



# THE SINGULARITY SUMMIT & FUTURE AHEAD

Compiled & Designed by Alireza Hejazi

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Dear Friends,

The Singularity Summit held on October 3-4, 2009 in New York. Happy to those guys attended the event. At least for listening talks we futurists usually love to hear once again. Exponential growth of information technology, quantum computing, whole brain emulation, neural prosthetics, super intelligence, immortality, outer space life, advanced genetics, smart machines and many other issues.

Since I could not attend there, I decided to surf the web for related news and information. Doing so brought me a great deal of info and also an idea. I thought of a short report compiled from the materials I had gathered on my PC. So this is the product of that idea and I hope you would like it.

I did my best to arrange the articles or notes in a logical order. So first I put a challenging article titled: "The singularity and the fixed point". Then I came to an interesting article written by Stuart Fox. The third article is a personal expression of the event provided by Razib Khan. After that *J. Storrs Hall* explores more thoughts on the singularity. And at the final scene we see Ray Kurzweil immortal on a film!

My compiled report is more a memorial than an analytical one. So there is much more room for further discussion that is I chose "The Future Ahead" for the rest of my report title. Who really knows how will be the future? Perhaps we meet each other at the next Singularity Summit! Until then your comments and views will make a valuable intellectual capital for me and every other one who likes to know more about the Singularity.

Sincerely Yours,  
Alireza Hejazi at:  
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## The Singularity and the Fixed Point

### The importance of engineering motivation into intelligence

By Edward Boyden

Some futurists such as Ray Kurzweil have hypothesized that we will someday soon pass through a singularity—that is, a time period of rapid technological change beyond which we cannot envision the future of society. Most visions of this singularity focus on the creation of machines intelligent enough to devise machines even more intelligent than themselves, and so forth recursively, thus launching a positive feedback loop of intelligence amplification. It's an intriguing thought. (One of the first things I wanted to do when I got to MIT as an undergraduate was to build a robot scientist that could make discoveries faster and better than anyone else.) Even the CTO of Intel, Justin Rattner, has publicly speculated recently that we're well on our way to this singularity, and conferences like the Singularity Summit (at which I'll be speaking in October) are exploring how such transformations might take place.

As a brain engineer, however, I think that focusing solely on intelligence augmentation as the driver of the future is leaving out a critical part of the analysis—namely, the changes in motivation that might arise as intelligence amplifies. Call it the need for "machine leadership skills" or "machine philosophy"—without it, such a feedback loop might quickly sputter out.

We all know that intelligence, as commonly defined, isn't enough to impact the world all by itself. The ability to pursue a goal doggedly against obstacles, ignoring the grimness of reality (sometimes even to the point of delusion—i.e., against intelligence), is also important. Most science-fiction stories prefer their artificial intelligences to be extremely motivated to do things—for example, enslaving or wiping out humans, if *The Matrix* and *Terminator II* have anything to say on the topic. But I find just as plausible the robot Marvin, the superintelligent machine from Douglas Adams' *The Hitchhiker's Guide to the Galaxy*, who used his enormous intelligence chiefly to sit around and complain, in the absence of any big goal.

Indeed, a really advanced intelligence, improperly motivated, might realize the impermanence of all things, calculate that the sun will burn out in a few billion years, and decide to play video games for the remainder of its existence, concluding that inventing an even smarter machine is pointless. (A corollary of this thinking might explain why we haven't found extraterrestrial life yet: intelligences on the cusp of achieving interstellar travel might be prone to thinking that with the galaxies boiling away in just  $10^{19}$  years, it might be better just to stay home and watch TV.) Thus, if one is trying to build an intelligent machine capable of devising more intelligent machines, it is important to find a way to build in not only motivation, but motivation amplification—the continued desire to build in self-sustaining motivation, as intelligence amplifies. If such motivation is to be possessed by future generations of intelligence—meta-motivation, as it were—then it's important to discover these principles now.

