The Singularity Is Near: When Humans Transcend Biology

Ray Kurzweil
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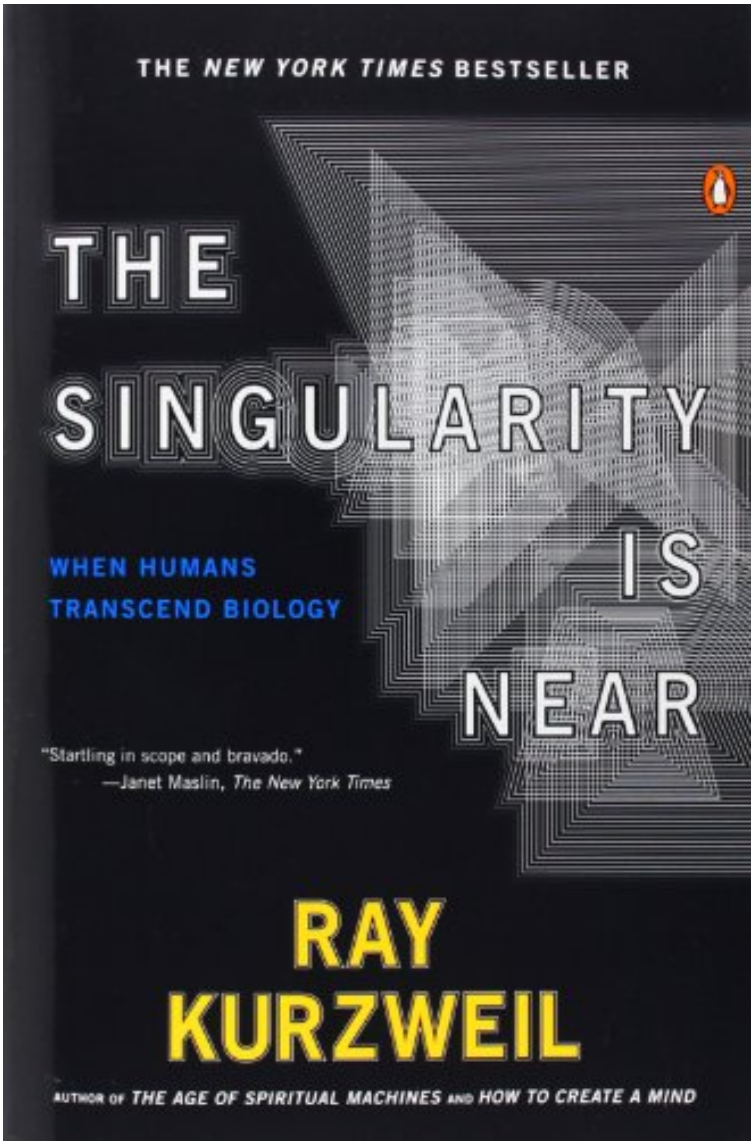

#6386 in Books Ray Kurzweil 2006-09-26 2006-09-26Original language:EnglishPDF # 1 9.06 x 1.33 x 5.97l, 1.45 #File Name: 0143037889672 pagesThe Singularity is Near When Humans Transcend Biology | File size: 48.Mb

Ray Kurzweil : The Singularity Is Near: When Humans Transcend Biology before purchasing it in order to gage whether or not it would be worth my time, and all praised The Singularity Is Near: When Humans Transcend Biology:

1 of 1 people found the following review helpful. Bible of Technology and FutureBy Kindle CustomerA definite must read for those who want to get a glimpse of near future in order to make preparations and logical investments. This book is the new word in many ways it has a messianic nature, it tells us of the great flood and tells us to build boats or

