


Christianity Versus Transhumanism

By Bruce Sterling  September 21, 2010 | 3:50 am | Categories: [Uncategorized](#)

*Or, relinquishing the Singularity via the church.

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AN OPEN LETTER TO CHRISTIAN LEADERS ON BIOTECHNOLOGY AND THE FUTURE OF MAN
Time running out to influence debate on transhumanism

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by Thomas R. Horn
RaidersNewsNetwork.com

Dear Pastor and Christian Leader,

Brent Waters, Director of the Jerre L. and Mary Joy Stead Center for Ethics and Values has written, “If Christians are to help shape contemporary culture—particularly in a setting in which I fear the posthuman message will prove attractive, if not seductive—then they must offer an alternative and compelling vision; a counter theological discourse so to speak.”

Although the Vatican in 2008 issued a limited set of instructions on bioethics primarily dealing with in vitro fertilization and stem cell research (Dignitas Personae or “the Dignity of the Person” [pdf]) and a handful of Christian scientists, policy makers, and conservative academics have hinted in public commentary on the need for a broader, manifesto-like document on the subject, the church as an institution has failed at any concerted effort to focus on the genetics revolution, the government’s interest in human enhancement, the viral transhumanist philosophy capturing the mind of a generation at colleges and universities (not to mention via popular media), and the significant moral and ethical issues raised by these trends.

At the time this open letter is being posted, four thousand evangelical leaders from two hundred nations are planning to convene in South Africa to adopt a new manifesto related to missiology and “a statement on Nature.” This gathering is organized by Billy Graham’s Lausanne Committee for World Evangelism (LCWE) and we pray it will include something significant on bioethics, because other than a nearly decade-old Lausanne “Occasional Paper No. 58,” which discussed ways in which bioethics could be used as a tool for evangelism (very important), no documentation we have seen thus far indicates that the new LCWE gathering will substantially debate the moral limits of human-enhancement technologies, which have quietly and dramatically evolved since the brief “Occasional Paper No. 58.”

While the Vatican’s Dignitas Personae likewise failed to provide instructions on the greater issue of biological enhancement (as envisioned by transhumanists and espoused by agencies of the U.S. and other federal governments as the next step in human evolution), its positional paper did provide an important bird’s-eye view on the clash developing between traditional morality and the contradictory adoption of transhumanist philosophy by Christian apologists, who likewise have begun to question what it means to be human and whose competing moral vision could ultimately shape the future of society.

Immediately following the release of *Dignitas Personae*, Catholic scientist William B. Neaves, in an essay for the *National Catholic Reporter*, reflected the new biblical exegesis, causing reporter Rod Dreher to describe it as clearly illustrating “the type of Christianity that is eager to jettison the old morality and embrace the new.” The subtleties behind Neaves’ comments included:

An alternative point of view to the Vatican’s, embraced by many Christians, is that personhood [a transhumanist concept] occurs after successful implantation in the mother’s uterus, when individual ontological identity is finally established.... If one accepts the viewpoint that personhood begins after implantation, the moral framework guiding the development and application of medical technology to human reproduction and treatment of disease looks very different from that described in *Dignitas Personae*.

In the alternative moral framework, taking a pill to prevent the products of fertilization from implanting in a uterus is morally acceptable. Using ivf [in vitro fertilization] to complete the family circle of couples otherwise unable to have children is an unmitigated good. Encouraging infertile couples with defective gametes to adopt already-produced ivf embryos that will otherwise be discarded is a laudable objective. And using embryonic stem cells to seek cures [creating human embryos for research “parts”] becomes a worthy means of fulfilling the biblical mandate to heal the sick.

Notwithstanding that the discussion by Neaves was limited to the Vatican’s position on embryos, his introduction of memes involving personhood and “ensoulment” represents worrisome Christian theological entanglement with transhumanist philosophy, further illustrating the need for a solid manifesto providing a conservative vision for public policy with regard to human experimentation and enhancement.

