamental level. Most of us are familiar with this idea as it pertains to biotechnology. DNA and related genetic structures are regarded as the code of life, "cracked" by scientists and now open to manipulation through engineering techniques. Stem cells, basic in their pluripotency, have been coaxed from embryos, placentas, and skin and are being primed to promote regeneration.

Neuroscience is expected to get at the root of consciousness, emotions, and addictions. In regard to nanotechnology, Robert Frodeman explains that it's power

> turns on smallness in general, and the characteristics and possibilities that result from diminished size. At the nano-scale the physical behavior of matter changes; new material possibilities become attainable, for instance, extraordinary strength and lightness. Our relationship to matter itself is changed as items can be built from the ground up, atom by atom and molecule by molecule. Lost is the brute givenness that had previously characterized our relationship with nature. Certainly, we have long been able to manipulate materials, fashioning carbon or gold into a variety of items, but we had not attempted to refashion carbon itself. Now the prospect exists of changing carbon into gold, or vice versa (2006:384–385).

At the most basic level, so the thinking goes, transmutation is possible. Understandably, Frodeman and others see these technologies as the new alchemy.

With that said, we risk misunderstanding the debate if we assume that it is all about the technologies. The contestants are really arguing over sociotechnical ensembles. (Bijker and Pinch 1984) Let me explain. A crude causal model holds that technology determines society, e.g., "Guns kill." However, is technology truly independent of society? It is often countered that society determines technology, e.g., "Guns don't kill, people do." The problem with this back-and-forth argument is that we soon run into an impasse. STS offers a way out by re-conceptualizing the relationship between society and technology. Are they independent or mutually exclusive? No. Technology is social through and through. Even though artifacts are made of different stuff than you and I, they are of the social world. Design and implementation are affected by social, economic, and political decisions. This is true not only for the most controversial technologies, such as nuclear reactors, surveillance cameras, and encryption software but also for bicycles (see Bijker 1995) and air bags (see Wetmore 2004).

Conversely, society is technological through and through. In his wonderful essay, "Where Are the Missing Masses?" Bruno Latour (1992) notes that many artifacts are crucial to social order. They close doors (pneumatic hinge), promote traffic flow (stop signs and lights) and serve seatbelt legislation (caution chimes or lights), for example. Alter them and you change society. When the electricity grid fails, those affected lose illumination, refrigeration, air conditioning (or heat), mass

entertainment, communication mediums, and computer access. Imagine if the grid stayed down for years. Wouldn't we lose modernity?

Eliminating the false dichotomy between society and technology, we can consider ways in which sociotechnical ensembles develop. This allows for a more constructive approach to seemingly intractable social dilemmas. For instance, we would assert that the problem is not guns per se, nor violent people per se, but a gun-violence ensemble (a volatile mixture of inexpensive handguns, lax background check system, poverty, gang culture, bullying, etc.) and look for systematic correctives. We can also better appreciate sociotechnical controversies like the one we are investigating when we see that the transhumanity debate is not simply over allegedly good or evil technologies and, instead, it is about how technologies function in a particular social order.

Discourse of Concern and Discourse of Hope

Nancy Campbell defines "suspect technologies" as those perceived with "reasonable suspicion that their development, deployment, and effects are unevenly distributed, differential, and more likely to be socially unjust than not" (2005:375). Using Wiebe Bijker and Trevor Pinch's terminology, we could consider "suspect sociotechnical ensembles" when suspicions encompass technologies *and* social institutions. With regard to neuropharmacology, for example, Ad Bergsma (2000) warns of pharmaceutical companies manipulating consumers by marketing designer drugs that tinker with the brain's pleasure center. Francis Fukuyama (2002) predicts that if genetic engineering of children is allowed the most powerful families will surely extend their advantages, thereby perfecting aristocracy. One of Frodeman's worries regarding nanotechnology is that extremely small surveillance devices placed within one's body would be used by authorities as social control mechanisms.

When Jasper Lassen and Andrew Jamison (2006) asked focus group members to talk about genetic technologies (agricultural and medical applications) they found a very rich "discourse of concern." The respondents raised questions not only about technologies but also about whether agribusiness and state regulators could be trusted. They raised philosophical questions about the natural order. In my own research with college students I found that young men and women critically assess biotechnology in terms of their understanding of God's plan.