There's a second issue. An intelligent being may be able to envision many more possibilities than a less intelligent one, but that may not always lead to more effective action, especially if some possibilities distract the intelligence from the original goals (e.g., the goal of building a more intelligent intelligence). The inherent uncertainty of the universe may also overwhelm, or render irrelevant, the decision-making process of this intelligence. Indeed, for a very high-dimensional space of possibilities (with the axes representing different parameters of the action to be taken), it might be very hard to evaluate which path is the best. The mind can make plans in parallel, but actions are ultimately unitary, and given finite accessible resources, effective actions will often be sparse.



**Intelligences that invent more and more interesting and absorbing technologies, that can better grab and hold their attention, while reducing impact on the world, might enter the opposite of a singularity.**

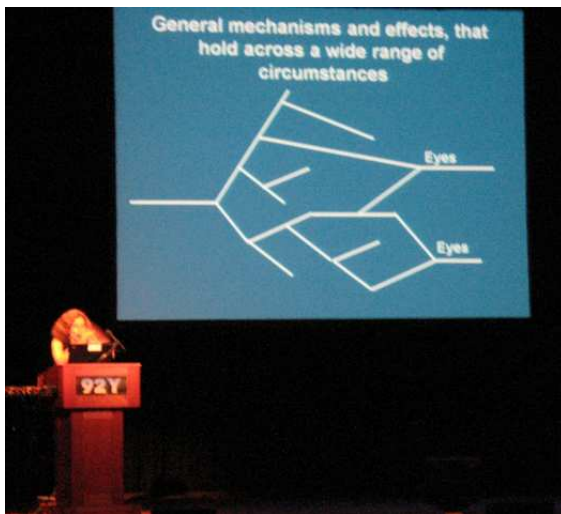
The last two paragraphs apply not only to AI and ET, but also describe features of the human mind that affect decision making in many of us at times—lack of motivation and drive, and paralysis of decision making in the face of too many possible choices. But it gets worse: we know that a motivation can be hijacked by options that simulate the satisfaction that the motivation is aimed toward. Substance addictions plague tens of millions of people in the United States alone, and addictions to more subtle things, including certain kinds of information (such as e-mail), are prominent too. And few arts are more challenging than passing on motivation to the next generation, for the pursuit of a big idea. Intelligences that invent more and more interesting and absorbing technologies, that can better grab and hold their attention, while reducing impact on the world, might enter the opposite of a singularity.

**The singularity depends on a mathematical recursion: invent a superintelligence, and then it will invent an even more powerful superintelligence.**

What is the opposite of a singularity? The singularity depends on a mathematical recursion: invent a superintelligence, and then it will invent an even more powerful superintelligence. But as any mathematics student knows, there are other outcomes of an iterated process, such as a fixed point. A fixed point is a point that, when a function is applied, gives you the same point again. Applying such a function to points near the fixed point will often send them toward the fixed point.

A "societal fixed point" might therefore be defined as a state that self-reinforces, remaining in the status quo—which could in principle be peaceful and self-sustaining, but could also be extremely boring—say, involving lots of people plugged into the Internet watching videos forever. Thus, we as humans might want, sometime soon, to start laying out design rules for technologies so that they will motivate us to some high goal or end—or at least away from dead-end societal fixed points. This process will involve thinking about how technology could help confront an old question of philosophy—namely, "What should I do, given all these possible paths?" Perhaps it is time for an empirical answer to this question, derived from the properties of our brains and the universe we live in.

Source: [http://www.technologyreview.com/printer\\_friendly\\_article.aspx](http://www.technologyreview.com/printer_friendly_article.aspx)



## Singularity Summit 2009: Open The Pod Bay Door, HAL

*By Stuart Fox*

Anna Salamon Battles The Pink Robots courtesy of Stuart Fox

Ray Kurzweil's concept of the Singularity rests on two axioms: that computers will become more intelligent than humans, and that humans and computers will merge, allowing us access to that increased thinking power. So it only makes sense to begin the conference with discussions of those two fundamental concepts. No one disputed the emergence of intelligence beyond our own, but they did give me plenty of reasons to

worry about how that process might take place.