In the letter to the church at Ephesus, Paul states the responsibility of the Church as the agent of God’s wisdom, concluding this was by divine intention. “His intent was that now, through the church, the manifold wisdom of God should be made known to the rulers and authorities in the heavenly realms” (Ephesians 3:10). Making known the “righteous” and manifold wisdom of God must include human-affirming virtues of Christian morality that are intrinsic to His divine order and the Great Commission. In every generation, there is no middle ground for preachers of righteousness in these matters. Christian leaders must be actively engaged in ideological warfare for the mind of a generation especially in an age where people are seeking reasons to believe, despite everything they are being told, that the church remains relevant. To fail this responsibility could be to abdicate to a frightening transhuman vision of the future such as was predicted by theologian and Christian apologist C. S. Lewis in *The Abolition of Man*. Lewis foresaw the day when transhumanist and scientific reasoning would win out, permanently undoing mankind through altering the species, ultimately reducing *Homo sapiens* to utilitarian products. Here is part of what he said:

In order to understand fully what Man’s power over Nature, and therefore the power of some men over other men, really means, we must picture the race extended in time from the date of its emergence to that of its extinction. Each generation exercises power over its successors: and each, in so far as it modifies the environment bequeathed to it and rebels against tradition, resists and limits the power of its predecessors. This modifies the picture which is sometimes painted of a progressive emancipation from tradition and a progressive control of natural processes resulting in a continual increase of human power. In reality, of course, if any one age really attains, by eugenics and scientific education, the power to make its descendants what it pleases [transhuman/posthuman], all men who live after it are the patients of that power. They are weaker, not stronger: for though we may have put wonderful machines in their hands we have pre-ordained how they are to use them. And if, as is almost certain, the age which had thus attained maximum power over posterity were also the age most emancipated from tradition, it would be engaged in reducing the power of its predecessors almost as drastically as that of its successors.... The last men, far from being the heirs of power, will be of all men most subject to the dead hand of the great planners and conditioners and will themselves exercise least power upon the future.... The final stage [will have] come when Man by eugenics, by pre-natal conditioning, and by an education and propaganda based on a perfect

applied psychology...shall have “taken the thread of life out of the hand of Clotho” [one of the Three Fates in mythology responsible for spinning the thread of human life] and be henceforth free to make our species whatever we wish it to be. The battle will indeed be won. But who, precisely, will have won it?

Lewis foresaw the progressive abandonment of what we would call “moral law” based on Judeo-Christian values giving way to “the dead hand of the great planners and conditioners” who would decide what men should biologically become. The terms “great planners and conditioners” correspond perfectly with modern advocates of transhumanism who esteem their blueprint for the future of the species as the one that will ultimately decide the fate of man. A recent step toward establishing this goal occurred when the U.S. National Science Foundation (NSF) and the Human Enhancement Ethics Group (based at California Polytechnic State University, whose advisory board is a wish list of transhumanist academics and institutions worldwide) released its fifty-page report entitled “Ethics of Human Enhancement: 25 Questions & Answers.” This government-funded report addressed the definitions, scenarios, anticipated societal disruptions, and policy and law issues that need to be considered en route to becoming posthuman (the full NSF report can be downloaded for free at our Web site: www.ForbiddenGate.com). Some of the topics covered in the new study include:

What are the policy implications of human enhancement?

Is the natural-artificial distinction of human enhancement morally significant?

Does human enhancement raise issues of fairness, access, and equity?

Will it matter if there is an “enhanced divide” between “new” people classifications?

How would such a divide make communication difficult between “normals” and the “enhanced”?

How should the enhancement of children be approached?

What kind of societal disruptions might arise from human enhancement?

Should there be any limits on enhancement for military purposes?

Might enhanced humans count as someone’s intellectual property?

Will we need to rethink the very meaning of “ethics,” given the dawn of enhancement?