At times it can be bewildering following the strands of points and counterpoints woven throughout the transhumanity debate. The discussion is over social equality and then it moves to the nature of consciousness, the rate of technological innovation, etc. The debate is sprawling! Even so, one can identify the arrangement of a "discourse of hope" pitted against a "discourse of concern." Transhumanists generally appreciate modern society, economy, science, and technology and they imagine that social life will only improve as the ensemble matures and its full potential is realized. Simon Young (2006) refers to this as the "New Enlightenment." Their adversaries disagree in one of two ways. Conservative critics voice

misgivings regarding modernity and fear that transhumanity will make matters much worse. Liberal critics worry that pushing forward with transtechnologies will destabilize the modern ensemble, thereby erasing gains made over the past few centuries.

Transhumanity and Modernity

For the most part, contestants are not interested in making distinctions between modern and postmodern developments in culture, society, and economy. In keeping with the debate, for our purposes modernity will stand for the contemporary state of national and global systems. Conservationists disagree about the relationship between modernity and transhumanity with critics of modernity seeing a sequel and advocates of modernity perceiving a revolution.

Suspect Modernity

In the Foreword to *Brave New World*, Aldous Huxley asserts that "It is only by means of the sciences of life that the quality of life can be radically changed…This really revolutionary revolution is to be achieved, not in the external world, but in the souls and flesh of human beings" [(1932) 1969]. He imagines a totalitarian government utilizing technologies for social control purposes. The "World Society" in his dystopia involves embryonic and fetal biochemical engineering, neo-Pavlovian conditioning, hypnopædia or sleep-learning, and powerful psychotropics to mass produce members incapable of contesting their caste standing and the social system. Whereas Max Weber warned about bureaucracy and an "iron cage," Huxley raises an alarm about science and a bioengineered cage.

Leon Kass, a noted ethicist and a former Chairman of the President's Council on Bioethics, explicitly draws many parallels between Brave New World technologies and current ones:

> Our Prozac is not yet Huxley's "soma"; cloning by nuclear transfer or splitting embryos is not exactly "Bokanovskification"; MTV and virtual reality parlors are not quite the "feelies"; and our current safe and consequenceless sexual practices are not universally as empty or loveless as those in the novel. But the likeness between Huxley's fictional world and ours are disquieting, especially since our technologies of bio-psycho-engineering are still in their infancy, yet vividly reveal what they may look like in their full maturity (2002:5–6).

As with Huxley's World Society, Kass believes that consumer society promotes a "soft dehumanization" and, if allowed, capitalist enterprises will continue to use science and engineering to provide every manner of indulgence in exchange for dependency: "Homogenization, mediocrity, pacification, drug-induced contentment, debasement of tastes, souls without loving and longings—these are the

inevitable results of making the essence of human nature the last project for technical mastery" (2002:48). Carl Elliott warns that the commercialization of transtechnologies amounts to unprecedented market access to the body and mind:

> [F]or critics of genetic enhancement, the market represents something far more sinister because it seems to view the world as a place where everything has a price. How will our sensibilities be changed if we start to see our children, our bodies, and our minds as potential objects of consumption? Where does the soul go, once it's been priced and tagged? (2003).

Bill McKibben (2003) asserts that the intense competition of the capitalist labor market will drive reluctant parents and individuals to risk the side-effects of increasingly potent enhancers simply to compete effectively over academic placement and good jobs. He worries that satisfaction and pride in one's accomplishments will be compromised.

Modernity in the Balance

Jurgen Habermas (2003) and Francis Fukuyama (2002) value the liberal state and are mainly concerned that transhumanity may undermine it. Habermas asserts that democracy works as long as citizens accept the right of fellow citizens to participate. This, in turn, is based on citizens' assumption that the other men and women going to the polls and serving in office are essentially the same as they in terms of their capacities. As it stands now, children, chimpanzees, dolphins, and dogs are not allowed to have a say in the governance of society, in part, because they are thought not to have the same capacity for reasoning. He alleges that if transhumans, and then posthumans, become cognitively or emotionally distinct from humans, commonality will cease and the polis will fracture. Habermas also warns that genetically-designed children will not be perceived as autonomous actors because they will be governed by the "irreversible intentions of third parties" (63). Once again, at stake is universal egalitarianism.

