



DA07 - TRANSHUMANISM

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INTRODUCTION

- Human evolution
 - Currently in a standstill – humans haven't changed significantly for the past 315 000 years
 - Current state of humanity – flawed, mortal beings with limited lifespan
- Technology
 - Constantly advanced, improved
 - Progress is already happening very quickly, expected to accelerate even further soon (within next few decades) [1]
- Question
 - Is advanced technology going to impact human evolution?



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TRANSHUMANISM – MEANING

- Literal meaning: *beyond-human*
- No stable definition throughout history
 - 1923, Haldane - future technology can impact human biology in a positive way ; will be considered “indecent and unnatural” at first [2]
 - 1940, W.D. Lighhall - “a new view of cosmic, biological, and cultural evolution” [3]
 - 1957, J. Huxley - mankind’s ability to “transcend itself” as a whole [4]
- Modern times, redefined by Humanity+ organization [5]
 - Transhumanism as philosophy
 - Movement that advocates for human enhancement through usage of technology
 - Transhumanism as science
 - Research into technology - possibilities, dangers and ethical implications of using the it for human improvement

THE POSTHUMAN

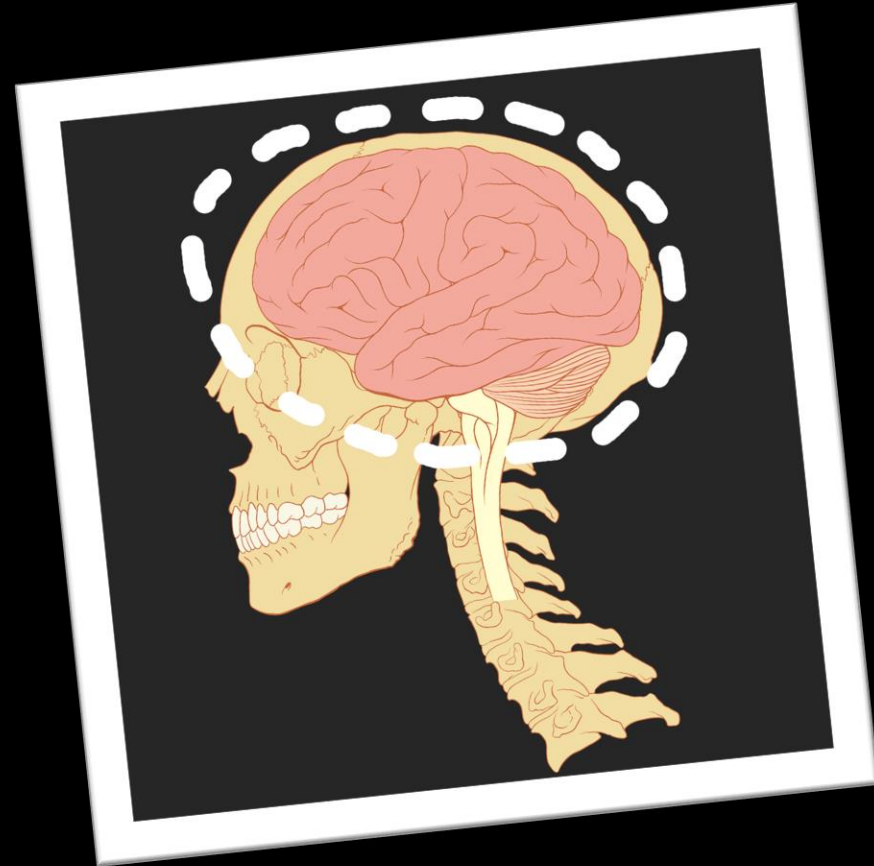
- Type of human being that surpassed natural limitations, for example [6]:
 - longer/unlimited lifespan
 - improved health
 - better cognitive abilities
 - enhanced intelligence
- No strict definition
 - could be just a human with cybernetic implants
 - could be complete synthesis of human and machine
 - could be a part of *The Global Brain* (network of human minds)



["The lizard's journey"](#) by jaci XIV, Public Domain

MIND ENHANCEMENTS – WHY?