The “Ethics of Human Enhancement” report was authored by the NSF-funded research team of Dr. Fritz Allhoff (Western Michigan University), Dr. Patrick Lin (California Polytechnic State University), Prof. James Moor (Dartmouth College), and Prof. John Weckert (Center for Applied Philosophy and Public Ethics/Charles Sturt University, Australia) as part of a three-year ethics study on human enhancement and emerging technologies. This came on the heels of the US National Institute of Health granting Case Law School in Cleveland \$773,000 of taxpayers’ money to begin developing the actual guidelines that will be used for setting government policy on the next step in human evolution—“genetic enhancement.” Maxwell Mehlman, Arthur E. Petersilge Professor of Law, director of the Law-Medicine Center at the Case Western Reserve University School of Law, and professor of bioethics in the Case School of Medicine, led the team of law professors, physicians, and bioethicists over the two-year project “to develop standards for tests on human subjects in research that involves the use of genetic technologies to enhance ‘normal’ individuals.” Following the initial study, Mehlman began offering two university lectures: “Directed Evolution: Public Policy and Human Enhancement” and “Transhumanism and the Future of Democracy,” addressing the need for society to comprehend how emerging fields of science will, in approaching years, alter what it means to be human, and what this means to democracy, individual rights, free will, eugenics, and equality. Other law

schools, including Stanford and Oxford, are now hosting similar annual “Human Enhancement and Technology” conferences, where transhumanists, futurists, bioethicists, and legal scholars are busying themselves with the ethical, legal, and inevitable ramifications of posthumanity.

“No matter where one is aligned on this issue, it is clear that the human enhancement debate is a deeply passionate and personal one, striking at the heart of what it means to be human,” explained Dr. Lin in the NSF report. Then, with surprising candor, he added, “Some see it as a way to fulfill or even transcend our potential; others see it as a darker path towards becoming Frankenstein’s monster.”

Because any attempt at covering each potential GRIN-tech, catastrophic, Frankenstein’s monster possibility in an open letter such as this would be impractical, I summarize below a few of the most important areas in which conservatives, bioethicists, regulators, and especially Christians could become informed and involved in the public dialogue over the potential benefits and threats represented by these emerging fields of science:

SYNTHETIC BIOLOGY

Synthetic biology is one of the newest areas of biological research that seeks to design new forms of life and biological functions not found in nature. The concept began emerging in 1974, when Polish geneticist Wacław Szybalski speculated about how scientists and engineers would soon enter “the synthetic biology phase of research in our field. We will then devise new control elements and add these new modules to the existing genomes or build up wholly new genomes. This would be a field with the unlimited expansion [of] building new... ‘synthetic’ organisms, like a ‘new better mouse.’” Following Szybalski’s speculation, the field of synthetic biology reached its first major milestone in 2010 with the announcement that researchers at the J. Craig Venter Institute (JCVI) had created an entirely new form of life nicknamed “Synthia” by inserting artificial genetic material, which had been chemically synthesized, into cells that were then able to grow. The JCVI Web site explains:

Genomic science has greatly enhanced our understanding of the biological world. It is enabling researchers to “read” the genetic code of organisms from all branches of life by sequencing the four letters that make up DNA. Sequencing genomes has now become routine, giving rise to thousands of genomes in the public databases. In essence, scientists are digitizing biology by converting the A, C, T, and G’s of the chemical makeup of DNA into 1’s and 0’s in a computer. But can one reverse the process and start with 1’s and 0’s in a computer to define the characteristics of a living cell? We set out to answer this question [and] now, this scientific team headed by Drs. Craig Venter, Hamilton Smith, and Clyde Hutchison have achieved the final step in their quest to create the first...synthetic genome [which] has been “booted up” in a cell to create the first cell controlled completely by a synthetic genome.

