

BEYOND INFINITE: A 21ST CENTURY REVOLUTION?

by Seth Baum

“If we can just survive this next century or so, given the challenges we’ll be facing, then we should be well on our way towards enjoying the upcoming eons.”

Those who have studied the matter put the odds of humanity surviving the 21st Century somewhere between 50 and 75 percent. This essay is dedicated to improving those odds.

I spent a solid week in a state of shock trying to comprehend the magnitude of the situation, like a recently unplugged Neo from *The Matrix* looking back at his former world with an overwhelming and disconcerting sense of burden. Could the odds of humanity going extinct in the next 100 years really be so high? Mentally, I’m tough, but I’m not that tough.

To give you a glimpse of what’s at stake here, consider that barring any major catastrophes, the Earth’s ecosystems will remain hospitable to us for another 500 million years or so. If we can keep our civilization moving this long, then colonizing space should be easy, which buys us another 10^{14} years or so, when all stars burn out. By then, we may have mastered living without stars, which might keep us around for another 10^{32} years or so, until the components of atoms start decaying en-masse. But by then, we may have figured out how to beat that. Indeed, our survival for an infinite amount of time, whatever that means, cannot currently be ruled out. That’s a lot of issues of *Whats Up* magazine, among other things. So to say that a lot is at stake here is, well, a big understatement.

Those who have studied the matter seem to agree that if we can just survive this next century or so, given the challenges we’ll be facing, then we should be well on our way towards enjoying the upcoming eons. However, they also seem to agree that we’ll be facing some pretty tough challenges. It is this (almost unfathomably tall) task that Pulitzer Prize-nominated author and technologist James Martin calls the 21st Century Revolution. Martin, who has published over 100 other books (and I thought I write a lot!), discusses these challenges in *The Meaning of the 21st Century*.

Many of these challenges are by now familiar. We must tame our global climate and make sustainable our use of natural

resources. We must protect ourselves against disease outbreaks—including diseases we design ourselves. And of course, we must not blow ourselves to smithereens.

Other challenges are less well known. For example, artificial intelligence is improving much faster than we are, so sometime this century, we might no longer be the smartest creatures on Earth. These much smarter beings might change the planet radically. If we design them well, we may be sitting very pretty; if not, we may be lying in graves. And new threats and opportunities we have not yet imagined may come up, possibly taking us by surprise.

While we face unprecedented challenges, we also hold unprecedented advantages. Two high school students built a 7,000-member coalition to aid Darfur via MySpace and Facebook. I never would have learned of these challenges without reading and corresponding online. And whether it’s medical breakthroughs or climate forecasting, we’re building powerful knowledge that can be used for great good—if we can figure out how and choose to do so.

Since the early days of space exploration, physicists and philosophers have pondered the Fermi paradox: By the numbers, the universe should be bursting with intelligent civilizations. So where are they? One terrifying possibility is that such civilizations have a strong tendency for self-annihilation once they develop the capacity to do so, as we now have. Another possibility is that, however unlikely it is, ours is the only advanced civilization anywhere nearby. For all we know, this may be life’s one shot at something cosmically awesome. I’ll see what I can do to help out. Hopefully you will too.

To learn more about extinction threats and other challenges and opportunities facing humanity, check out the following books and organizations:

- *The Meaning of the 21st Century* by James Martin.
- *Our Final Hour* by Martin Rees. This accessible read puts our upcoming challenges into perspective.
- *Catastrophe* by Richard Posner. This book brings a valuable social scientist perspective and has a treasure trove of a bibliography.
- The James Martin 21st Century School. An Oxford University-based collection of research groups. www.21school.ox.ac.uk
- The Lifeboat Foundation, a nonprofit working on as many aspects of humanity’s survival as it can get its hands on. www.lifeboat.com
- The Singularity Institute for Artificial Intelligence, a nonprofit working specifically on the Artificial Intelligence risk and opportunity. (Disclosure: I am currently a guest contributor to its blog.) www.singinst.org

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Seth Worries she’ll have less time to ponder the cosmos as a good student.