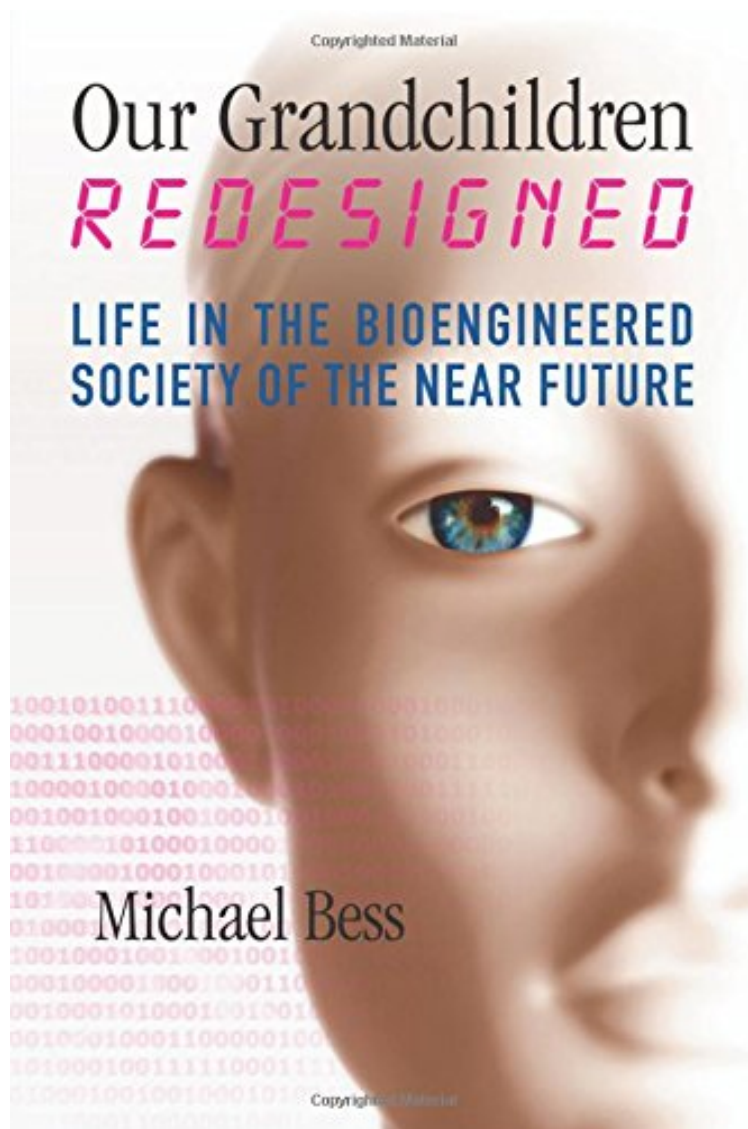


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# Our Grandchildren Redesigned: Life in the Bioengineered Society of the Near Future

Michael Bess

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#452237 in Books Michael Bess 2015-10-13 2015-10-13 Original language: English PDF # 1 9.29 x 1.16 x 6.231, 1.25 #File Name: 0807052175320 pages OUR GRANDCHILDREN REDESIGNED | File size: 30.Mb

**Michael Bess : Our Grandchildren Redesigned: Life in the Bioengineered Society of the Near Future** before purchasing it in order to gauge whether or not it would be worth my time, and all praised Our Grandchildren Redesigned: Life in the Bioengineered Society of the Near Future:

5 of 5 people found the following review helpful. A decent high level book on the subject that is really for the novice By Yoda This is a review of the unabridged MP3 version of this work Any review of this book would have to