The JCVI site goes on to explain how the ability to routinely write the software of life will usher in a new era in science, and with it, unnatural “living” products like Szybalski’s “new better mouse.” Jerome C. Glenn added for the 2010 State of the Future 14th annual report from the Millennium Project, “Synthetic biologists forecast that as computer code is written to create software to augment human capabilities, so too genetic code will be written to create life forms to augment civilization.” The new better mice, dogs, horses, cows, or humans that grow from this science will be unlike any of the versions God made. In fact, researchers at the University of Copenhagen may look at what Venter has accomplished as amateur hour compared to their posthuman plans. They’re working on a third Peptide Nucleic Acid (PNA) strand—a synthetic hybrid of protein and DNA—to upgrade humanity’s two existing DNA strands from double helix to triple. In so doing, these scientists “dream of synthesizing life that is utterly alien to this world—both to better understand the minimum components required for life (as part of the quest to uncover the essence of life and how life originated on earth) and, frankly, to see if they can do it. That is, they hope to put together a novel combination of molecules that can self-organize, metabolize (make use of an energy source), grow, reproduce and evolve.”

PATENTING NEW LIFE-FORMS

Questions are evolving now over “patenting” of transgenic seeds, animals, plants, and synthetic life-forms by large corporations, which at a minimum has already begun to impact the economy of rural workers and farmers through such products as Monsanto’s “terminator” seeds. Patenting of human genes will escalate these issues, as best-selling author Michael Crichton pointed out a while back in a piece for the New York Times titled, “Gene Patents Aren’t Benign and Never Will Be,” in which he claimed that people could die in the future from not being able to afford medical treatment as a result of medicines owned by patent holders of specific genes related to the genetic makeup of those persons. Former special counsel for President Richard Nixon, Charles Colson, added, “The patenting of genes and other human tissue has already begun to turn human nature into property. The misuse of genetic information will enable insurers and employers to exercise the ultimate form of discrimination. Meanwhile, advances in nanotechnology and cybernetics threaten to ‘enhance’ and one day perhaps rival or replace human nature itself—in what some thinkers are already calling ‘transhumanism.’”

HUMAN CLONING

The prospect of human cloning was raised in the nineties immediately after the creation of the much-celebrated “Dolly,” a female domestic sheep clone. Dolly was the first mammal to be cloned using “somatic cell nuclear transfer,” which involves removing the DNA from an unfertilized egg and replacing the nucleus of it with the DNA that is to be cloned. Today, a version of this science is common practice in genetics engineering labs worldwide, where “therapeutic cloning” of human and human-animal embryos is employed for stem-cell harvesting (the stem cells, in turn, are used to generate virtually any type of specialized cell in the human body). This type of cloning was in the news recently when it emerged from William J. Clinton Presidential Center documents that the newest member of the Supreme Court, Elena Kagan, had opposed during the Clinton White House any effort by Congress to prevent humans from being cloned specifically for experimental purposes, then killed. A second form of human cloning is called “reproductive cloning” and is the technology that could be used to create a person who is genetically identical with a current or previously existing human. While Dolly was created by this type of cloning technology, the American Medical Association and the American Association for the Advancement of Science have raised caution on using this approach to create human clones, at least at this stage. Government bodies including the U.S. Congress have considered legislation to ban mature human cloning, and though a few states have implemented restrictions, contrary to public perception and except where institutions receive federal funding, no federal laws exist at this time in the United States to prohibit the cloning of humans. The United Nations, the European Union, and Australia likewise considered and failed to approve a comprehensive ban on human cloning technology, leaving the door open to perfect the science should society, government, or the military come to believe that duplicate or replacement humans hold intrinsic value.

REDEFINING HUMANS AND HUMAN RIGHTS

Where biotechnology is ultimately headed includes not only redefining what it means to be human, but redefining subsequent human rights as well. For instance, Dr. James Hughes, whom I have debated on his syndicated Changesurfer Radio show, wants transgenic chimps and great apes uplifted genetically so that they achieve “personhood.” The underlying goal behind this theory would be to establish that basic cognitive aptitude should equal “personhood” and that this “cognitive standard” and not “human-ness” should be the key to constitutional protections and privileges. Among other things, this would lead to nonhuman “persons” and “nonperson” humans, unhinging the existing argument behind intrinsic sanctity of human life and paving the way for such things as harvesting organs from people like Terry Schiavo whenever the loss of cognitive ability equals the dispossession of “personhood.” These would be the first victims of transhumanism, according to Prof. Francis Fukuyama, concerning who does or does not qualify as fully