get ready to drown. Ray is a magnificent man a certified genius and he shares his projections and grand vision with both positive and negative aspects, nothing gets sugar coated. Read it and get ready7 of 7 people found the following review helpful. Probably the most important book you'll ever readBy David FieldGood evening.You may know me as the genial, white-haired book reviewer, but I once had a secret identity. I was Doctor D. Filed, the mad scientist, and my job was to introduce children to "the future," around when they were nine years old.You may remember "the future." We would zoom round the galaxy, meeting alien races, living forever, and having robot computers that were smarter than we are. However, all this would happen many years from now, and our great-great-grandchildren's great-great-grandchildren might catch a little glimpse of it. Otherwise the future we ourselves encountered would be just like today, only more so.However, Ray Kurzweil has been doing the math on those last two things, and he has a revised date for when we'll be immortal and have super-smart computers. And his date is . . .2045.That's right, the year 2045, thirty-five years from now, less than half a lifetime. That means that more than half the people alive today will see that date. And don't take that to be some wishful thinking. Kurzweil has extrapolated the rate of change in technology and biology to arrive at that date. He points out that these technologies improve exponentially. That means that if our technology knowledge doubles every year, we are not going to see twenty times the knowledge in a decade, but two multiplied by itself ten times, or over a thousand times.Kurzweil quotes the Human Genome Project, which after seven years of a fifteen-year process, had completed one percent of its work. However, it finished on time, because technology improved all through that period. His work is meticulously sourced, with many a footnote reference. His charts show that over and over again knowledge takes an exponential course. EDIT: I read recently of a human genome being read in four weeks, and today I hear of someone who did it in a week. Exponential enough for ya? EDIT of EDIT:An ex-ICU nurse told me today (9/9/09) that someone who nursed in an ICU as little as three years ago would have to go through months of training to get up to speed on ICU changes since then. AND THE LAST EDIT: "Complete Genomics has completed 14 genomes since March (20 human genomes in the world have been published), priced at $5000, and aims to complete 10,000 genomes by the end of 2010." (also 9/9/09, still less than twenty years since the first mapping.)He believes that "the singularity," no matter how far away it seems today, will be here on time. This will mean that some technologies will reach their limits, but new technologies will arise before they're needed. The history of computer technology certainly bears him out. Equally biology is helping us understand the brain, so its re-creation in software is likely to happen.You might think that there is too much to learn about the brain, but it's a reasonably simple machine with complex ways of doing things. So let's just concentrate on the higher powers, rather than reconstructing neurons. To give you an example, for more than a hundred years we have been able to fly. We've had birds around us all through human history, but we didn't copy them. Pretty much all our development has been with fixed- and rotating-wing aircraft being pulled through the air. Our "non-bird" flying has made us superior to birds, but we also have to get up there and come down safely. Hence a non-neuron brain, provided that it works at a higher level, can replace an incredibly complex series of cells.Kurzweil believes that we'll see advances in GNR, or Genetics, Nanotechnologies, and Robotics. Our DNA will be transformed to make us unable to catch major diseases, we'll have tiny machines inside our bloodstream, and these machines will improve our health from within. The day before I wrote this I read of "bacteria-based computing," and we're already capable of putting together tiny machines atom by atom, so it's not far away.Where does that leave us? Don't look at me - my white hair is a result of being born in World War II. I won't see the singularity - but you might. Many people try to believe that it will never happen as soon as Kurzweil says - but that's like going out in a thunderstorm "because hardly anybody gets killed by lightning." The day will come, because "Objects seen in the future are closer than they appear."When those things happen it will cause a major disruptive force. Some understanding of what's to come makes us more able to judge these technologies when they occur. An unprepared population is likely to be panicked into making a wrong choice. I'm sure your reaction to this news was a kind of fear - when something needs fixing that you thought was OK. Kinda like your first reaction to Global Climate Change.But just as we recognized and now are doing something toward fixing Global Warming, so we can recognize this and discuss it. It's obviously a far bigger problem, but even if the projections are off it's still likely to occur. Most people don't realize that there are more embedded computers than people in the world - chips that run your remote control, your car, and your dishwasher. We are so used to them we don't even know that they are there.Some criticisms of this book are that it's repetitive, but Kurzweil has to show that everything points to it. His background is impeccable, but I wouldn't take dozens of pills as he does, but then I've given up living long enough to see The Singularity. I applaud him for not making the book into some kind of horror story, and his apparent optimism is simply explaining that the process will happen, and there are enough good things to look forward to dealing with it.You may agree with Kurzweil or you may not, but at least you'll know that there is an issue coming up that you'll probably have to deal with. Parts of it may seem unlikely to happen, but you're reading this on a system that has just about all the knowledge in the world, and the half human/half computers will have direct access to it. In fact, we'll invent the last machine we need - the "inventing machine," which will be like the "mathematic machine" we call a computer, but it will invent new things and even improve itself.So don't laugh at the white-haired book reviewer - in the late twenty-first century, and the twenty-second century, and the twenty-third century, this could be you, telling the youngsters how unlimited knowledge and life was once a figment of people's imaginations.And if you have the

slightest interest in this subject, buy this book. In 1975 - thirty-five years before now, imagine a book that told you what life would be like in 2010 - Communism crushed, a computer in just about every home, and all the knowledge in the world on tap. This book is far more important than the 1975 book, and I'll bet you wished you'd read the 1975 book and made a few wise investments. But "The Singularity Is Near" will prepare you for a major coming crisis, and you'd better be prepared.8 of 9 people found the following review helpful. Too smart for most - pity!By CustomerFirst check Ray Kurzweil's biography. I trust you agree that hes probably quite smart, a serial achiever, and a thinker of consequence, fairly unique and that his deliberations might deserve serious consideration. I have studied his 2005 book The Singularity is Near when Humans Transcend Biology and have recognised it as the foundation to much that has been written, reproduced and debated ever since. Im no different and Ive leant heavily on his work in my book 'Leading into the Future' (WIP).The publication of The Singularity is Near was ground breaking and remains a definitive logic study of science not because its the only treatise of a technology shaped future but precisely because it was written by Ray Kurzweil. He is the man on the spot; in the know and part of the collegiate of thought leaders that are making it happen. This is no armchair what might be expose or a new series script for a Space Odyssey sequel. It is an explanation of why it is so and why it matters, and it is still today, discussed and debated; it remains highly relevant and a verifiable road map of our progress towards actualization of technological progress.