start out by mentioning the fact that the author, Michael Bess, is a Professor of history specializing in the social and cultural impacts of technology. This is the direction the book comes from. The author looks at this subject from this particular angle. Those interested in a detailed analysis and discussion of the specific technologies, in particular electrical or mechanical, that will enable the modifications of humans over the next 40 or so years should instead see the relevant chapters of Ray Kurzweil's *The Singularity is Near*. The few chapters of that book do an excellent chapter at discussing the technologies in detail and from the perspective of Dr Kurzweil (i.e., from the view of an electrical engineer). Dr. Bess starts off his book with a handful of chapters providing a high level view of the various technologies that may enable humanity to modify itself. He provides a discussion of pharmaceuticals, bioelectronics, genetics and other technologies that he believes will make this possible. As stated previously however, this discussion is very high level. It is not for the knowledgeable or for those who seek a more detailed examination of these technologies or, for that matter, anyone with anything more than an introductory level of (or no) knowledge regarding these technologies. Then Dr. Bess goes into various social issues such as impact on inequality, discrimination, competitiveness between humans, etc. In regard to this he proves, at least in this reviewer's opinion, more successful than in his discussion of the technologies. Given he is a history professor specializing in the impact of these technologies this is no surprise. Dr. Bess then goes into how this will impact humanity's identity, a particularly important question considering that these technologies can (and probably will) change the meaning of being human. This is not only in terms of extending the lifespan of humans, which will have a minimal impact on humanity's identity, but in terms of many of the impacts of specific technologies. For example, modifications to the brain that will permit humans to process large amounts of information in a parallel method (like today's thinking supercomputers such as Watson) will blur the line of time in the thought process. We will be able to think not in one string of thought at any one time but in many. We may end up having more artificial components within us than natural. Humans may be able to communicate via thought and networks instead of through voice (and hence be able to communicate with large numbers of other persons or machines simultaneously). All this implies humanity looking more android than human. More specifically, more like the Borg from *Star Trek: The Next Generation*. Dr. Bess, like many others including technologists, is careful to point out that not only will there be positives with human modification (i.e., extended lifespan, mitigation or elimination of many diseases, ability for greater accomplishments due to greater abilities, etc.) but there will also be dangers. Dangers include not only the impact on social structures (i.e., creation of underclass among those unable to afford cutting edge technologies, etc.) and on humanity's identity but simply dangers stemming from the direct technological uncertainty on implementing this technology in terms of, say, physiology. For example, pharmaceuticals that enable one to keep all facts in one's memory, as opposed to forgetting, may lead some unforeseen effects on the brain. Too much information input may lead to a society where anxiety and neurosis may run amuck. And so on. He warns that humanity will have to move slowly so as to be able to spot such problems before it is too late. International cooperation is something else he also emphasizes to this end. Considering the zero sum game such technologies will have on people and societies (i.e., the individual or society who chooses to wait will fall behind in ability to find work, the world pecking order, etc.) though many of his recommendations, in this regard, seem little more than wishful thinking. Dr. Bess concludes by emphasizing that people will have to be selective in the implants and modifications they should adopt. They will have to think first and really, really know themselves. Knowing oneself is not a recommendation that is recent though. Socrates gave that advice 25 centuries ago. Know thyself is one of his most famous maxims. Yet, despite this, this has still been a problem since. Few people seem to have been able to answer this question and to act upon it in a meaningful way. Why would anyone expect this to change in the future? Hence how will humans of the future be able to make the correct choices as to how to modify themselves? In short, this book is geared to the novice who has little knowledge of the technologies discussed and has read or thought little about their social impacts and their impacts on human identity. For that audience this book is worthy of a 4 star or so. For those with more extensive knowledge of the technologies and who has read and thought more on social impacts and issues of human identity the book has nothing novel or profound to say. For that audience 3 stars or so. A last comment is in regard to the performance of the audiobook. It is not bad but nothing to shout about either though. Pretty much a three-star performance. 7 of 7 people found the following review helpful. **Pragmatic and Balanced Examination of Human Enhancement Technologies** By Kevin Joseph *Our Grandchildren Redesigned* offers a comprehensive and balanced look at the inevitable future of human enhancement. Unlike some futurists, who tend to approach these issues with a strong pro-enhancement or anti-enhancement bias, Michael Bess brings an unwaveringly pragmatic viewpoint to the subject matter. His thesis is that our best hope for integrating enhancements into our society, without creating undesirable gaps between the haves and have-nots, compromising our values, or losing touch with what it means to be human, is to create a worldwide regulatory framework that keeps tabs on enhancement technologies and ensures they progress in a measured and sensible way, ensuring access to basic enhancements by all and banning certain technologies that pose too great of a threat to our values. He effectively uses hypothetical scenarios to show how various types of genetic, pharmaceutical and bioelectric enhancements would impact our day-to-day lifestyles, and draws upon these examples to frame important questions about justice and identity. While the challenges he identifies are daunting, and the solutions he proposes are often complex, in the end he leaves us with an optimistic message that