### Artificial intelligence greater than our own is inevitable and dangerous.

According to Anna Salamon, a former NASA researcher who now works for the Singularity Institute for Artificial Intelligence that hosts the conference, artificial intelligence greater than our own is inevitable and dangerous. Salamon argued that biological brains have finite intellectual capacity. Just as a goldfish can't appreciate opera and a cat can't learn quantum mechanics, so too will humans soon confront problems beyond the comprehension of our slimy, mortal brains.

### Just as relatively weak human muscles can work together to create stronger lifting machines like cranes, relatively stupid human brains can design vastly more powerful computers minds.

She believes we will create super computers to solve those problems for us. Just as relatively weak human muscles can work together to create stronger lifting machines like cranes, relatively stupid human brains can design vastly more powerful computers minds. Unfortunately, Salamon worries that if humans and AI have divergent goals, we could find ourselves in competition with the AI for resources to achieve those different goals. And when you compete with something vastly smarter than yourself, you lose. She stressed that assuring humanity and AI have the same goals requires a level of care and responsibility greater than even our stewardship of nuclear weapons technology.

To head off the Skynet take over, Salamon advocates starting now to ensure that positive, human assisting missions get hardwired into the basic architecture of artificial intelligence.

But according philosopher Anders Sandberg, the nature of artificial intelligence development may complicate the embedding of those fail-safes. Sandberg believes that engineers have to base their first attempts at AI on the only current example of natural intelligence: the human brain.

### If the first artificial intelligence has to take the form of a human brain, it has to take the form of a particular human brain.

And if the first artificial intelligence has to take the form of a human brain, it has to take the form of a particular human brain. Sandberg noted that the first artificial brain, as copy of a specific human brain, would necessarily contain elements of the personality of the test subject that the artificial brain copied. Personality traits that could become locked into all artificial intelligence as the initial AI software proliferates.

Based on my experience with people who volunteer for scientific tests, this means the first artificial intelligence will most likely have the personality of a half stoned, cash-strapped, college student. So if both Salamon and Sandberg prove right, I think avoiding destruction at the hands of artificial intelligence could mean convincing a computer hardwired for a love of Asher Roth, keg stands and pornography to concentrate on helping mankind.

Take home message: as long as we keep letting our robot overlord beat us at beer pong, we just might make it out of the Singularity alive.

Source: <http://www.popsoci.com/scitech/article/2009-10/singularity-summit-2009-open-pod-bay-door-hal>

# Singularity Summit: A Personal Expression

By Razib Khan

My thoughts on the talks at The Singularity Summit 2009 below the fold...

Shaping the Intelligence Explosion - Anna Salamon: A qualitative analysis of the implications of the emergence of artificial general intelligence. Having talked to Anna before, and knowing the general thrust of the work of the SAI, not too surprising. AGI will come fast if it comes, it will be beyond our comprehension, etc. The main issue with Anna's talk was that it was hurried at the end, so perhaps we missed some points.

Technical Roadmap for Whole Brain Emulation - Anders Sandberg: Interesting. Lots of pictures. The whole field turned out to be a bit more brute force than I'd imagined. The "whole brain emulation" route seemed a bit at cross-purposes with discussions of AGI insofar as it seems to be a smaller ontological jump, so to speak.

Questions of consciousness & continuity which jump out of work as old as David Hume's kept leaping out of the questions in regards to these talks. I tend to be of the opinion that consciousness & continuity is an illusion, and we shouldn't stress too much about that aspect.

The time is now: As a species and as individuals we need whole brain emulation - Randal Koene: The *ought* to the previous talk's *is*. Didn't really convince that whole brain emulation is *the* technology we need to focus on (as opposed to more piecemeal enhancements, for forms of cognition which don't attempt to emulate our current brains as explicitly). Questions of consciousness & continuity which jump out of work as old as David Hume's kept leaping out of the questions in regards to these talks. I tend to be of the opinion that consciousness & continuity is an illusion, and we shouldn't stress too much about that aspect.