human and is thus represented by the founding concept that “all men are created equal.” Most would argue that any human fits this bill, but women and blacks were not included in these rights in 1776 when Thomas Jefferson wrote the Declaration of Independence. So who is to say what protections can be automatically assumed in an age when human biology is altered and when personhood theory challenges what bioethicists like Wesley J. Smith champion as “human exceptionalism”: the idea that human beings carry special moral status in nature and special rights, such as the right to life, plus unique responsibilities, such as stewardship of the environment. Some, but not all, believers in human exceptionalism arrive at this concept from a biblical worldview based on Genesis 1:26, which says, “And God said, ‘Let us make man in our image, after our likeness: and let them have dominion over the fish of the sea, and over the fowl of the air, and over the cattle, and over all the earth, and over every creeping thing that creepeth upon the earth.’”

NANOTECHNOLOGY AND CYBERNETICS

As discussed in the upcoming new book *Forbidden Gates*, technology to merge human brains with machines is progressing at a fantastic rate. Nanotechnology—the science of engineering materials or devices on an atomic and molecular scale between 1 to 100 nanometers (a nanometer is one billionth of a meter) in size—is poised to take the development between brain-machine interfaces and cybernetic devices to a whole new adaptive level for human modification. This will happen because, as Dr. C. Christopher Hook points out:

Engineering or manipulating matter and life at nanometer scale [foresees] that the structures of our bodies and our current tools could be significantly altered. In recent years, many governments around the world, including the United States with its National Nanotechnology Initiative, and scores of academic centers and corporations have committed increasing support for developing nanotechnology programs. The military, which has a significant interest in nanotechnology, has created the Center for Soldier Nanotechnologies (csn) [which is] interested in the use of such technology to help create the seamless interface of electronic devices with the human nervous system, engineering the cyborg soldier.

TRANSHUMAN EUGENICS

In the early part of the twentieth century, the study and practice of selective human breeding known as eugenics sought to counter dysgenic aspects within the human gene pool and to improve overall human “genetic qualities.” Researchers in the United States, Britain, Canada, and Germany (where, under Adolf Hitler, eugenics operated under the banner of “racial hygiene” and allowed Josef Mengele, Otmar von Verschuer, and others to perform horrific experiments on live human beings in concentration camps to test their genetic theories) were interested in weeding out “inferior” human bloodlines and used studies to insinuate heritability between certain families and illnesses such as schizophrenia, blindness, deafness, dwarfism, bipolar disorder, and depression. Their published reports fueled the eugenics movement to develop state laws in the 1800s and 1900s that forcefully sterilized persons considered unhealthy or mentally ill in order to prevent them from “passing on” their genetic inferiority to future generations. Such laws were not abolished in the U.S. until the mid-twentieth century, leading to more than sixty thousand sterilized Americans in the meantime. Between 1934 and 1937, the Nazis likewise sterilized an estimated four hundred thousand people they deemed of inferior genetic stock while also setting forth to selectively exterminate the Jews as “genetic aberrations” under the same program. Transhumanist goals of using biotechnology, nanotechnology, mind-interfacing, and related sciences to create a superior man and thus classifications of persons—the enhanced and the unenhanced—opens the door for a new form of eugenics and social Darwinism.

GERM-LINE GENETIC ENGINEERING

Germ-line genetic engineering has the potential to actually achieve the goals of the early eugenics movement (which sought to create superior humans via improving genetics through selective breeding)

through genetically modifying human genes in very early embryos, sperm, and eggs. As a result, germ-line engineering is considered by some conservative bioethicists to be the most dangerous of human-enhancement technology, as it has the power to truly reassemble the very nature of humanity into posthuman, altering an embryo's every cell and leading to inheritable modifications extending to all succeeding generations. Debate over germ-line engineering is therefore most critical, because as changes to "downline" genetic offspring are set in motion, the nature and physical makeup of mankind will be altered with no hope of reversal, thereby permanently reshaping humanity's future. A respected proponent of germ-line technology is Dr. Gregory Stock, who, like cyborgist Kevin Warwick, departs from Kurzweil's version of Humans 2.0 first arriving as a result of computer Singularity. Stock believes man can choose to transcend existing biological limitations in the nearer future (at or before computers reach strong artificial intelligence) through germ-line engineering. If we can make better humans by adding new genes to their DNA, he asks, why shouldn't we?