the human race can influence its future evolution by making careful choices about what enhances and detracts from important human values. I can only hope that leaders in these fields read this book and consider its important message.-

Kevin Joseph, author of *The Champion Maker* 1 of 1 people found the following review helpful. Thinkers like Voltaire, Diderot By John Messerly (from [reasonandmeaning.com](http://reasonandmeaning.com)) Vanderbilt University's Michael Bess has written an extraordinarily thoughtful new book: *Our Grandchildren Redesigned: Life In The BioEngineered Society Of The Near Future*. The first part of the book introduces the reader to the technologies that will enhance the physical, emotional, and intellectual abilities of our children and grandchildren: pharmaceuticals, bioelectronics, genetics, nanotechnology, robotics, artificial intelligence, synthetic biology, and virtual reality. In the second part of the book Bess sets out the pro and cons of human enhancement. The arguments against bioenhancement are that doing so: 1) plays god or interferes with nature; 2) destroys the qualities that make us human; 3) subverts dignity by commodifying human traits; 4) displays hubris and robs life of its meaning; and 5) rejects the limitations that define humanity. In these multiple ways enhancement will lead to disaster. The arguments for bioenhancement are that doing so: 1) continues the long process of controlling ourselves and our world; 2) expresses our natural desires for new capabilities and richer experiences; 3) rejects the legacy of blind evolution and advocates directing the evolutionary process; 4) will reduce suffering and other constraints on our being; and 5) pursues our potential to be more than we are now, which is what gives life meaning. Bess argues that the differences between the pro and anti-enhancement camps reflect the tension between conservative and romantic reactions to the Enlightenment. Thinkers like Voltaire, Diderot, Locke, and Kant emphasized progress and perfectibility combined with an optimism about human social and moral evolution. Progress could continue indefinitely, as humans used reason to unlock their inner potential. But conservatives like Edmund Burke saw human nature as limited and more fixed. Instead of progressive social evolution, they saw recurring patterns of greed and violence. Bess suggests a via media between these two visions. He sees the human condition as characterized by change, innovation and novelty, as well as by continuity, preservation and order. Wisdom combines the two visions: "hope ... tempered by humility ... an attitude of openness to the future, chastened by the sobering lessons of past experience. The resulting moral maxim would be: embrace innovation, but proceed critically, incrementally, and cautiously in adopting it; explore new possibilities, but remain acutely cognizant of the historical track record as you go." Bess refers to his view as "chastened optimism." (78) Chastened optimism considers various forms of enhancement on a case-by-case basis, but what moral framework should we use to make these assessments? Since human beings differ regarding their moral beliefs, Bess argues that the best we can do is to combine the ancient concept of human flourishing with today's positive psychology and the "capabilities approach" in economic theory. Together these two fields have come to a consensus about the personal traits and social conditions that contribute to human flourishing, and Bess believes that this provides a framework for assessing enhancement technologies. The key factors in human flourishing from the individual perspective are: security; dignity; autonomy; personal fulfillment; authenticity; and pursuit of practical wisdom. From a societal perspective the key factors are: fairness; interpersonal connectedness; civic engagement; and transcendence. This framework helps us answer questions about whether a particular enhancement will or will not contribute to human flourishing, although in most cases the answer will not be straightforward. Other questions will arise as well. Who gets enhanced? Will this create a new caste system? What of those who reject enhancement? Bess thinks it unlikely that first world democracies would tolerate a biological class system, and that violence may accompany the desire for universal access to enhancement technologies. As for those who reject these technologies, it is unclear whether the non-modified will be able to live peaceably beside the modified as the Amish do today. But when large numbers of individuals choose to adopt bioenhancement, there will be tremendous pressure on others to do so as well. But the implications are startling. By the end of this century non-modified humans will be at a distinct disadvantage. Given enough time, modified and non-modified humans will be different species. In the third part of the book explores the more ethereal effects enhancements will have on individual humans. Do pharmaceuticals enhance our experiences by disconnecting us from reality? Do enhancements mechanize the self by eliminating the messy and unpredictable aspects of human experience? And if the answer is yes to these questions are enhancements worth the price? Similar questions arise regarding moral enhancement. Suppose we can give people a "morality pill" to increase the likelihood that people would make ethical choices, an idea that is becoming increasingly realistic. This pill (or chemical we put in the water) wouldn't completely override free will; rather it would increase the proclivity toward altruism. Bess says we should reject the pill because intention is a large part of what makes an act moral and the pill too heavily influences moral intention. In short he believes that free will is worth the price of whatever negative outcomes follow from it. I think that this is a very large price to pay for an idea, free will, that may be illusory anyway. Still Bess maintains that moral enhancement, to the extent it undermines free will, removes moral meaning from the world. But I would reply that who cares about discarding the idea moral meaning if a better world would result. No doubt I am revealing my utilitarian preferences. Other ethereal problems relating to human identity include: the possible monitoring and sharing of our intimate thoughts; the development of better virtual reality; and the extension of human lifespans. In addition enhancement technologies will bring about unforeseen consequences. What will be the future of sex, food, privacy, the arts, and war? No doubt the future will be weird in ways that are at present inconceivable. Bess thinks we should be a bit scared. "If you think your iPhone is a

