

What can Technology Ultimately Make Possible, and What are the Ultimate Possibilities for Life?



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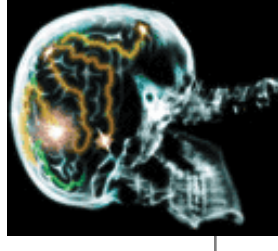
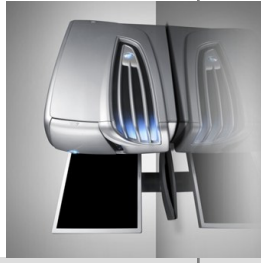
<http://www.melanieswan.com>

Slides: <http://www.slideshare.net/LaBlogga/slideshows>



fq(x)
Foundational Questions Institute

What is the future of intelligence?

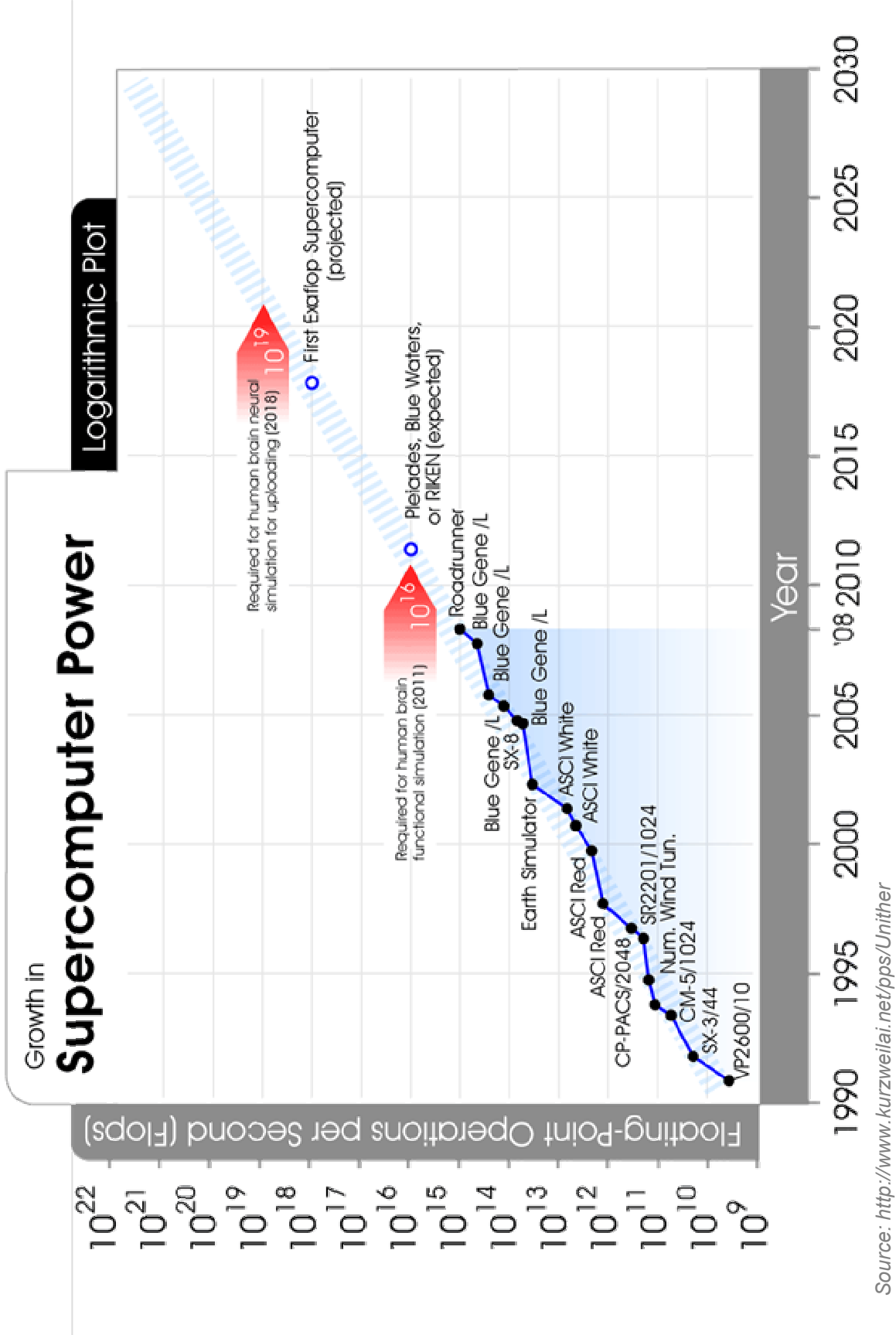


Machine	Human
<ul style="list-style-type: none">▪ IBM Roadrunner: 1 petaflop/s (>1,000 trillion IPS) and 80 TB memory¹▪ Unlimited operational/build knowledge▪ Quick upgrade cycles: performance capability doubling every 18 months▪ Linear, von Neumann architecture▪ Understands