"We have spent billions to unravel our biology, not out of idle curiosity, but in the hope of bettering our lives. We are not about to turn away from this," he says, before admitting elsewhere that this could lead to "clusters of genetically enhanced superhumans who will dominate if not enslave us." The titles to Stock's books speak for themselves concerning what germ-line engineering would do to the human race. The name of one is *Redesigning Humans: Our Inevitable Genetic Future* and another is *Metaman: The Merging of Humans and Machines into a Global Superorganism*.

Besides the short list above, additional areas of concern where Christian leaders may wish to become well advised on the pros and cons of enhancement technology include immortalism, postgenderism, augmented reality, cryonics, designer babies, neurohacking, mind uploading, neural implants, xenotransplantation, reprognetics, rejuvenation, radical life extension, and more.

HEAVEN AND HELL SCENARIOS

While positive advances either already have been or will come from some of the science and technology fields we are discussing, learned men like Prof. Francis Fukuyama, in his book, *Our Posthuman Future: Consequences of the Biotechnology Revolution*, warn that unintended consequences resulting from what mankind has now set in motion represents the most dangerous time in earth's history, a period when exotic technology in the hands of transhumanist ambitions could forever alter what it means to be human. To those who would engineer a transhuman future, Fukuyama warns of a dehumanized "hell scenario" in which we "no longer struggle, aspire, love, feel pain, make difficult moral choices, have families, or do any of the things that we traditionally associate with being human." In this ultimate identity crisis, we would "no longer have the characteristics that give us human dignity" because, for one thing, "people dehumanized à la Brave New World...don't know that they are dehumanized, and, what is worse, would not care if they knew. They are, indeed, happy slaves with a slavish happiness." The "hell scenario" envisioned by Fukuyama is but a beginning to what other intelligent thinkers believe could go wrong.

On the other end of the spectrum and diametrically opposed to Fukuyama's conclusions is an equally energetic crowd that subscribes to a form of technological utopianism called the "heaven scenario." Among this group, a "who's who" of transhumansist evangelists such as Ray Kurzweil, James Hughes, Nick Bostrom, and Gregory Stock see the dawn of a new Age of Enlightenment arriving as a result of the accelerating pace of GRIN (genetics, robotics, artificial intelligence, and nanotechnology) technologies. As with the eighteenth-century Enlightenment in which intellectual and scientific reason elevated the authority of scientists over priests, techno-utopians believe they will triumph over prophets of doom by "stealing fire from the gods, breathing life into inert matter, and gaining immortality. Our efforts to become something more than human have a long and distinguished genealogy. Tracing the history of those efforts illuminates human nature. In every civilization, in every era, we have given the gods no peace." Such men are joined in their quest for godlike constitutions by a growing list of official U.S. departments that dole out hundreds of

millions of dollars each year for science and technology research. The National Science Foundation and the United States Department of Commerce anticipated this development over a decade ago, publishing the government report *Converging Technologies for Improving Human Performance* (download here)—complete with diagrams and bullet points—to lay out the blueprint for the radical evolution of man and machine. Their vision imagined that, starting around the year 2012, the “heaven scenario” would begin to be manifested and quickly result in (among other things):

The transhuman body being “more durable, healthy, energetic, easier to repair, and resistant to many kinds of stress, biological threats, and aging processes.”

Brain-machine interfacing that will “transform work in factories, control automobiles, ensure military superiority, and enable new sports, art forms and modes of interaction between people.

“Engineers, artists, architects, and designers will experience tremendously expanded creative abilities,” in part through “improved understanding of the wellspring of human creativity.”

“Average persons, as well as policymakers, will have a vastly improved awareness of the cognitive, social, and biological forces operating their lives, enabling far better adjustment, creativity, and daily decision making....