transformative device, just wait til they turn on your brain-machine interface." (174) The last section of the book explores the ethical questions raised by the pursuit of human enhancement. How far should we go with enhancements? What modifications should embrace and which should we reject? Will we even have a say in determining such matters? What is generally better, modest or radical enhancements? What sorts of creatures do we want to become, and what sort do we to avoid becoming? Bess doubts that we can "just say no" to these technologies for even if we did some would pursue them in a black market or in countries that approve of such technologies. Thus complete relinquishment of enhancement technologies is a non-starter. So the real question is whether we want to pursue enhancements at a low-level, increasing today's capabilities; at a mid-level, capabilities beyond today's levels but still recognized as human; or a high level, capabilities we would classify as transhuman or posthuman. It is the transhumanist vision that Bess especially fears. He argues that you cannot have a radically expanded cognitive architecture with transforming identity. Such a consciousness would no longer be anything like the consciousness it used to be. Thus, to transform ourselves in this manner would be to terminate ourselves and become a new kind of sentient being. But we should not do this because of the potential for posthumans to harm others. "Until we know a great deal more than we do today about what such entities would be like ... it would be the height of folly and irresponsibility to proceed with the project of creating them ... The potential rewards are too uncertain, and the risks are far too great." Furthermore, the societal consequences of some of us becoming posthuman might tear the fabric of civilization apart. While Bess admits that the temptation to pursue radical enhancements will be great, he counsels restraint. He hopes that as we adapt to low-level changes, we can gradually relax the constraints on mid-level and high-level ones. Of course he admits that enforcing these moratoriums would be difficult, and international cooperation would be difficult to achieve, but arms control provides a model of how this might be accomplished. Still trying to control technologies that may spell our doom is worth the effort. While we may not be able to control where enhancement technology leads, we can still influence the path it takes. Bess' book is one of the most thoughtful meditations on the future that I have encountered. Moreover, the book is carefully and conscientiously crafted, and meticulously argued. He is impartial to the end, giving a fair hearing to contradictory arguments. In the end I would situate Bess' views a bit more toward the conservative side of the argument. While he is optimistic that we can muddle our way through the coming storm, which demands a large dose of optimism indeed, I sense more fear than excitement. I think Bess overestimates how good life is now, and underestimates how good it can be. Bess concludes that in the future: "the most potent deed of all will still take the form of a smile, a silent nod of empathy, a hand gently laid on someone's arm. The merest act of kindness will still remain the Ultimate Enhancement." This is touching, and it reminds us that remaking the world demands more than just engineering. But let us hope that Bess doesn't mean this literally; let us hope that in the future we can do more for human suffering than smile, nod and touch. Let us hope that someday there will be more than just kindness to ameliorate the reality of our descendents.

