

# Review of 'transcendent man' (2011)

Transcendent man begins with a shot of travelling through space, stars wizzing past, heading towards a bright light. A voice-over begins to meditate on our mortality and how our acceptance of it is really just a form of denial. Death, claims the voice, represents a profound loss of not just those we love, but of experience, skill and creativity. Meditating upon this, claims the voice, represents "such a profoundly sad, lonely feeling, that I can't bare it. So I go back to thinking about how I'm not going to die." The voice is that of Ray Kurzweil, and he means what he says literally: he plans not to die.

## Who is Ray Kurzweil?

Ray Kurzweil is a successful American inventor; the chief inventor of the flatbed scanner, the famous Kurzweil electronic keyboard, and devices which scan text and then read it out (useful to the blind). Ray has had three big realisations in his life. Firstly, that for every problem, the correct application of intelligence can provide a solution (a realisation which inspired him at age five to become an inventor). Secondly, that inventions succeed or fail according to their timing. In other words, that the world is constantly changing, not only in its social structures, but in its technical capabilities: certain products were possible to manufacture and sell in 2010 that just weren't in 2000, or 1990. Therefore knowing what will be technically possible in the near future is helpful to inventors in planning what to create. This second realisation led Kurzweil to study technological trends, which led him to the conclusion that all information technologies develop exponentially rather than linearly. In other words, over a fixed period of time, say 2 years, an information technology will double in performance.

## The singularity

This doubling, and then doubling of the doubling, followed by another doubling of the doubling of the doubling can look like normal linear improvements for a while, but then suddenly there comes a point when the improvements increase so massively and so quickly that its like the transition from a flaming match to a nuclear explosion. That explosive change in the development of technology is going to arrive in about 30 or 40 years from now. This is how he describes the notion in the film:

*“If you go back 500 years, not a lot happened in a century. Now a lot happens in 6 months. Technology feeds on itself and it gets faster and faster. And in about 40 years the pace of change is going to be so astonishingly quick that you won’t be able to follow it, unless you enhance your own intelligence by merging with the intelligent technology we’re creating.”*

This explosive change has been dubbed the ‘singularity’, a term borrowed from physics to describe a time and place in which, for example, energy and matter becomes so densely concentrated that the usual laws of physics break down and its impossible to see beyond.

In the last 40 years computers have gone from being the size of a building, to the size of something that can fit in your pocket. In the next 25 years, Kurzweil predicts, computers will shrink down to the size of a blood-cell. If we think that we’ve seen an astonishing revolution thanks to personal computers that we can carry around with us, this is clearly nothing compared to the potential revolution to come, when we may carry millions of computers around in our bloodstream, monitoring and enhancing our health and our thinking. This, however, is only the build-up to the singularity. By 2030 he predicts that we’ll have computers as powerful as the human

brain. But by the time of the singularity we'll be merging with computers as powerful as all human brains, and we'll have already have solved problems which have been intractable throughout history, such as the existence of hunger, and even aging and death.

### **Expert objections**

Yet many find this vision of the future hard to swallow. Neil Gershenfeld, a professor at MIT, says "What Ray does consistently is takes a whole bunch of steps that everybody agrees on, and takes principles for extrapolating that everybody agrees on, and shows that they lead to things that nobody agrees on."

Why do even some experts disagree with the conclusions kurzweil draws? Some of it seems to be religiously driven resistance. Others think that he is basically correct, but off on the timing of when the singularity will occur, or that he's wrong to assume these changes will be positive (one commentator raises the possibility that future artificial intelligences, many millions of times more intelligent than us, may simply wipe us out). Equally, we didn't evolve to be able to intuitively comprehend exponential change in the same way that we did to understand linear change. This means that our intuitions about the future tend to be based on the idea that between now and then things will continue to develop linearly.

### **Is the film any good?**

Whilst I enjoyed the film, it didn't quite hit the target for me. I think people who are already familiar with these ideas won't find anything new here, and for those who are coming at them for the first time, I don't think the film had sufficient depth or was sufficiently good at visualising these ideas. Whilst films tend to be better at communicating emotions than ideas, the documentary does a pretty good job at getting

across the basic ideas whilst remaining interesting. Kurzweil himself speaks in a slow, deliberate way, in correctly formed sentences, with no 'erms' or 'ahhs'. This gives his delivery a measured, if slightly soporific tone, which belies the extraordinary significance of what he's saying. Nevertheless, one of the things that film can do well is turn ideas into powerful images, but that never happens in this documentary.

There are some very significant ideas explored in the film, and some powerful debates can be stirred up around them (about the nature of consciousness, mortality, and what it means to be human), but the film largely shies away from them, which seems like a wasted opportunity.