“Factories of tomorrow will be organized” around “increased human-machine capabilities.”

Beyond how human augmentation and biological reinvention would spread into the wider culture following 2012 (the same date former counter-terrorism czar, Richard Clark, in his book, *Breakpoint*, predicted serious GRIN rollout), the government report detailed the especially important global and economic aspects of genetically superior humans acting in superior ways, offering how, as a result of GRIN leading to technosapien DNA upgrading, brain-to-brain interaction, human-machine interfaces, personal sensory device interfaces, and biological war fighting systems, “The twenty-first century could end in world peace, universal prosperity, and evolution to a higher level [as] humanity become[s] like a single, transcendent nervous system, an interconnected ‘brain’ based in new core pathways of society.” The first version of the government’s report asserted that the only real roadblock to this “heaven scenario” would be the “catastrophe” that would be unleashed if society fails to employ the technological opportunities available to us now. “We may not have the luxury of delay, because the remarkable economic, political and even violent turmoil of recent years implies that the world system is unstable. If we fail to chart the direction of change boldly, we may become the victims of unpredictable catastrophe.” This argument parallels what is currently echoed in military corridors, where sentiments hold that failure to commit resources to develop GRIN as the next step in human and technological evolution will only lead to others doing so ahead of us and using it for global domination.

The seriousness of this for the conceivable future is significant enough that a recent House Foreign Affairs (HFA) committee chaired by California Democrat Brad Sherman, best known for his expertise on the spread of nuclear weapons and terrorism, is among a number of government panels currently studying the implications of genetic modification and human-transforming technologies related to future terrorism. Congressional Quarterly columnist Mark Stencel listened to the HFA committee hearings and wrote in his March 15, 2009, article, “Futurist: Genes without Borders,” that the conference “sounded more like a Hollywood pitch for a sci-fi thriller than a sober discussion of scientific reality...with talk of biotech’s potential for creating supersoldiers, superintelligence, and superanimals [that could become] agents of unprecedented lethal force.” George Annas, Lori Andrews, and Rosario Isasi were even more apocalyptic in their *American Journal of Law and Medicine* article, “Protecting the Endangered Human: Toward an International Treaty Prohibiting Cloning and Inheritable Alterations,” when they wrote:

The new species, or “posthuman,” will likely view the old “normal” humans as inferior, even savages, and fit for slavery or slaughter. The normals, on the other hand, may see the posthumans as a threat and if they can, may engage in a preemptive strike by killing the posthumans before they themselves are killed or enslaved by them. It is ultimately this predictable potential for genocide that makes species-altering experiments potential weapons of mass destruction, and makes the unaccountable genetic engineer a potential bioterrorist.

Observations like those of Annas, Andrews, and Isasi support Prof. Hugo de Garis’ nightmarish vision (The Artilect War) of a near future wherein artilects and posthumans join against “normals” in an incomprehensible war leading to gigadeath. Notwithstanding such warnings, the problem could be unavoidable, as Prof. Gregory Stock, in his well-researched and convincing book, *Redesigning Humans: Our Inevitable Genetic Future*, argues that stopping what we have already started (planned genetic enhancement of humans) is impossible. “We simply cannot find the brakes.” Scientist Verner Vinge agrees, adding, “Even if all the governments of the world were to understand the ‘threat’ and be in deadly fear of it, progress toward the goal would continue. In fact, the competitive advantage—economic, military, even artistic—of every advance in automation is so compelling that passing laws, or having customs, that forbid such things merely assures that someone else will get them first.” In what we found to be a bit unnerving, academic scientists and technical consultants to the U.S. Pentagon have advised the agency that the principal argument by Vinge is correct....

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Posted by: Bruce Sterling | 09/21/10 | 3:22 pm

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“Skulachev showed that SKQ1 could penetrate into mitochondria.”

Posted by: [Let’s Give The HBDers/Eugenicists What They Want! – A Thought Experiment](#) « [The Obsidian Files](#) | 10/4/10 | 2:21 pm

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