A panoramic overview of biotechnologies that can endlessly boost human capabilities and the drastic changes these superhuman traits could trigger. Biotechnology is moving fast. In the coming decades, advanced pharmaceuticals, bioelectronics, and genetic interventions will be used not only to heal the sick but to boost human physical and mental performance to unprecedented levels. People will have access to pills that make them stronger and faster, informatic devices will interface seamlessly with the human brain, and epigenetic modification may allow people to reshape their own physical and mental identities at will. Until recently, such major technological watersheds like the development of metal tools or the industrialization of manufacturing came about incrementally over centuries or longer. People and social systems had time to adapt: they gradually developed new values, norms, and habits to accommodate the transformed material conditions. But contemporary society is dangerously unprepared for the dramatic changes it is about to experience down this road on which it is already advancing at an accelerating pace. The results will no doubt be mixed. People will live longer, healthier lives, will fine-tune their own thought processes, and will generate staggeringly complex and subtle forms of knowledge and insight. But these technologies also threaten to widen the rift between rich and poor, to generate new forms of social and economic division, and to force people to engage in constant cycles of upgrades and boosts merely to keep up. Individuals who boost their traits beyond a certain threshold may acquire such extreme capabilities that they will no longer be recognized as unambiguously human. In this important and timely book, prize-winning historian Michael Bess provides a clear, nontechnical overview of cutting-edge biotechnology and paints a vivid portrait of a near-future society in which bioenhancement has become a part of everyday life. He surveys the ethical questions raised by the enhancement enterprise and explores the space for human agency in dealing with the challenges that these technologies will present. Headed your way over the coming decades: new biotechnologies that can powerfully alter your body and mind. The possibilities are tantalizing: Rejuvenation therapies offering much longer lives (160 and even beyond) in full vigor and mental acuity Cognitive enhancement through chemical or bioelectronic means (the rough equivalent of doubling or tripling IQ scores) Epigenetic tools for altering some of your genetically influenced traits at any point in your lifetime (body shape, athletic ability, intelligence, personality) Bioelectronic devices for modulating your own brain processes, including your pleasure centers (a potentially non-stop high) Direct control of machines by thought, and perhaps direct communication with

other people, brain-to-brain (a new dimension of sharing and intimacy) But some of the potential consequences are also alarming: A growing rift between the biologically enhanced and those who cant afford such modifications A constant cycle of upgrades and boosts as the bar of normal rises ever higherHumans 95, Humans XP, Humans 8 The fragmentation of humankind into rival bioenhancement clusters A gradually blurring boundary between person and product Extreme forms of self-modification, with some individuals no longer recognized as unambiguously human

In the future, accelerating technology and unexpected, revolutionary eventsmost of which will never be predicted by futuristsmay produce a society as alien as some of our tools. Bess delivers an insightful philosophical analysis of how we must adjust.Kirkus sRejuvenation therapies that could potentially extend human lifespans to 160 years or more, chemical or bioelectronic cognitive enhancement that could double or triple IQ scores, bioelectronic devices for modulating brain processes including pleasure centers, so-called designer babies, and much more are poised to cross the threshold from science fiction to reality in the near future. Michael Bess offers a sober prediction of how such advances will directly affect human society, and the ethical dilemmas that could result. Our Grandchildren Redesigned is fascinating from cover to cover and near-impossible to put down. Highly recommended!The Midwest Book About the AuthorMichael Bess is the Chancellors Professor of History at Vanderbilt University. He has received major fellowships from the J. S. Guggenheim Foundation, the American Council of Learned Societies, the National Human Genome Research Institute, the John D. and Catherine T. MacArthur Foundation, and the Fulbright program. His previous books include Choices Under Fire and The Light-Green Society.