The Reproductive Revolution

David Pearce

Abstract

Since the Cambrian explosion, pain and suffering have been inseparable from the existence of life on Earth. However, a major evolutionary transition is now in prospect. One species of social primate has evolved the capacity to master biotechnology, rewrite its own genetic source code, and abolish the molecular signature of experience below "hedonic zero" throughout the living world. This talk explores one aspect of the evolutionary transition ahead, namely the reproductive revolution of designer babies. How much of traditional "human nature" do we want to conserve?

The Reproductive Revolution

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"May all that have life be delivered from suffering"

-Gautama Buddha

(trad. c.566 BC - c.480 BC)

"We advocate the well-being of all sentience, including humans, non-human animals, and any future artificial intellects, modified life forms, or other intelligences to which technological and scientific advance may give rise."

-The Transhumanist Declaration

(1998, last updated 2009)

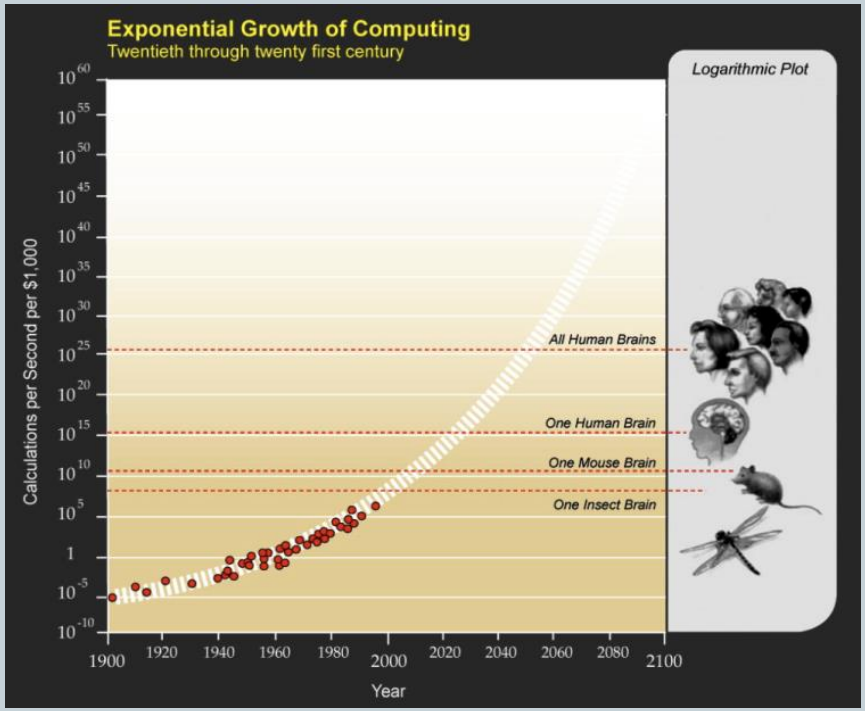
www.humanityplus.org/learn/philosophy/transhumanist-declaration

The Reproductive Revolution

Recursively self-improving organic robots can modify their own genetic source code and bootstrap our way to full-spectrum super intelligence. Genetically enhanced humans can recalibrate the hedonic treadmill, abolish ageing and disease, and phase out suffering throughout the living world.

The Reproductive Revolution

Darwinian life is typically "nasty, brutish and short". But later in the 21st century, every cubic metre of planet Earth will be computationally accessible to surveillance, micromanagement and control. God-like power brings complicity. At the molecular level, how much much pain and suffering do we want to conserve in the living world?