For Francis Fukuyama liberal democracy is a crowning achievement. His bold declaration of the "end of history" was meant to signify that we have left the rough and tumble period of failed political and economic experiments and have reached the point of fine tuning. However, he warns that all this could change. Religious fundamentalism and terrorism represent serious threats to democracies, but Fukuyama is more concerned about human life technologies. What if human nature is reconfigured such that citizens become more docile, more manageable? Authoritarian government would be so much more formidable with a population incapable of dissent. Fukuyama warns that transhumanity will open a door for a return of totalitarianism.

The "New Enlightenment"

The transhumanists respond to their critics by chastising them for a lack of faith in the vitality and durability of the Western political economic system. They certainly do not want to see a resurgence of totalitarian regimes, and they assert that as long as we stand firm and not allow a dismantling of citizens' rights we should avoid that fate. They trust that free citizens will not opt for technologies that limit self-determination.

The true villain in Huxley's dystopia, according to the transhumanists, is state power. Give the World Society or any government too much power over its citizens and there will be grave consequences. Any technology deployed by a totalitarian government for social control purposes will be harmful. You prevent this by restricting the degree to which the state can dictate personal matters and by protecting individual rights, especially the right to make decisions regarding one's own body and relationships.

Liberal political philosophy is enshrined in constitutions and it is used to justify, among other things, free speech, artistic expression, parental rights, and reproductive choice. Human rights are often expressed in terms of freedoms that all persons are entitled to enjoy. They can be stated as freedom *from* coercions, for example, not to be held in slavery or suffer torture, or freedom *to* act, for example, to practice religion or express opinions. Ratified in law, they frame a protected space for personal autonomy and self-determination. From the United Nations' Universal Declaration of Human Rights (1948) we have these: "the right to life, liberty and security of person" (Article 3), freedom from "arbitrary interference with his [sic]privacy, family" (Article 12), "freedom of thought, conscience and religion" (Article 18), and freedom "to enjoy the arts and to share in scientific advancement and its benefits" (Article 27). The universality of these rights, i.e., that they be accorded to all people regardless of gender, race, property ownership, beliefs, and creed, satisfies a standard of morality as expressed in the Golden Rule and Immanuel Kant's categorical imperative, which in this instance might be stated as "the liberties that we most desire for ourselves should be provided to all." Furthermore, as John Locke argued, these rights must be provided to *all* if tyranny and discrimination are to be restrained.

Although James Hughes, a leading figure in the World Transhumanist Association, may use the postmodern-sounding "citizen cyborg" in the title of his 2004 book, he makes it clear that this concept of citizenship is based on the political philosophy of John Stuart Mill, whom he quotes at least five times in his text. He praises Mill's rationale for liberty and calls for an extension of liberal democracy. For example, the right to control one's own body should be extended to include the right to augment one's body. Enfranchisement should be extended to transhumans or posthumans. As Hughes sees it,

> Transhumanism is a direct product of this radical democratic tradition. Transhumanists, like their democratic humanist forebears, want to create a global society in which all persons, on the basis of their capacity for thought and feeling, can participate as equal

citizens, control their own affairs and achieve their fullest potential, regardless of the characteristics of their bodies (2004:81–82).

A classic question regarding governance can be posed in terms of technology: Who should we trust to decide our technological future, an elite or all citizens? Gregory Stock (2002) answers that, despite trepidations, it is best to trust the people. Autocratic approaches produce terrible results due to heavy handedness, inflexibility, and because collective wisdom is spurned. Stock believes that most people act prudently. If certain applications appear too dangerous or repulsive, consumers will not support them and they will fail in the market. Parents, more so than anyone else, look after their children, and will only embrace safe and efficacious technologies for their daughters and sons. According to Stock, "[t]echnology doesn't emerge magically; it depends on the existence of large numbers of people who want it. Today we are actively choosing the technologies that serve us, and if future generations do the same, people's biggest fears will not come to pass" (151).

