

How Can People Plan for the Technological Future and Who Should Be Their Guides into the Future?

ABSTRACT

This essay raises questions concerning who or what might influence technology. If the future becomes increasingly incomprehensible, then will people turn more toward religion?

THE TECHNOLOGICAL SINGULARITY AND QUESTIONS

"People are so unable to accept thinking different than their peers that they immediately drop their thought pattern when it leads to absurd conclusions. ... Knowledge is growing exponentially. It's doubling approximately every year. ... I think we're only 15 years away from a tipping point in longevity." — Ray Kurzweil [1]

What is the best plan for using technology? What will be the most important paradigm shifts over the next 30 years? What role will the foundations of physics play over the next 30 years? In 30 years will all the best theoretical physicists be robots with superhuman intelligence?

Suppose you owned a robot with an artificial intelligence equivalent to an IQ of 100,000. Would you be able to control the robot? Would you really own the robot or would the robot own you? Does artificial intelligence have far more connection with molecular biology than with mathematics and foundational issues in physics? Do foundational issues in physics have profound connections with psychology and religion?

One of my basic ideas is that the space roar consists of electromagnetic radiation from the inflaton field. Dark energy, dark matter, and the inflaton field might exist because some gravitons quantum paradoxically escape from the boundary of the multiverse into the interior of the multiverse. In January 2014 C.E. I posted online a quantum theory of gravity with 3 decisive empirical tests. If any 1 of the 3 tests is empirically falsified, the whole theory fails. I say that the main problem with string theory is that string theorists fail to realize that Milgrom is the Kepler of contemporary cosmology. [2], [3], [4]

Let us assume my theory is wrong. Milgrom, McGaugh, and Kroupa cannot be wrong because they have accumulated overwhelming empirical evidence in their favor. [5] Why have astrophysicists failed to appreciate the importance of the work done by Milgrom, McGaugh, and Kroupa?

"The story of Barbara McClintock allows us to explore the conditions under which dissent in science arises, the function it serves, and the plurality of values and goals it reflects. It makes us ask: What role do interests, individual and collective, play in the evolution of scientific knowledge? Do all scientists seek the same kinds of explanations? Are the kinds of questions they ask the same?" — Evelyn Fox Keller [6]

If my theory were true, then there would be no basis for miracles, immortal souls, or supernatural entities, although every living thing would automatically come back to life

every 81.6 ± 1.7 billion years. Let us assume my theory is completely wrong. Does a quantum theory of gravity really make a difference in terms of technology? What shall be the most important paradigm shifts over the next century?

Shall robotics and computer technology dominate the human future? What technologies shall become available over the next century? How can people use technology to improve their lives and, even more, the lives of future generations of people on into the great abyss of time and space? What is the goal? What is the plan? Who and what carries out the plan? What technologies, strategies, tactics, techniques, and resources are necessary for the plan? What are the risks? What are the rewards? What are the choices?

What will the technology of the future allow? Arthur C. Clarke suggested that a sufficiently advanced technology is indistinguishable from magic. Is religion a matter of ethics and spirituality divorced from magic and superstition?

RELIGION, TECHNOLOGY, SCIENCE, AND THE FUTURE

Recall Joel 3:16, English Standard Version of the Bible, “The Lord roars from Zion, and utters his voice from Jerusalem, and the heavens and the earth quake. But the Lord is a refuge to his people, a stronghold to the people of Israel.” Does the Lord roar, causing the heavens and the earth to quake? Is a graduate student likely to earn a Ph.D. in geology from M.I.T. or Cal Tech using such a premise for the cause of earthquakes? One might say that such Biblical verses are metaphorical. Note that the Lord has mighty powers and somehow lends these powers to His people. Is there a powerful placebo mechanism at work in religion? Is religion a technology of psychological self-help for a group of people?

Is hubris a kind of religion with one and only one member of the congregation? You can easily find a woman who will say that she has met many a man who believes that “he is God’s gift to women” — could such a woman be literally correct? If a man has such a belief could that be an evolutionary advantage in terms of the propagation of his DNA? Is optimism generally favored over pessimism in terms of Darwinian evolution?