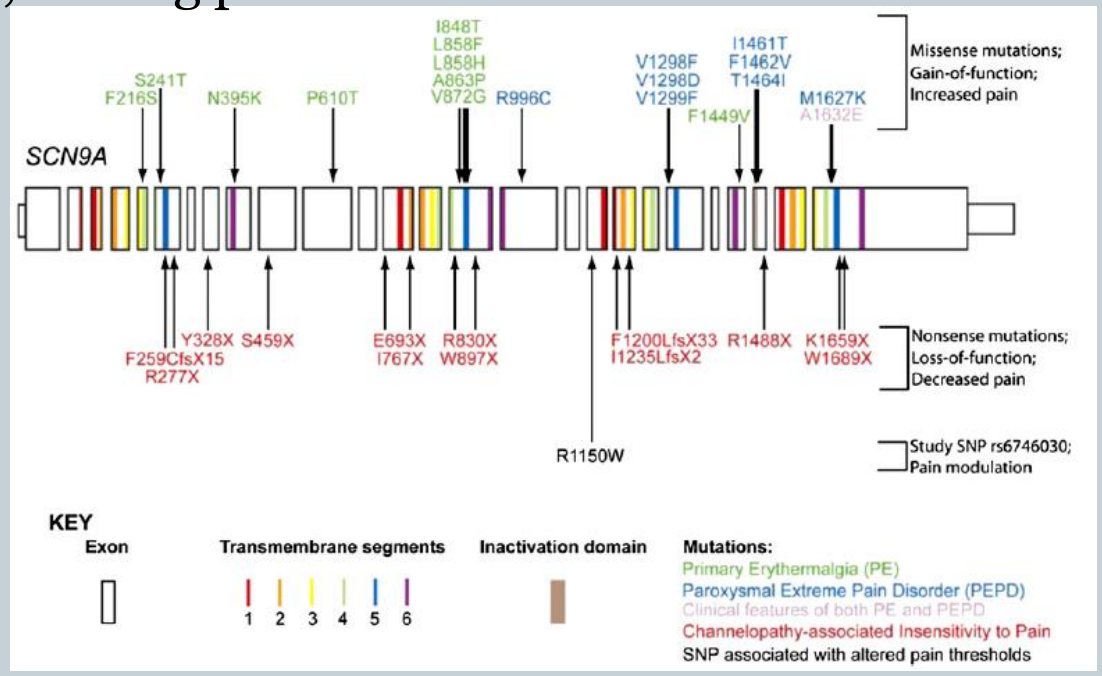
The Reproductive Revolution

Traditional Sexual Reproduction versus Designer Babies

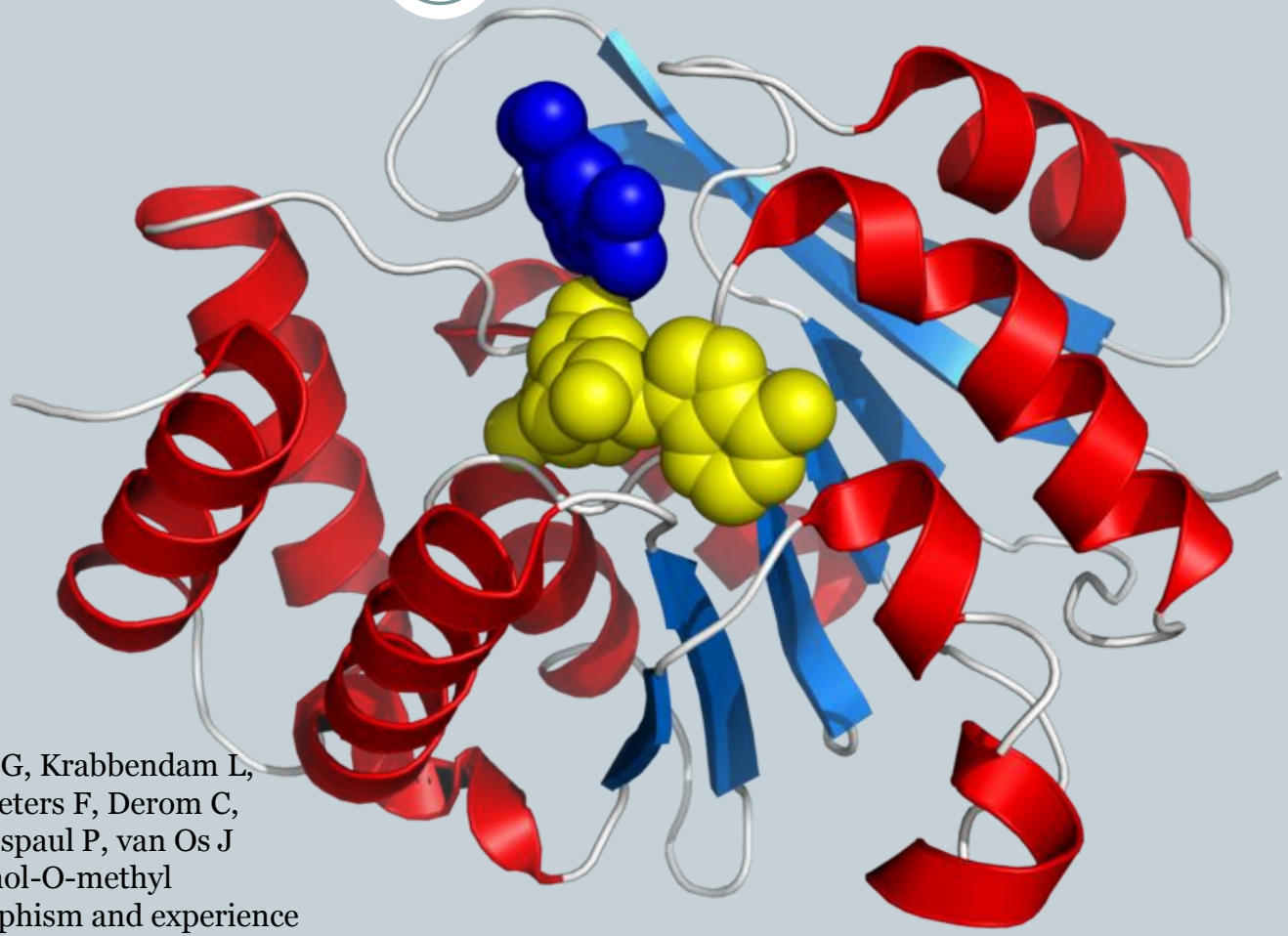
The Case for Universal Preimplantation Genetic Diagnosis
Case Study One: *SCN9A Gene*

- A single gene plays the dominant role in our level of pain-sensitivity
- Variant alleles of the gene SCN9A code for the a-subunit of the voltage-gated sodium channel Nav1.7 in nociceptive neurons
- Activating mutations in SCN9A lead to rare conditions such as "man on fire" syndrome - relentless, searing pain
- Inactivating mutations cause a complete absence of pain
- Other alleles cause unusually high, or *unusually low*, pain sensitivity

Reimann *et al*, Pain perception is altered by a nucleotide polymorphism in SCN9A, *Proc Natl Acad Sci.* USA. 2010 Mar 16; 107(11):5148-53.



The Case for Universal Preimplantation Genetic Diagnosis
Case Study Two: *COMT Gene*



Wichers M, Aguilera M, Kenis G, Krabbendam L, Myin-Germeys I, Jacobs N, Peeters F, Derom C, Vlietinck R, Mengelers R, Delespaul P, van Os J (December 2008). "The catechol-O-methyl transferase Val[158]Met polymorphism and experience of reward in the flow of daily life". *Neuropsychopharmacology* **33** (13): 3030–6.

Pitfalls

Selection Pressure in a Post-Darwinian World

The "blind" genetic roulette of natural selection will shortly be replaced by a novel kind of selection pressure. Prospective parents will *pre-select* alleles and allelic combinations for a new child *in anticipation of* their psychological and behavioural effects.

"Nothing is too wonderful to be true if it be consistent with the laws of Nature."

-Michael Faraday

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Philosophy: Abolitionist.com

The End