James Hughes dismisses the assertion that parental say over the design of a child's genome will be detrimental. Such genetic decisions should be understood along the lines of parents' provision of nutrition and education for the overall development of the child. Rather than being fetters, genetic modifications are more likely to serve creativity:

> Few parents intend to make their children less intelligent or less capable of autonomy and communication. If anything, parents' choices will generally expand children's ability to communicate, make decisions, and control their own lives…[i]f there were widespread evidence that parents were systematically choosing to make their children less capable of making choices, less able-bodied, less intelligent, then I would be for regulating those bizarre choices (2004:149).

He concedes that some families will choose enhancements while others will not, and over time the population will diversify. He recommends that national and international law be amended, if necessary, so that political rights are fairly and uniformly provided for *all* intelligent persons, human or transhuman. Just as the polis did not fracture with the incorporation of women and liberated slaves, he contends that with the proper legal framework in place the political community can handle diversity of another kind.

In concluding this section, I'd like to point out that if we accept the accusations leveled by both sides in the debate we would be in the untenable position of "dammed if you do, dammed if you don't." The conservationists contend that if liberal democracies go down the transhumanist path and allow free choice for enhancement technologies, consumers knowingly or unknowingly will suffer modifications that diminish free will. Governments would exploit them. According to the transhumanists, if liberal democracies take up the conservationists' cause, the state would become more involved in the regulation and control of reproduction, the body, and parenting through banning enhancement technologies, and monitoring and policing illicit use. This would entail an increase in state power and loss of personal autonomy.

Each side raises the specter of totalitarianism. They dispute which truly is the destructive path, but not the high stakes involved. However, as I will discuss in Chap. 4, there is a tendency in debate rhetoric to overemphasize and we should not accept without critical review the claim that the fate of democracies hang in the balance.

On Capitalism

Whereas most conservationists disfavor the increasing interconnection between science and business and register concerns about the direction of global capitalism, transhumanists favor entrepreneurial capitalism. Many have firsthand experience with hi-tech ventures and feel quite comfortable with what they see as the mutually beneficial relationship between science, engineering, and business. As long as the system continues to support innovation there is little reason to oppose it. Why kill the goose that lays the golden eggs?

We should, however, be careful not to overstate their position towards the free market system. There is a tendency to mistake the transhumanists' unequivocal admiration of capitalist productivity for economic libertarianism, i.e., the belief that the free market system should be left to operate unencumbered by the state. An economy provides for the production of goods and services in a society, but it also functions to allocate goods and services. In a capitalist economy, allocation follows effective demand, in other words those that have the means to pay for what they want, get what they want, and those without the means, go without. Transhumanists hold a very mainstream view that certain goods and services are so important to the greater good that the state should intervene to ensure universal allocation. Such public goods now include education and immunization, and the transhumanists want future life-enhancing technologies to be included as well. They offer this in the spirit of social welfare, but they also worry that social conflict might arise if only the affluent have access to them.

Conclusion

It may come as a surprise that transhumanists are very supportive of the modern social system. A mixed economy is fine. The state has a role to play in promoting social welfare but it should not be allowed to dictate personal matters. Democracy must prevail over fundamentalism. At least in terms of political-economic leanings, transhumanism is not a radical ideology, not even a reform ideology. We need to keep in mind that all ideologies, including transhumanism, are designed to serve movement interests. Transhumanists keep their eyes on the prize. If there is every expectation that biotechnology, nanotechnology, neurotechnology, and computer

technology will continue to flourish under the political economy of Western societies and the global system, it makes perfect sense to back these.

In the following chapters we'll have the chance to explore in much greater detail the transhumanist argument and the conservation counterargument. We'll take up the dispute over whether transhumanity will amount to transcendence or transgression. What is the implication for human body and mind? What are the risks? Is transhumanity inevitable? However, I'd like to conclude this chapter by modifying my initial characterization of transhumanism as a dangerous ideology. The call for human perfectibility is certainly audacious but transhumanism will not go far if it is too shocking and unconventional. The fact of the matter is that transhumanity is put forward wrapped in the familiar package of Western progress. Transhumanists envision a future of robust democracy, compassionate government, and prosperity. Such optimism is uncommon today and may invite curiosity and interest in their more controversial ideas. Their opponents reject the core element of transhumanity which is human enhancement but they must also cast doubt on the transhumanists' vision for the future. As we will see in the next chapter this is done by countering transhumanists' call for engineered transcendence with dire warnings of mankind's fall.