

Book review

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The Singularity Is Near: When Humans Transcend Biology

Ray Kurzweil

Viking Press

2005

\$29.95

652 pp.

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Web site: www.singularity.com.

This book, hardly short nor easy, could be one of the most important books I ever read.

The Singularity, according to author Dr Ray Kurzweil, is an event horizon in which the ongoing exponential growth of every aspect of information technology, including price-performance, capacity, and rate of adoption, continues until our nonbiological intelligence vastly exceeds our biological portion. The Singularity, expected to occur around 2045, “will represent the culmination of the merger of our biological thinking and existence with our technology, resulting in a world that is still human but that transcends our biological roots.”

This may sound like science fiction, but there is no one on the planet (that we know of – and Kurzweil does point out the possibilities of extraterrestrial life) better suited to predict technological evolution than Kurzweil, one of the most accomplished inventors of our time, with a 20 year track record of accurate scientific predictions.

Kurzweil enlightens the reader in nine detailed chapters that include footnotes, graphs, and other documented claims:

- The six epochs.
- A theory of technology evolution: the law of accelerating returns.
- Achieving the computational capacity of the human brain.
- Achieving the software of human intelligence: how to reverse engineer the human brain.
- GNR: three overlapping revolutions.
- The impact ... *Ich bin ein Singularitarian*.
- The deeply intertwined promise and peril of GNR.
- Response to critics.

Of particular interest to roboticists is the chapter on genetics, nanotechnology, and robotics (GNR). Kurzweil discusses that major leaps in GNR will transpire from “the interplay and

myriad synergies that will result from multiple intertwined technological advances.” These revolutionary changes will allow us to reverse-engineer the human brain to create a virtual mind right down to the molecular level.

This book is a must read for any human (or robot) interested in artificial intelligence and the impact of its exponential growth. And, if you do not have time to read the 600+ page book, you can catch the movie, *The Singularity is Near*, to be released in early 2009.

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