Let us avoid gloom and doom. Instead let us focus on hope and hype. Hope and hype? Are these two words reminiscent of a mixture of religion and advertising? Are religion and advertising different forms of technology? What is a technology? According to Wiktionary, from ancient Greek τεχνολογία means “systematic treatment (of grammar)”, from τέχνη = art + -λογία = study. According to “Webster’s New World Dictionary”, the word “technology” can mean 1 of 5 things: “1. the science or study of the practical or industrial arts. 2. the terms used in a science, art, etc.; technical terminology. 3. applied science. 4. a method, process, etc. for handling a specific technical problem. 5. the system by which a society provides its members with those things needed or wanted.” Are long-established religions, such as Hinduism, Buddhism, Judaism, Christianity, and Islam, systems by which a society provides its members with those things needed or wanted? What do people need and want? What do people not need? What do people not want?

Would most people over the age of 40 like to be 20 years younger with 100 times more money? Who can help people get what they want? Is the stuff some people want more important than the stuff other people want? Who should be the judge of what is important?

Who might be the world's greatest living genius? Could it be Grigori Perelman or Ed Witten? Could it be a religious leader or ethical teacher? Or could it be someone connected with money and technology? Could it be Bill Gates or Larry Ellison? Could it be Larry Page or Sergey Brin? Could it be Elon Musk or Ray Kurzweil?

According to Wikipedia, "Raymond 'Ray' Kurzweil ... is an American author, inventor, futurist, and a director of engineering at Google. Aside from futurology, he is involved in fields such as optical character recognition (OCR), text-to-speech synthesis, speech recognition technology, and electronic keyboard instruments. He has written books on health, artificial intelligence (AI), transhumanism, the technological singularity, and futurism. Kurzweil is a public advocate for the futurist and transhumanist movements, as has been displayed in his vast collection of public talks, wherein he has shared his primarily optimistic outlooks on life extension technologies and the future of nanotechnology, robotics, and biotechnology." Kurzweil seems to believe that sometime around the year 2029 C.E. a computer will be able to pass the Turing test and that sometime around the year 2045 C.E. the net aggregate of artificial intelligence will exceed the net aggregate of human intelligence by about a factor of 1 billion. In other words, if there are about 10 billion people with a mean IQ of 100 then the net aggregate IQ of the human species would be 1 trillion, and the net aggregate IQ of the artificial intelligences would be 1,000,000,000 times 1 trillion, a number represented by 1 followed by 21 zeroes — a number called a sextillion in the USA and France. There might be a person with an IQ of 200 and an artificial intelligence with an IQ of 200,000,000,000. Who might tell us how to cope with this future?

"If you could meet your grandkids as elderly citizens in the year 2100 ... you would view them as being, basically, Greek gods ... that's where we're headed." — Michio Kaku [7]

"I believe with Schopenhauer: We can do what we wish, but we can only wish what we must. Practically, I am, nevertheless, compelled to act as if freedom of the will existed. If I wish to live in a civilized community, I must act as if man is a responsible being. I know that philosophically a murderer is not responsible for his crime; nevertheless, I must protect myself from unpleasant contacts. I may consider him guiltless, but I prefer not to take tea with him. ... The only progress I can see is progress in organization. The ordinary human being does not live long enough to draw any substantial benefit from his own experience. And no one, it seems, can benefit by the experiences of others. Being both a father and teacher, I know we can teach our children nothing. We can transmit to them neither our knowledge of life nor of mathematics. Each must learn its lesson anew. ... I believe in intuitions and inspirations. I sometimes feel that I am right. I do not know that I am. When two expeditions of scientists, financed by the Royal Academy, went forth to test my theory of relativity, I was convinced that their conclusions would tally with my hypothesis. I was not surprised when the eclipse of May 29, 1919, confirmed my intuitions. I would have been surprised if I had been wrong. ... I am enough of an artist to draw freely upon my imagination. Imagination is more important than knowledge. Knowledge is limited. Imagination encircles the world. ... I am happy because I want nothing from anyone. I do not care for money. Decorations, titles or distinctions mean nothing to me. I do not crave praise. The only thing that gives me pleasure, apart from my work, my violin and my sailboat, is the appreciation of my fellow workers. ... I claim credit for nothing. Everything

is determined, the beginning as well as the end, by forces over which we have no control. It is determined for the insect as well as for the star. Human beings, vegetables or cosmic dust, we all dance to a mysterious tune, intoned in the distance by an invisible player.” — Einstein [8]