Technological Convergence Leading to Artificial General Intelligence - Itamar Arel: The thrust of this talk was that AGI was coming soon, perhaps on the order of 10 years. Most of the audience disagreed (he took a poll with a show of hands). The technical aspects of this talk were not too interesting or really comprehensible to me (yes, I know what parallel processing is superficially, but...).

Pathways to Beneficial Artificial General Intelligence: Virtual Pets, Robot Children, Artificial Bioscientists, and Beyond - Ben Goertzel: I've never tried out "Second Life," so a lot of this presentation was lost on me.

Neural Substrates of Consciousness and the 'Conscious Pilot' Model - Stuart Hameroff: Basically the same presentation as he gave at *Beyond Belief*. Cribbed from Emperor's New Mind.

Quantum Computing: What It Is, What It Is Not, What We Have Yet to Learn - Michael Nielsen: One of the best technical talks I've seen when limited to 20-30 minutes in front of an audience which doesn't consist of specialists. This was made doubly difficult since a substantial minority of the audience were specialists, while a substantial minority were non-technical (the largest number would have been technically oriented non-specialists). Stuart Hameroff was kind of a dick during the Q & A, and it looked like Nielsen took a long time answering one questions so that he didn't have to deal with a follow up question from Hameroff.

DNA: Not Merely the Secret of Life - Ned Seeman: Using DNA as a structural material in nanotech, etc. I'd encountered this stuff before, but it seemed that the non-biologically oriented people at the Summit were really wowed by this presentation.

Compression Progress: The Algorithmic Principle Behind Curiosity, Creativity, Art, Science, Music, Humor - Juergen Schmidhuber: Probably my favorite presentation. He was really funny, and even if you disagreed with the thrust of his points you had to acknowledge that he pulled off his arguments with aplomb. I'm still thinking about Schmidhuber's arguments in regards to novelty and patterns, though I'd encountered the ideas before.

Conversation on the Singularity - Stephen Wolfram and Gregory Benford: Mostly Stephen Wolfram talking. Lots of stuff from *A New Kind of Science*. When Wolfram was talking up Wolfram Alpha, Carl Zimmer, who was sitting next to me, jotted down the question "search for *Homo erectus* on his notepad.

Simulation and the Singularity - David Chalmers: David Chalmers was kind of being a belligerent dick at the bar after the Summit, so I'm not going to describe his talk :- (though it was pretty funny)

Choice Machines, Causality, and Cooperation - Gary Drescher: I missed this.

Synthetic Neurobiology: Optically Engineering the Brain to Augment Its Function - Ed Boyden: Weird coincidence, I had drinks





with one of Boyden's post-docs the previous night. He lost a \$5 bet with me in regards to who was older. Boyden's talk was dense, and I was already familiar with some of his work at the intersection of optics and neuroscience because I was hanging with his post-doc, if you're curious just look it up, it's pretty mind-blowing.

Foundations of Intelligent Agents - Marcus Hutter: I think I was at this talk, but I don't really remember an impression. I think it was good, but

the fact that I don't remember it is rather strange.

Cognitive Ability: Past and Future Enhancements and Implications - William Dickens: A lot of the stuff from *What is Intelligence?* was in this talk. A lot of people asked what I thought about this talk, because they knew that I have given a lot of consideration to the reality that most of the human race are morons. My basic attitude is that even if a lot of the trait-value difference is due to gene-environment correlation, what are you going to do about it? We don't live in Stalin's USSR. Also, Dickens reported that he had unpublished data which suggested that there was a 0.70 correlation between economic growth (GDP) and increase in the Flynn Effect.

The Ubiquity and Predictability of the Exponential Growth of Information Technology- Ray Kurzweil:  $Kurzweil(x) = \text{The Law of Accelerating Returns}$ .

More than Moore: Comparing Forecasts of Technological Progress - Bela Nagy: I wanted to see this, but I missed it. It was at 8 AM and I'd only gotten 4 hours of sleep, after getting 2 hours the previous night. Nerds party hard.

