

MICHAEL ARTHUR BUCKO

UNDERSTANDING

MORTALITY

ME

- @transhumanbob

MY PROBLEMS

- Longevity, immortality, transhumanity
- Cooperating with numerous neuroscientists, biologists, in think tanks with people creating organoids, doing optogenetics, learning from bacteria and DNA

AGENDA

- Thinking
- Death
- Human brain
- Consciousness
- Solving with data

THINKING-1

- World is changing dramatically!
- Exponential and clear, and re-learn
- Exponential: take a look around and use the right tools more often than before to see even farther
- Clear: embrace the rel. big pic
- Re-learn: don't get too fixed! Re-learn vocabulary!

THINKING-2

- Take the best tools and your applicability will dramatically change
- Check out prof. Motl's take on free will — what can we learn from quantum physics?
- Share tool now or focus on self — reproduction is a great example of sharing tool now

DEATH

- What is it?

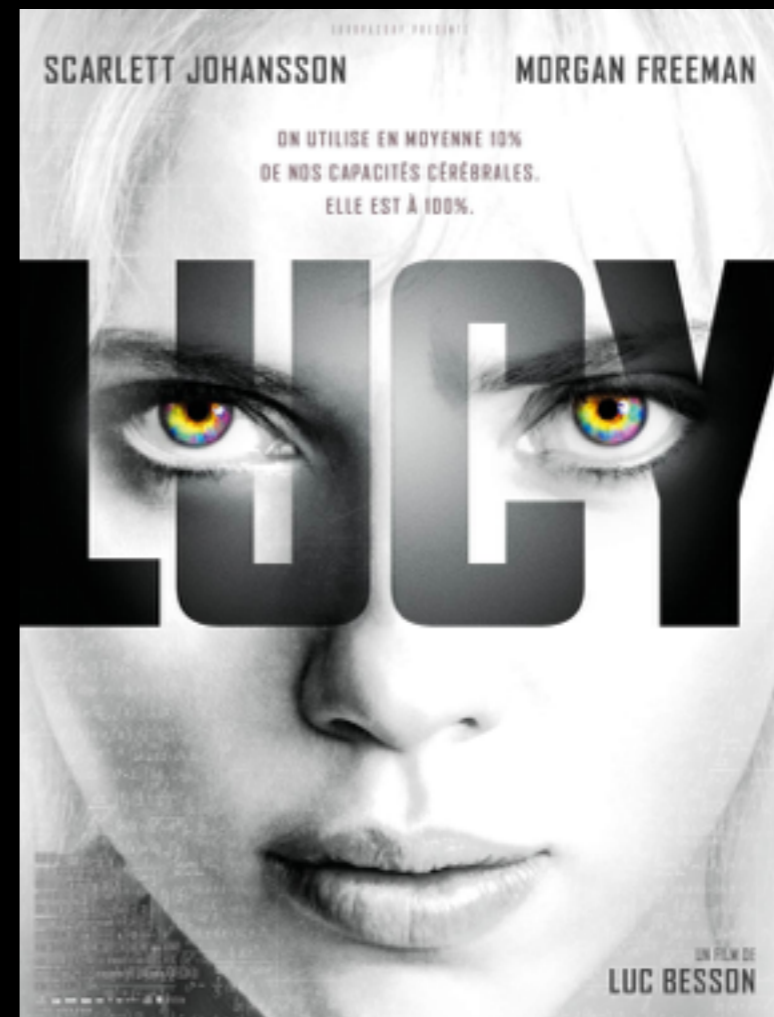
DEATH: OPTION 1

- As long as there is no argument against it.. it is the accumulation of damage in a functioning body that results in a difficult to revert body's inability to function anymore

Solution:
less damage

DEATH: OPTION 2

- From within a box an arbitrary damage to the body can be seen as something else in a different reference frame
- Bodies change every second
- Solution:
re-definition of life
(transhumanity =
step 1)



DEATH: SOLUTION

- Both 1 and 2 are going to happen: both need data-driven approaches
- 2 is “knowably” long run and $2 \gg \gg 1$
- Regular reasoning can’t currently work— to much data

DEATH IS PART OF REALITY

- Too much data for us now? clarity and exponentially of thought matter to build new abstraction
- Modelled using science (falsifiability)
- Can't currently simulate universe (not only unification problems)
- Learning not yet fully solved at "data level"
- "Data level" learning reality is not within our current applicability — understand & augment brain

- Let' talk about .. brain

STATE-OF-ART - 1 (BRAIN)

- Brain organoids allow us learn how to cure diseases faster
- EM stimulation allows us to learn how brains react
- Brain transplants are currently impossible — still, there are some success stories related to the topic
- Nano-technology allows us to interact with tiny elements in our bodies — we can augment brain

HUMAN BRAIN OUTSIDE OF A HUMAN BODY

- Many issues: sensory deprivation, spinal cord issues, brain working states, blood supply, cerebrospinal fluid supply, bone marrow issues, blood-brain barrier, haemolytic reactions, how to augment and stimulate, brain degeneration, how much of it we really need..
- Data learnt from experiments, tough to experiment on people

HUMAN BRAIN OUTSIDE OF A HUMAN BODY

- Steering EM data to play with organoids
- Nano-perspective learning allows us to re-learn cellular biology
- Cognition-level learning using experiments

STATE-OF-ART - 2 (NEW DATA)

- We will soon live in the data-level mixed reality
- With optogenetics steering cognition
- With fusion re-thinking forms
- With nanobiology re-learning regeneration
- With vitrification re-learning storage
- With 3d printing eliminating dependencies

STATE-OF-ART - LEARN FROM DATA

- We need bridging— cannot go directly to the answer
- Everything is going to be represented at the data level...
- Using falsifiability for reinforcement
- The world is eating experience data now!

ESCAPING DEATH-1

- Longevity is "small" fixing human body
- Transhumanity is exchanging human body
- Really, no fixing w/o changing
- Transhumanity >>> Longevity

ESCAPING DEATH-2

- Mixed reality life is personalised reality-learning procedure
- Use data to learn life carriers on bio data
- Building life carriers / life using mechanics & robotics
- Living outside of body,.. but with consciousness?

CONSCIOUSNESS-1

- Some say that consciousness is an intrinsic property of matter , but the “impossibility” proofs work only in trivial cases
- As long as there is data, consciousness can be created at knowable (for you) level. You can recognise yourself when you are wearing a mask, but your friends won't recognise you
- Do you remember what happened one month ago? When you look at a video you will be able to record just a tiny piece of its dynamics?

CONSCIOUSNESS-2

- We model consciousness using a ResNet-like CNN for re-creating representation of spatial and temporal history of humans
- We add residual algorithms to re-learn sequential decision problems and use it for reinforcement
- We learn representation from cellular data
- But the problem is big.. the quest is to combine intelligence and connect dots, and only use the state-of-art "intelligence solving" for testing

CONSCIOUSNESS-3

- But the big goal is not to re-create old consciousness, but learn what is going to render continuity in the connected and mixed world..
- Re-learning continuity can at most be data-driven from our perspective, so is consciousness
- Also, continuity is not about preserving memories of weakness

SOLVING WITH DATA - 1

- re-creating consciousness by eating experience data
- re-defining life by spreading intelligence tools
- re-learning representation from bio data
- exponential thinking by using relevancy measures to choose the tools and define the problem

SOLVING WITH DATA - 2

- there's plenty of video out there!
- there's nanodata from microscopes!
- there's giving away rods by personalising learning!

- Thank you!