“There slowly grew up in me an unshakable conviction that we have no right to inflict suffering and death on another living creature unless there is some unavoidable necessity for it, and that we ought all of us to feel what a horrible thing it is to cause suffering and death out of mere thoughtlessness. And this conviction has influenced me only more and more strongly with time. I have grown more and more certain that at the bottom of our heart we all think this, and that we fail to acknowledge it because we are afraid of being laughed at by other people as sentimentalists, though partly also because we allow our best feelings to get blunted. But I vowed that I would never let my feelings get blunted, and that I would never be afraid of the reproach of sentimentalism.” — Albert Schweitzer [9]

“In what terms should we think of these beings, nonhuman yet possessing so very many human-like characteristics? How should we treat them? Surely we should treat them with the same consideration and kindness as we show to other humans; and as we recognize human rights, so too should we recognize the rights of the great apes? Yes ...” — Jane Goodall [10]

“You cannot lay bare your private soul and look at it. You are too much ashamed of yourself. It is too disgusting. For that reason I confine myself to drawing the portraits of others.” — Mark Twain [11]

“If you desire many things, many things will seem but a few.” — Benjamin Franklin [12]

“I’d be pretty cool to die on Mars, just not on impact.” — Elon Musk [13]

“Religion largely relies on authority. ... We don’t have anything like that in the world of science. ... We have learned. We have progressed. In science we don’t have prophets. ... We try hard in science to stamp out the influence of wishful thinking. ... There are those whose views about religion are not very different from my own, but who nevertheless feel that we should try to damp down the conflict, that we should compromise it. ... I respect their views and I understand their motives, and I don’t condemn them, but I’m not having it. To me, the conflict between science and religion is more important than these issues of science education or even environmentalism. I think the world needs to wake up from its long nightmare of religious belief; and anything that we scientists can do to weaken the hold of religion should be done, and may in fact be our greatest contribution to civilization.” — Steven Weinberg [14]

Who will judge science and religion? Will the judges soon be robots with superhuman intelligence? Does Steven Weinberg have the appropriate attitude toward religion?

“... Weinberg writes with clarity and an old-fashioned feeling for a good sentence (in the preface, he rather casually drops the names of Tacitus, Edward Gibbon and Samuel Eliot Morison as historians that he reads for pleasure.) ... Weinberg is the man who famously once wrote, “The more the universe seems comprehensible, the more it also seems

pointless, and yes, he talks a little about how that phrase has dogged him for decades." — Tim Radford [15]

Will robots with superhuman intelligence soon create a world that seems pointless and incomprehensible to people? In terms of the human future are the atheists better or worse than the theists? In the competition between technological optimists and technological pessimists are the optimists highly likely to win?

"First you jump off the cliff and you build your wings on the way down." — Ray Bradbury [16]

"Our machines are our tools, and the human with the best tools wins. We have strong economic and political pressures to build intelligent machines. Already we're surrounded by narrow AI, computers that can learn a little in particular areas of expertise and get better over time. It may take a century, or as little as a decade, but I'm pretty sure we'll have general, human-like AI as well. It could be in a computer, or in a robot, doesn't really matter. Machine intelligence is coming.

In many ways, people are poised to welcome the arrival. It seems like every week I discuss another example of how our culture embraces and loves the idea of the robot. Yet before true machine intelligence gets here, people need to re-examine their belief in the myth of the Three Laws of Robotics. We cannot control intelligence – it doesn't work on humans, it certainly won't work on machines with superior learning abilities. But just because I don't believe in control, doesn't mean that I'm not optimistic. Humanity has done many horrible things in the past, but it hasn't wiped itself out yet. If machine intelligence proves to be a new form of Armageddon, I think we'll be wise enough to walk away. If it proves to be benevolent, I think we'll find a way to live with its unpredictability. If it proves to be all-consuming, I think we'll find a way to become a part of it. I never bet against intelligence, even when it's human." — Aaron Saenz [17]

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