The "Petaflop Macroscope" - Gary Wolf: I watched this talk, and thought it was OK. Basically about experiments which deal in more decentralized forms of data collection and analysis; e.g., personal experimentation. Some of the questioners asked about controls and what not, but I thought they were being a little too nerdy. A lot of "Big Science" sucks too.

Collaborative Networks In Scientific Discovery - Michael Nielsen: Props to Nielsen for being able to present two very different talks. I enjoyed this, though the general idea is pretty obvious. They're important, and probably have a big future.

How Does Society Identify Experts and When Does It Work? - Robin Hanson: Read *Overcoming Bias*.

Artificial Biological Selection for Longevity - Gregory Benford: Talks about his new longevity supplement company based around the Methuselah Flies.

Critics of the Singularity - Ray Kurzweil: *The Law of Accelerating Returns*. More charts (updated).

The Finger of AI: Automated Electrical Vehicles and Oil Independence - Brad Templeton: Interesting, though it did seem more like something out of *Popular Mechanics*.

The Fallibility and Improvability of the Human Mind - Gary Marcus: Just read Kluge. Focused on memory, and suggested that since the mind is imperfectly engineered there's plenty of room for design improvements.

Macroeconomics and Singularity - Peter Thiel: The main argument here is that modern economic projections are based on expectations of technological innovations, ergo productivity growth, ergo GDP growth, and those projections may be wrong. In particular, Thiel suggests we look at science fiction from the 1950s and notice how little the world has changed, and the famous face that median wages have remained static since 1973 in the United States (an indication of the lack of productivity growth driven by technology). Overall a pessimistic view. Read *Knowledge and the Wealth of Nations*.

Venture Capitalist Panel: Peter Thiel, David Rose, Mark Gorenberg: This was weird. I mentioned to someone that it was like we were watching CNBC, and the moderated was a bizarre shouter. Well, someone told me that *he was* from CNBC. Pathetic.

The Singularity and the Methuselararity: Similarities and Differences - Aubrey De Grey: Same old Aubrey presentation, but he wanted to suggest that the Methuselararity was going to be a bigger change than the Singularity. Trying to provoke, but it didn't seem like too many people bit.

Cognitive Biases and Giant Risks - Eliezer Yudkowsky: Most people are stupid. Read *Judgment under Uncertainty: Heuristics and Biases*.

Discussion: Eliezer Yudkowsky, Aubrey De Grey, Peter Thiel. Moderator: Michael Vassar: This was funny. Michael made a joke about a cure for AIDS being driven by Ed Witten contracting HIV. Thiel was a little out of place. It was pretty amusing.

How much it matters to know what matters: A back of the envelope calculation - Anna Salamon: Preach it girl!

**Note:** I go to the Summit mostly to socialize, as do many others judging by how many people are always lounging around the coffee room. I found the discussions pretty interesting, as well as a few of the talks. Probably though I will take away more the contacts I made with some really interesting people after the talks at bars and what not.

Source: [http://scienceblogs.com/gnpx/2009/10/singularity\\_summit\\_2009.php](http://scienceblogs.com/gnpx/2009/10/singularity_summit_2009.php)

# Yet More Thoughts on the Singularity Summit

By J. Storrs Hall

There were talks by two of SIAI's researchers, Eliezer Yudkowsky and Anna Salamon, on the general subject of producing a friendly AI as opposed to whatever the alternative is, presumably the Terminator scenario or the like. Eliezer did his usual thing on cognitive biases in humans, and Anna ended the conference with a very nice presentation of utility-based meta-decision theory — how much time should you spend thinking about what to think about? (Disclosure: I am partial to utility-based meta-decision theory having done a bit of work on it in the 90s in the context of internal computational resource allocation in AI systems.)



The key was that the actual human soldiers do so poorly that even a crummy error-prone AI could do better.

The thing that struck me about both of these talks was that the common thread was: humans tend to make dumb decisions.