rigid language▪ Special purpose problem solving (Deep Blue, Chinook, ATMs, fraud detection)▪ Metal chassis, easy to backup	<ul style="list-style-type: none">▪ An estimated 20,000 trillion IPS and 1,000 TB memory²▪ Limited operational/build knowledge▪ Slow upgrade cycles: 10,000 year evolutionary adaptations▪ Massively parallel architecture▪ Understands flexible, fuzzy language▪ General purpose problem solving, works well in new situations▪ Nucleotide chassis, no backup possible

¹Source: Top 500, June 2008, <http://www.top500.org/lists/2008/06>, <http://www.top500.org/system/8968>, <http://www.crn.com/hardware/208403186>

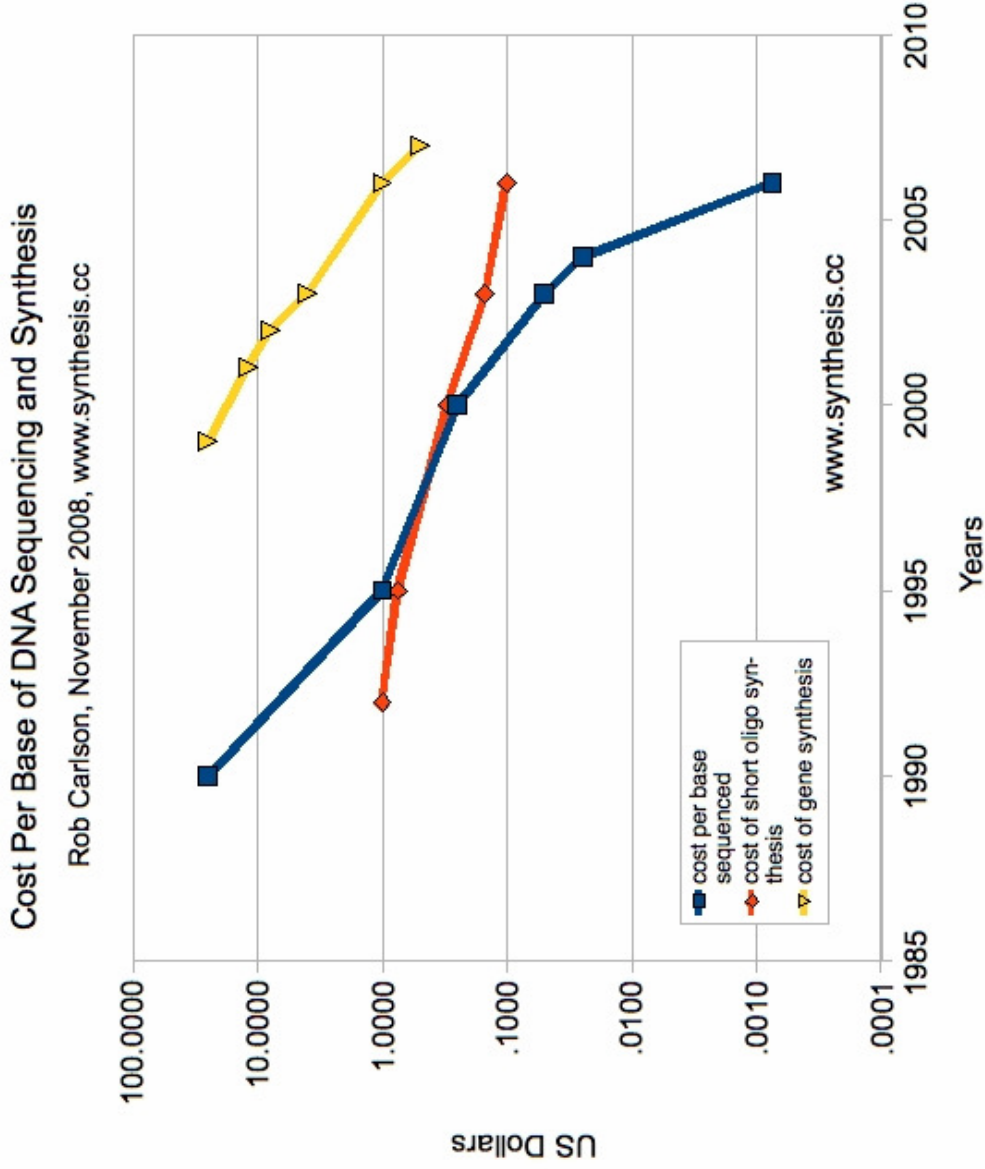
²Source: <http://paula.univ.gda.pl/~dokgrk/bre01.html>

