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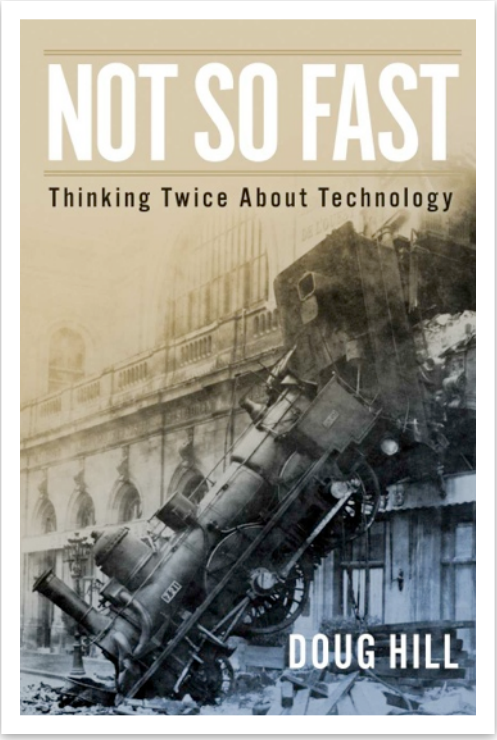
NOT SO FAST:
THINKING TWICE ABOUT TECHNOLOGY
By Doug Hill

Chapter 1 Excerpt: The Paradise Within Reach of All Men



Let me begin by stating the obvious: We live in an era of technological enthusiasm.
It's not too vast a generalization to say that Americans, along with much of the world, are deeply, passionately in love with the technologies they use in their personal lives. We're also beguiled by the promises of scientists and engineers that they'll be able, with the technologies at their disposal now or in the near future, to do pretty much anything they put their minds to.

Here's a comment I read recently, in a review of a book on synthetic biology: "We're entering an age where the limits to our capabilities to re-make the world around us are limited only by our imaginations and our good judgment."

Synthetic biology is only one of the current cutting-edge technologies said to possess unlimited potential for personal and planetary transformation. For Google chairman Eric Schmidt, the engine of our deliverance will be the Internet and the connectivity it

provides. "If we get this right," he said during a conference presentation in October of 2012, "I believe that we can fix all the world's problems."

Another remedy for all the world's problems was predicted a few months earlier by Eric Anderson, the co-president and co-founder of a company called Planetary Resources, which intends to mine precious metals from asteroids in outer space. Anderson is certain his project will produce unimaginable wealth, but that's just the beginning; it will also be the first step toward moving *all* industry into space, leaving nothing behind but verdant and peaceful landscapes. "We see the future of Earth as a garden of Eden," he said.

Such comments evoke a recurrent theme in the American experience: that we can cleanse all our past mistakes by opening a new frontier. Henry Ford had the same expectations for the slew of new technologies coming on the scene during his lifetime, which he said would deliver “a new world, a new heaven, and a new earth.”

Such comments also testify to a more recent wrinkle in utopian visions: that new technologies will be able to remedy the problems created by previous technologies. We see the same faith at work in the conviction of those who believe we'll come up with some way of reversing the catastrophe of global warming by "geoengineering" the climate of the entire planet. This is a sign that the technological enthusiasts of today are more aware than their predecessors that technology carries risks as well as promise.

For that reason their pronouncements, while still intoxicated and intoxicating, also tend to have disclaimers attached. A leading proselytizer of nanotechnology, Eric Drexler, for example, expects that within our lifetimes or those of our children, nano will place at our disposal a "genie machine" that will be able to assemble, molecule by molecule, pretty

much any object we can imagine. "What you ask for, it will produce," Drexler has written, adding, however, that "Arabian legend and universal common sense suggest that we take the dangers of such engines of creation very seriously indeed."

One of our more prominent and less restrained technological enthusiasts today is Ray Kurzweil, the inventor-turned-prophet who has captured a seemingly endless amount of media attention in recent years with his predictions of the imminent arrival—in 2045, to be exact—of "the Singularity." That's the historical turning point when humans will complete their ongoing merger with machines, creating a race of cyborgs with superpowers and without the annoying limitations of physical corporality.

"The Singularity will allow us to transcend the limitations of our biological bodies and brains," Kurzweil says. "We will gain power over our fates. Our mortality will be in our own hands. We will be able to live as long as we want (not necessarily forever). We will fully understand human thinking and will vastly extend and expand its reach."…

… While it's true that the scale and scope of technological expectations has increased as the power and reach of technology itself has increased, the fact remains that utopia is utopia, whenever it's predicted. In that sense Kurzweil's expectations are entirely consistent with promises of technological deliverance we've been hearing for at least a couple of hundred years, a chorus of joyful proclamations that together amount to a venerable American tradition.

In 1853, for example, an anonymous author in the *United States Review* proclaimed that, thanks to technology, humankind's troubles would be ended within fifty years. "Men and women will then have no harassing cares, or laborious duties to fulfill. Machines will perform all work—automata will direct them. The only task of the human race will be to

make love, study and be happy." Another author from the same period concluded, "Vanquished Nature yields! Her secrets are extorted. Art prevails! What monuments of genius, spirit, power!" A third wondered, "Are not our inventors absolutely ushering in the very dawn of the millennium?"

In *Technological Utopianism in American Culture*, historian Howard Segal reviewed twenty-five works of fiction published between 1883 and 1933, all offering visions of the glorious future technology would surely bring. Their authors shared several basic assumptions. Technological utopia was seen as not only possible but inevitable. The time and place of its arrival—within the next hundred years, usually; in the United States, always—could be accurately predicted, as could its characteristics.

"This is a Utopian book," one author stated in his preface, "but its Utopia is not, as Utopias generally are said to be, in the clouds; on the contrary, it is worked out with much detail in accordance with a natural order of sequence from existing conditions, with every point definite in time and place, true in all fundamental physical features to the best maps, true also to the law of cause and effect and duly regarding the limitations of nature."

Another similarity the authors of these books shared was a belief that, although the advance of technology would bring challenges of its own, in the end all difficulties would be surmounted by the power of technology itself. "They simply were confident," Segal writes, "that those problems were temporary and that advancing technology would solve mankind's major chronic problems, which they took to be material—scarcity, hunger, disease, war, and so forth. They assumed that technology would solve other, more recent and more psychological problems as well: nervousness, rudeness, aggression, crowding and social disorder, in particular. The growth and expansion of technology

would bring utopia; and utopia would be a completely technological society, one run by and, in a sense, for technology."

End of Excerpt