It reminded me of a talk by Ron Arkin at AGI08 about robot ethics. He was discussing using (current-day, rule-based, narrow) AI to make ethical decisions in places like battlefields and military occupation operations. The key was that the actual human soldiers do so poorly that even a crummy error-prone AI could do better. He underlined his talk with a quip that has become my motto for human vs. AI issues of all kinds: "It's a low bar."

So I would claim that the SIAI researchers have, perhaps unintentionally, provided one of the best arguments for developing AI as fast as possible and putting it into use in the real world without delay: humans making these decisions are messing up big time. We don't need superintelligence to do better, just human-level perception combined with rational decision-making — rational decision-making, I might add, that we already know how to do and believe and understand is the right way to do it, but just don't bother to for most of our decisions. It's a low bar.

we should be spending a lot more effort on AI, and indeed on all the "Singularity" technologies, including nanotech.

I do have one quibble with Anna's formulation of the problem in her talk; but before I mention it let me reiterate that I think her conclusion was absolutely correct: we should be spending a *lot* more effort on AI, and indeed on all the "Singularity" technologies, including nanotech. That said, I think she left out one of the key sources of utility in the back-of-the-envelope calculation: the utility of, and to, the possible future AIs themselves.

We value humans more than animals, animals more than plants, plants more than rocks, because we have an intuition that complexity, sentience, reflection, consciousness, understanding, and all of the other qualities that are correlated with increasing intelligence are in fact the constituents of our values. Now our current AI programs have very little or none of these things and are the cognitive equivalents of insects or at best reptiles. However, the AGIs of the not-too-distant future are going to be at least as intelligent, complex, sentient, and so forth as we are. It would be the height of egocentric selfishness to claim that they weren't just as deserving or moral concern as we are. Indeed, if we have the moral courage, skill, and luck to build superintelligences, they would have the capacity to be *more* valuable than we are.

Act in such a way that you treat any sentient intelligence, whether in your own species or in any other form, always at the same time as an end and never merely as a means to an end.

So the calculation must include not only the value (or danger) of the AIs to us, but the value to the AIs themselves. We could perhaps rephrase Kant's Categorical Imperative (Second Maxim):

Act in such a way that you treat any sentient intelligence, whether in your own species or in any other form, always at the same time as an end and never merely as a means to an end.

Source: <http://www.foresight.org/nanodot/>



**Singularians in 3-D.** Filmmaker Barry Ptolemy films Ray Kurzweil in a zero-gravity chamber for the film *Transcendent Man*.

STEVE BOXALL / PTOLEMAIC PRODUCTIONS

## The Cinematic Singularity

Ray Kurzweil is immortal—on film.

By Patrick Tucker

Scene: A movie theater on the west side of Manhattan during the Tribeca Film Festival. The audience teems with hip New York film students eager to see the world premiere of a new documentary. They're joined, unexpectedly, by computer scientists, geneticists, and futurists from Denmark, the United Kingdom, and Hong Kong. The lights dim. After a brief opening, inventor Ray Kurzweil appears on the screen, looks squarely into the camera, and says, "I'm never going to die."

So began the world premiere of Barry Ptolemy's *Transcendent Man*, a feature-length film that chronicles Kurzweil's ideas on the future of technological innovation. Chief among his forecasts: In the next 30 years, humans will use genomics, nanotechnology, and even artificial intelligence

to escape death.

"Soon, we'll be able to reprogram the underlying process of biology," Kurzweil told THE FUTURIST after the screening. "We've mapped the genome; we're making exponential progress in reverse engineering it. We can design new genetic interventions and test them with computer modeling. These breakthroughs are at an early stage, but because medicine is an information technology, it will progress at an exponential rate. If I were to say to you, "One day, you'll have nanobots in your bloodstream and they'll be keeping you healthy from the inside," you might respond that that sounds fairly futuristic. But we're already doing experiments in animals with first-generation nanodevices that are blood-cell sized." For instance, a team at Sandia National Laboratories is working to implant individual red blood cells with DNA, proteins, or drugs via a machine with molecularly small parts.

