

Synapses, neurons and brains

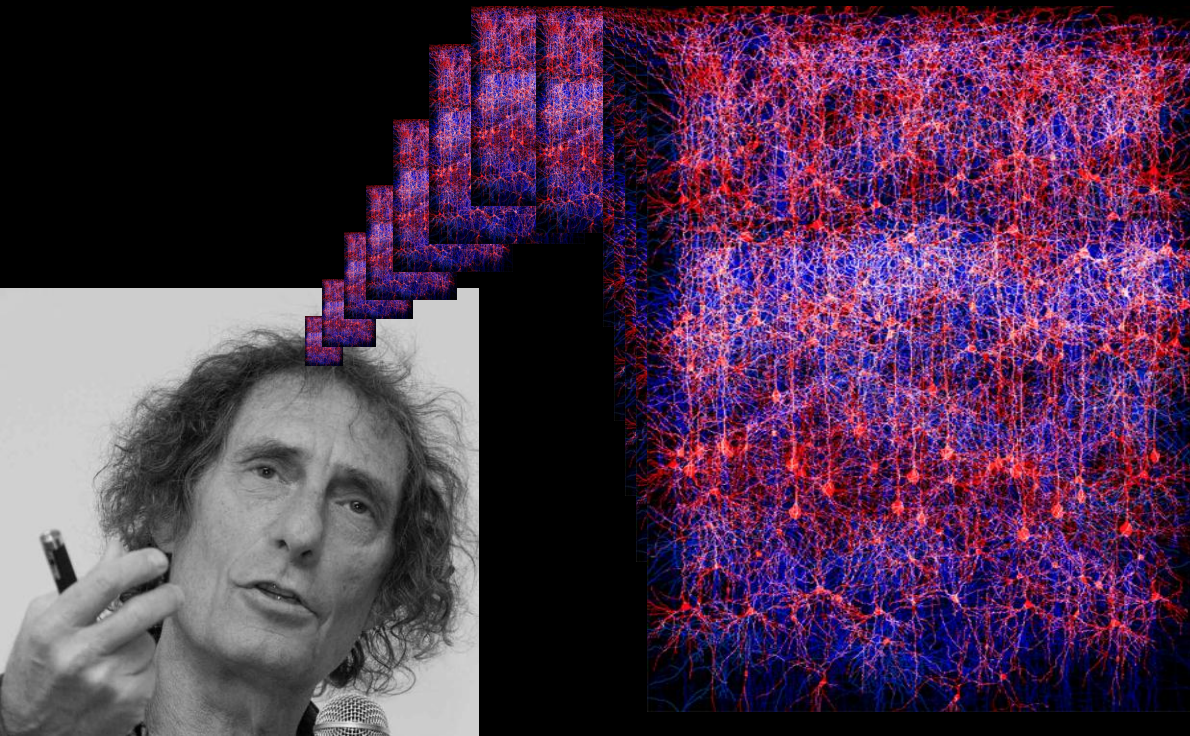
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Coursera 2013



Lesson #1

Brain excitements for the 21st century

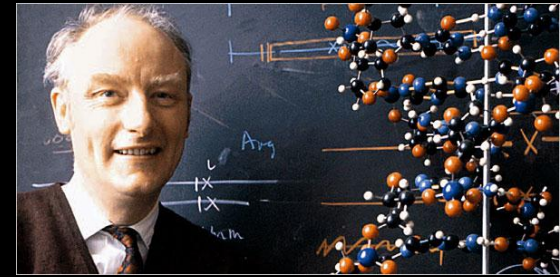


Kick start

- Great thinkers think about the brain
- How it (us) all started?
- Brain Blossom worldwide
- Structure of modern brain-research centers
- The problem with “understanding the brain”

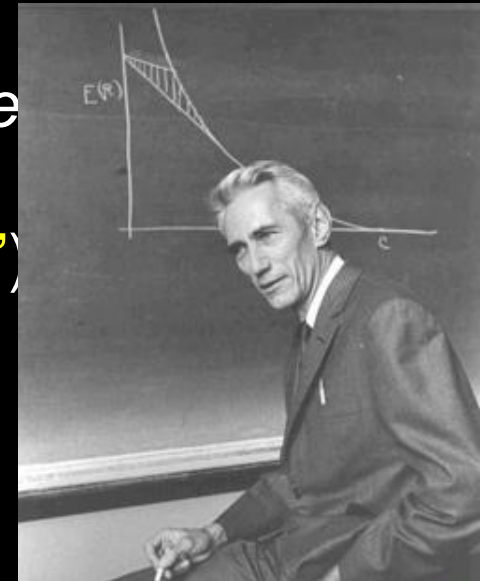
"You, your joys and sorrows, your memories and your ambitions, your sense of personal identity and your free will are in fact no more than the behavior of a vast assembly of nerve cells and their associated molecules"