Full human brain neural simulation estimate: 2018



FQXi Ultimate possibilities for technology and life

Biotechnology speedups: 12 months (vs. 18)



Source: http://www.synthesis.cc/graphics/carlson_cost_per_base_nov_08.jpg

Reengineering life into technology

- All matter (including life) designed to spec
- Purpose-driven form factors
 - Elective embodiment
- Issues
 - Transhumanism, posthumanism
 - Multiple persistent copies
 - What is intelligence?
 - Purpose of humans, of intelligence?
 - The ultimate possibilities for life and technology: a function of the ability to physically manipulate the universe

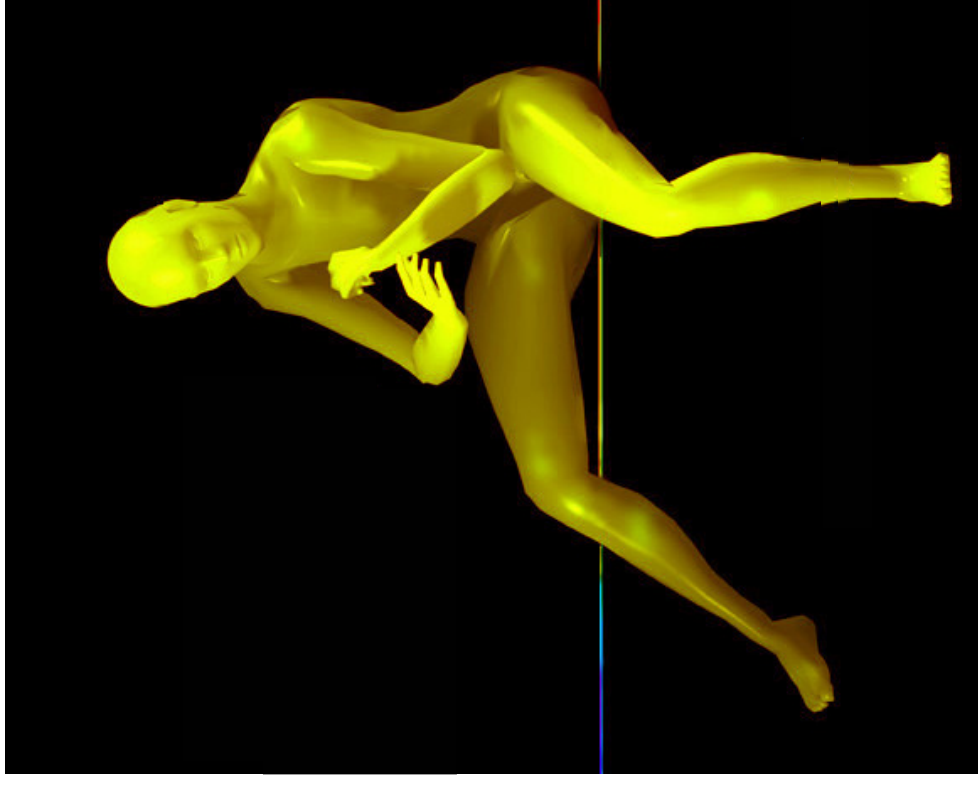
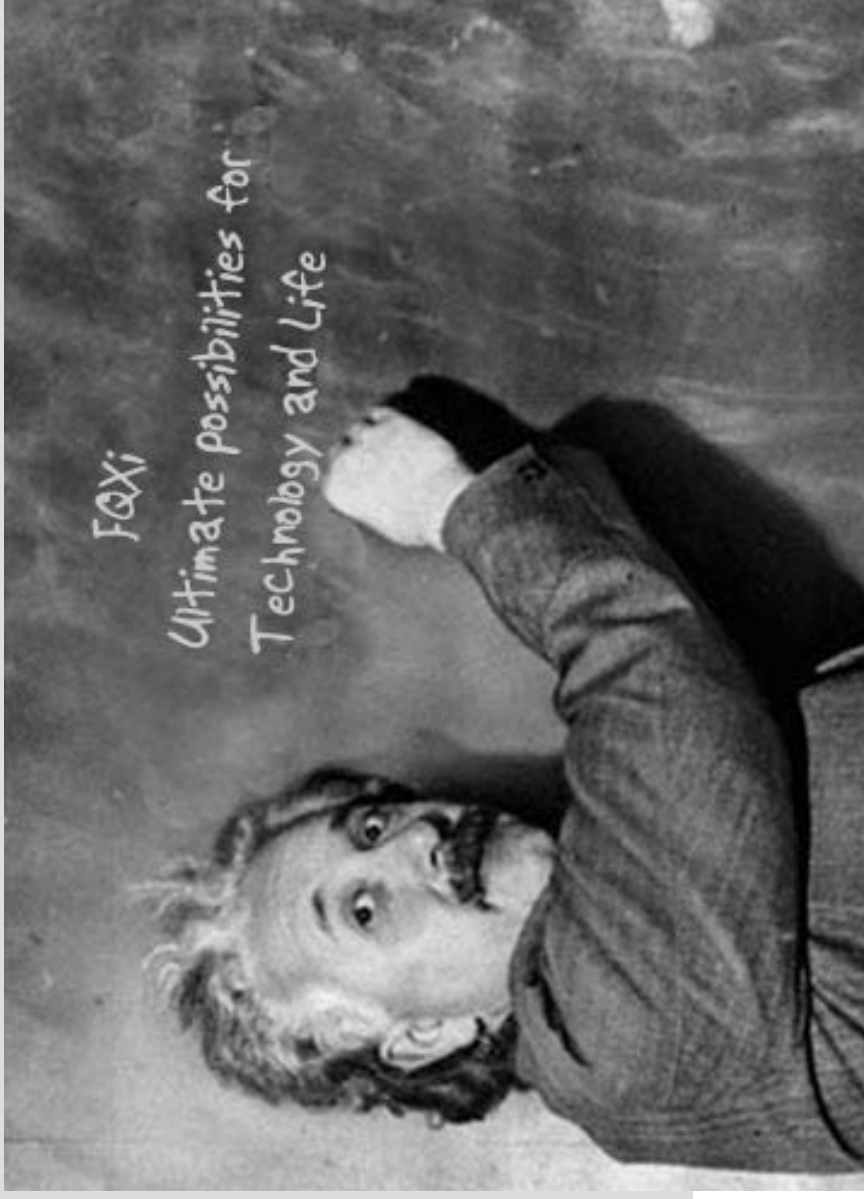


Image: Natasha Vita-More, *Primo Posthuman*

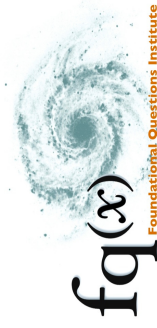


Thank you

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