With the 2005 publication of his fifth book, *The Singularity Is Near*, Ray Kurzweil became an international phenomenon. His ideas have appeared in the *New York Times*, *Wall Street Journal*, FOX News, CNN, and hundreds of newspapers, magazines, and networks. *Transcendent Man* follows Kurzweil as he discusses his ideas with various glitterati, including *Star Trek* star William Shatner, musician Stevie Wonder, and former U.S. Secretary of State Colin Powell.

Technology watchers like *Wired* founding executive editor Kevin Kelly also make appearances in the film to discuss — and dispute — Kurzweil's ideas.

"We'll have immortality one day, perhaps in 300 years," says Kelly.

"The reason many people, including some futurists, have a myopic view of the future is that they think linear; the actual nature of information technology is exponential. The linear perspective is intuitive; the exponential perspective is historically accurate. The computation in a cell phone today is a million times cheaper and a thousand times more powerful than the computer I used as a student. That's a billion-fold increase in price performance," Kurzweil told THE FUTURIST.

"Part of being a futurist is looking back," director Ptolemy remarked. "He's looking back at trends that have happened since the dawn of the universe. It fascinates me. I don't know why, exactly. Human potential, what we can do, is fascinating to me."

Kurzweil's relationship with his late father was key to Ptolemy's vision. At one point during the filming, Kurzweil confessed that he hoped to use artificial intelligence to bring his father back in the form of an interactive avatar. Even after hearing Kurzweil speak hundreds of times, the announcement was a surprise to Ptolemy. "That was the first time he'd expressed that idea on film," he said.

"He's really still the only person who was close to me who has died, but that was enough to really make me aware of just what a tragedy death is," said Kurzweil.

*Transcendent Man* is Ptolemy's first film, which he co-produced with his wife, Felicia, after Kurzweil's ideas moved him. "I read *The Singularity Is Near* and when I was done with the first chapter, it was a movie," he said.

### About the Author

Patrick Tucker is the senior editor of THE FUTURIST magazine and director of communications for the World Future Society.

Kurzweil's latest book, with co-author Terry Grossman, is *Transcend: Nine Steps to Living Well Forever* (Rodale Books, 2009).

Source: <http://www.wfs.org/August-Sept09/Singularitarianpage.htm>

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*Iranian Futurists Academy*



کانون آینده پژوهان ایرانی

**IRANIAN FUTURISTS ACADEMY**

Futures Discovery (FD) was formed in 2006 to assist Iranian individuals and organizations in understanding what the future may hold in store and enable them to make better strategic decisions today about their preferred tomorrow. Over the past three years, FD has gained recognition as an authoritative source of knowledge about trends and developments in the Iranian futurist community.

Everyone is interested in what the future of mankind will be like. Through the choices each of us makes, we determine whether tomorrow's world will be a better place for humans to live. The purpose of futures studies is to investigate the various kinds of futures that are possible. By utilizing the results of futures research to make well-informed choices, humans can exert a positive influence on their own destiny.

Achieving the horizons of futures studies, Futures Discovery tries to put the foundations of futures studies in Persian speaking societies. Building great and inspiring visions is the main objective of this scientific-research website. These visions are in fact the subjective images of the future.

Futures Discovery, the Iranian Futurists Academy was established in 2006 for Futures studies. Seven Iranian educated persons were the founding members, and additional institutions and members are joining the academy.

### Goals

Futures Discovery aims to influence the long-term development of Iranian society by advancing futures research and its utilization in our country. Our efforts in promoting futures studies focus on the following objectives:

- to develop the material, organizational, and intellectual bases for futures research in Iran;
- to advance higher education grounded on futures research;
- to foster contacts among futures researchers as well as between the researchers and those who could utilize their work;
- to maintain contacts with research institutes and researchers in foreign countries;
- to communicate the latest results of futures research to the Iranian public and to emphasize the necessity of such research.

Those interested in obtaining more information on the academy, please contact: info@futuresdiscovery.com