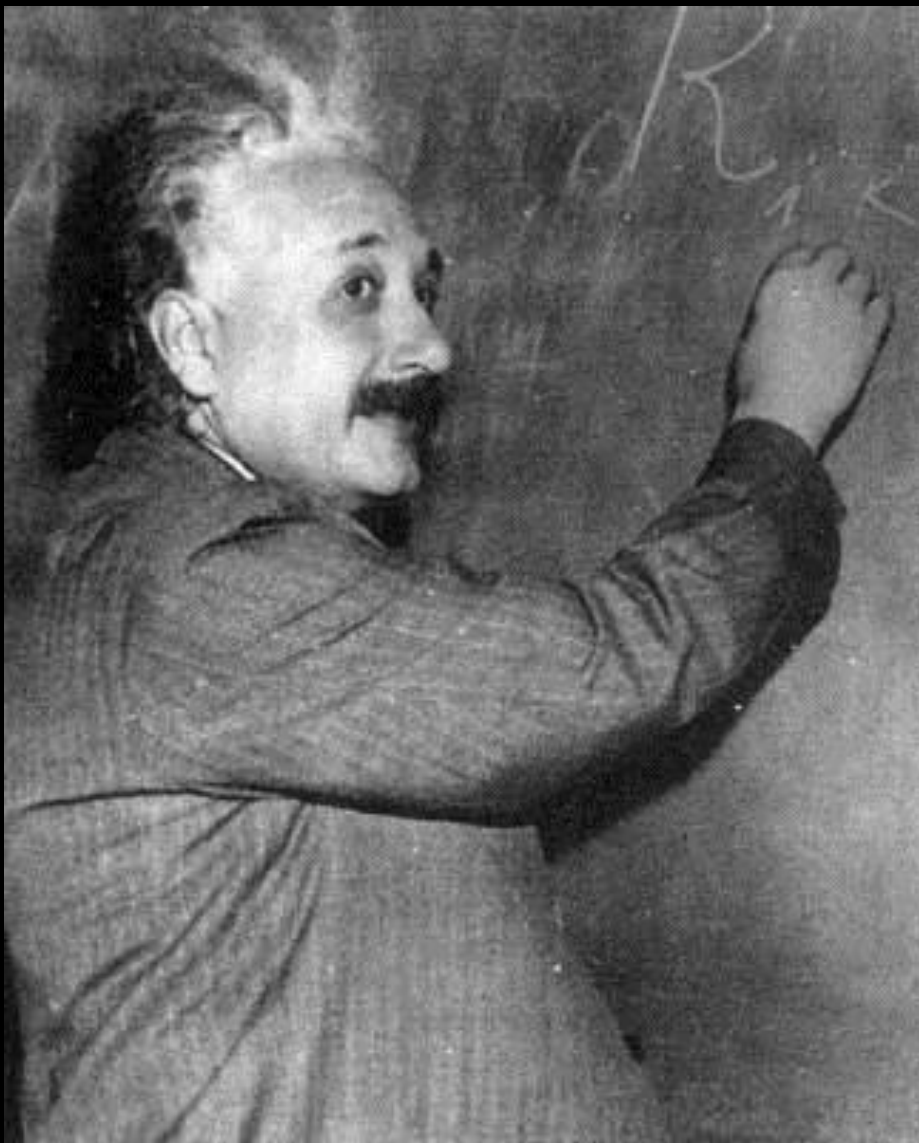
(Francis Crick, Nobel Laureate 1962 – “the father of DNA”).



"Machine think? You bet! We're machines and we think, don't we?"

(Claude Shannon – “the father of information age”)





***“The most
incomprehensible thing
about the world is that it
is at all comprehensible”.***

So what is the route to **comprehend the brain?**

The start

Or

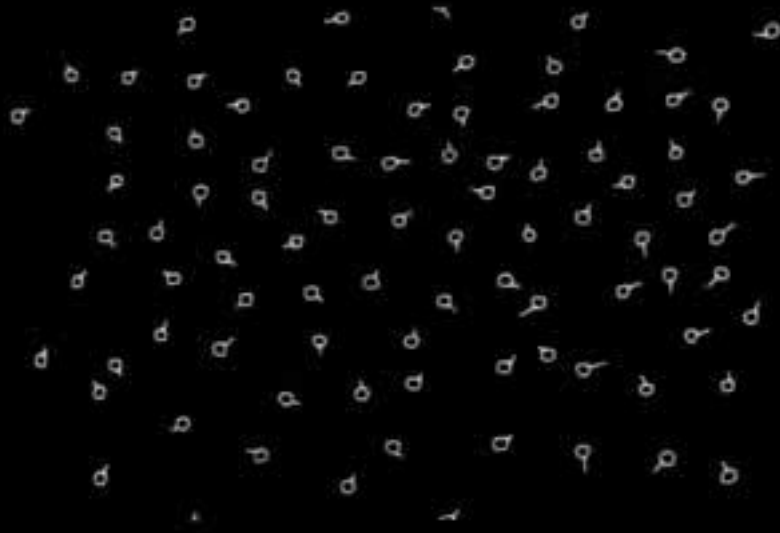
3.5 Billion years of life on earth

The Homo sapiens sapiens
&

The ~ 100 years old “Human Brain Project”