Startling in scope and bravado. Janet Maslin, The New York TimesArtfully envisions a breathtakingly better world. Los Angeles TimesElaborate, smart and persuasive. The Boston GlobeA pleasure to read. The Wall Street JournalOne of CBS Newss Best Fall Books of 2005 Among St Louis Post-Dispatchs Best Nonfiction Books of 2005 One of Amazon.coms Best Science Books of 2005A radical and optimistic view of the future course of human development from the bestselling author of How to Create a Mind and The Age of Spiritual Machines who Bill Gates calls the best person I know at predicting the future of artificial intelligenceFor over three decades, Ray Kurzweil has been one of the most respected and provocative advocates of the role of technology in our future. In his classic The Age of Spiritual Machines, he argued that computers would soon rival the full range of human intelligence at its best. Now he examines the next step in this inexorable evolutionary process: the union of human and machine, in which the knowledge and skills embedded in our brains will be combined with the vastly greater capacity, speed, and knowledge-sharing ability of our creations.

From Publishers WeeklyStarred . Renowned inventor Kurzweil (The Age of Spiritual Machines) may be technology's most credibly hyperbolic optimist. Elsewhere he has argued that eliminating fat intake can prevent cancer; here, his quarry is the future of consciousness and intelligence. Humankind, it runs, is at the threshold of an epoch ("the singularity," a reference to the theoretical limitlessness of exponential expansion) that will see the merging of our biology with the staggering achievements of "GNR" (genetics, nanotechnology and robotics) to create a species of unrecognizably high intelligence, durability, comprehension, memory and so on. The word "unrecognizable" is not chosen lightly: wherever this is heading, it won't look like us. Kurzweil's argument is necessarily twofold: it's not enough to argue that there are virtually no constraints on our capacity; he must also convince readers that such developments are desirable. In essence, he conflates the wholesale transformation of the species with "immortality," for which read a repeal of human limit. In less capable hands, this phantasmagoria of speculative extrapolation, which incorporates a bewildering variety of charts, quotations, playful Socratic dialogues and sidebars, would be easier to dismiss. But Kurzweil is a true scientista large-minded one at thatand gives due space both to "the panoply of existential risks" as he sees them and the many presumed lines of attack others might bring to bear. What's arresting isn't the degree to which Kurzweil's heady and bracing vision fails to convincegiven the scope of his projections, that's inevitablebut the degree to which it seems downright plausible. (Sept.) Copyright Reed Business Information, a division of Reed Elsevier Inc. All rights reserved.From Bookmarks MagazineKurzweil is one of the worlds most respected thinkers and entrepreneurs. Yet the thesis he posits in Singularity is so singular that many readers will be astoundedand perhaps skeptical. Think Blade Runner or Being John Malkovich magnified trillion-fold. Even if one were to embrace his techno-optimism, which he backs up with fascinating details, Kurzweil leaves some important questions relating to politics, economics, and morality unanswered. If machines in our bodies can rebuild cells, for example, why couldnt they be reengineered as weapons? Or think of singularity, notes the New York Times Book , as the "Manhattan Project model of pure science without ethical constraints." Kurzweils vision requires technology, which we continue to build. But it also requires mass acceptance and faith.Copyright 2004 Phillips Nelson Media, Inc.From BooklistContinuing the themes of The Age of Spiritual Machines (1999), Kurzweil further expounds his conviction that the human being will be succeeded by a superintelligent entity that is partly biological, partly computerized. Welcoming this prospect, and regarding it as inevitable, Kurzweil plunges into contemporary technological arenas, particularly genetics, nanotechnology, and robotics. Citing examples from medical devices to military weapons in which human control is increasingly detached from the autonomy of machines, Kurzweil stresses that trends are accelerating in terms of miniaturization and computational power. Eventually, smallness and speed reach a point of development, a "singularity," with implications Kurzweil says even he cannot imagine. Disinclined to

categorize his views as dystopian or utopian, the author recognizes that his vision is profoundly threatening to concepts of human nature and individuality. A closing section on philosophy and ethics accordingly addresses objections to his optimistic predictions. An involved presentation, this is best for readers of the wide-angle, journalistic treatment Radical Evolution (2005), by Joel Garreau. Gilbert TaylorCopyright American Library Association. All rights reserved