200,000 years

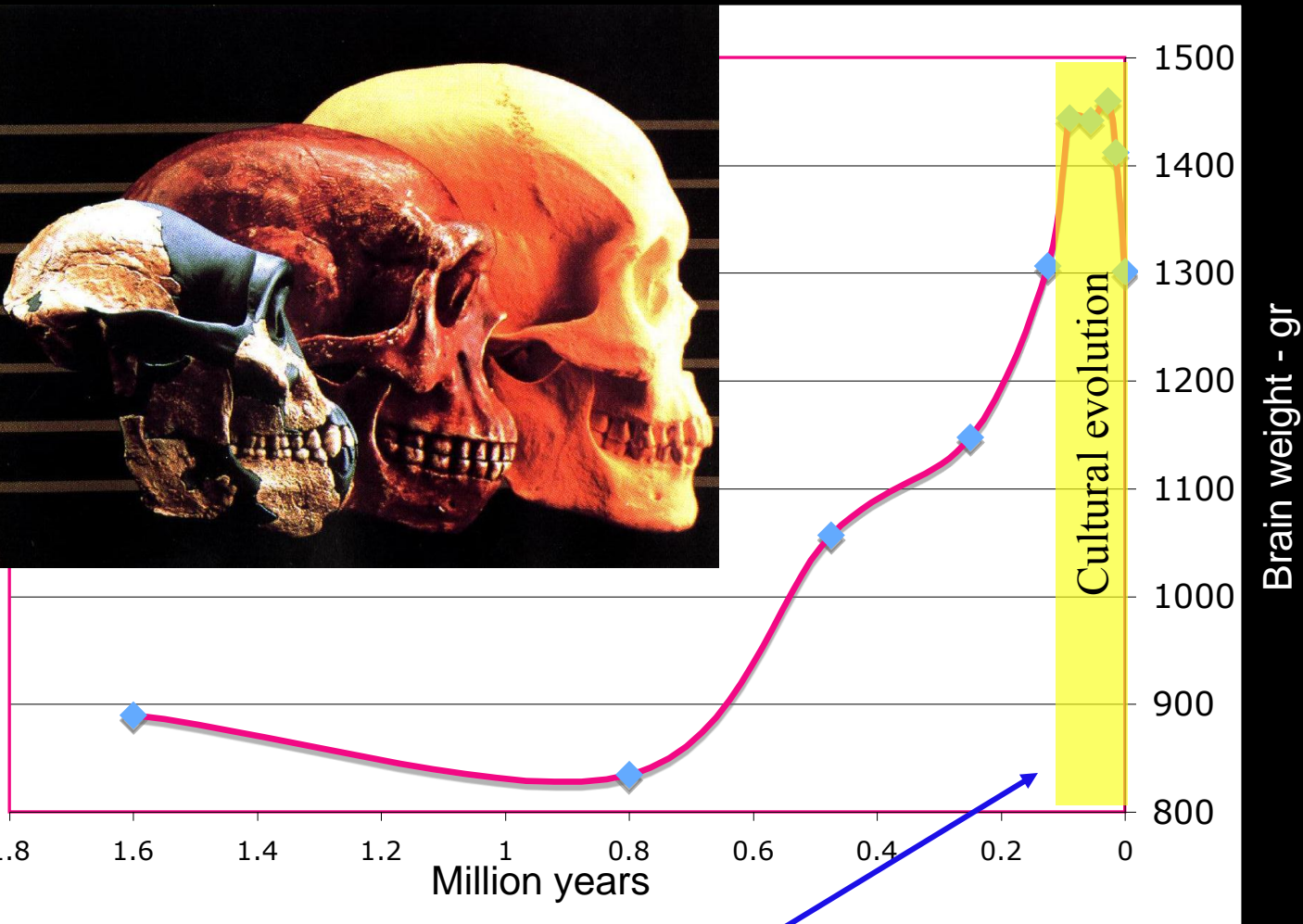
Humans



The development of mammalian “big brains” 200 Million years - TODAY



Modern Humans ~ 200,000 years & Cultural Evolution



Culture explosion of Homo sapiens sapiens

Understanding/repairing our brain

Today

Cell Phones, ICT

Today

Modern Computers

70 years

Science

3,000 years

Language/Math

5,000 years

Art

(60,000 - 30,000 ago)