- Human Brain Problem
 - A powerhouse – headquarter of the body
 - Fragile – vulnerable to many kinds of damage
 - Falls apart with time – shrinks by around “5% per decade after age of 40”, possibly accelerating after age of 70 [7]
 - Great when it works, but limited by its flaws
- Solution
 - Technology to countermeasure brain injuries or to slow down natural ageing



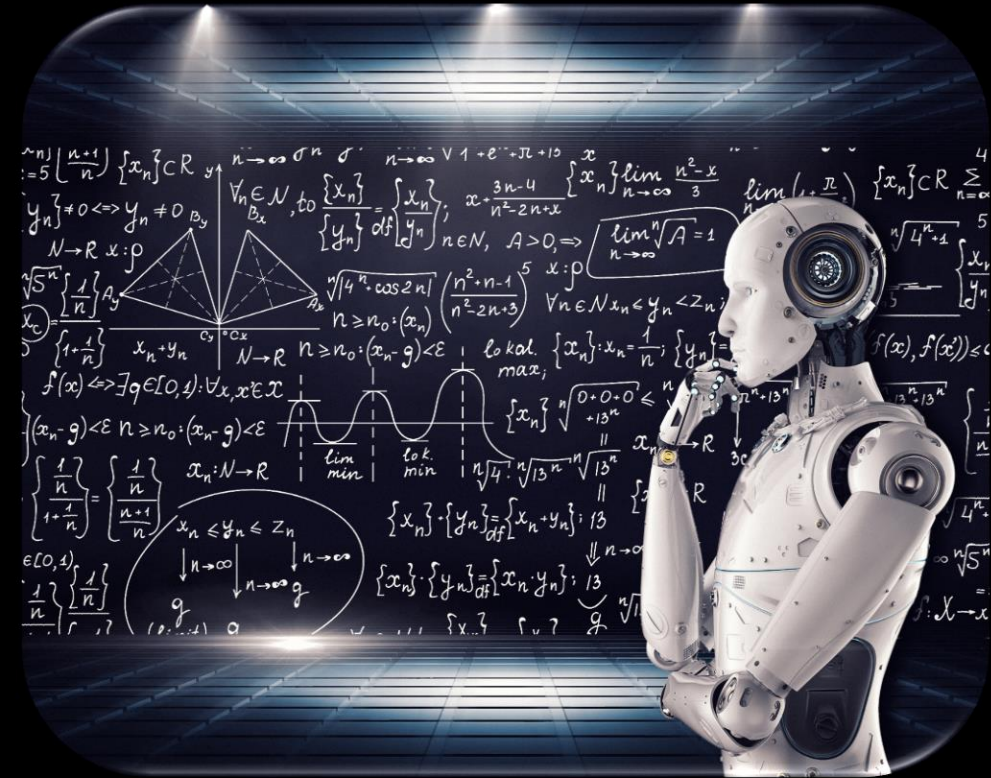
["brain 2"](#) by J E Theriot, licensed under [CC BY 2.0](#)

ARTIFICIAL BRAIN

- Idea to move parts (or entirety) of the brain onto substitute “platform”
- 3 major steps are required
 - SIM – Substrate-Independent Mind [8]
 - Type of mind, whose functions can be implemented on various “platforms”
 - Main goal → recreating the phenomenon of “consciousness” in a way it works on both natural brain and artificial one
 - “Uploading” [9]
 - Transferring from one brain to another without loss of data
 - “Human mind as a material object susceptible to physics”
 - Whole Brain Emulation [10]
 - Brain as body supervisor
 - Performance concerns not relevant (supercomputers)

THE ARTIFICIAL GENERAL INTELLIGENCE

- Artificial General Intelligence (AGI) – type of intelligence that matches our own
 - capable of learning and understanding on its own [11]
- Possible influence [12]
 - new point of view on the world (offered by new kind of being)
 - assistance in intellectual tasks – for example science research



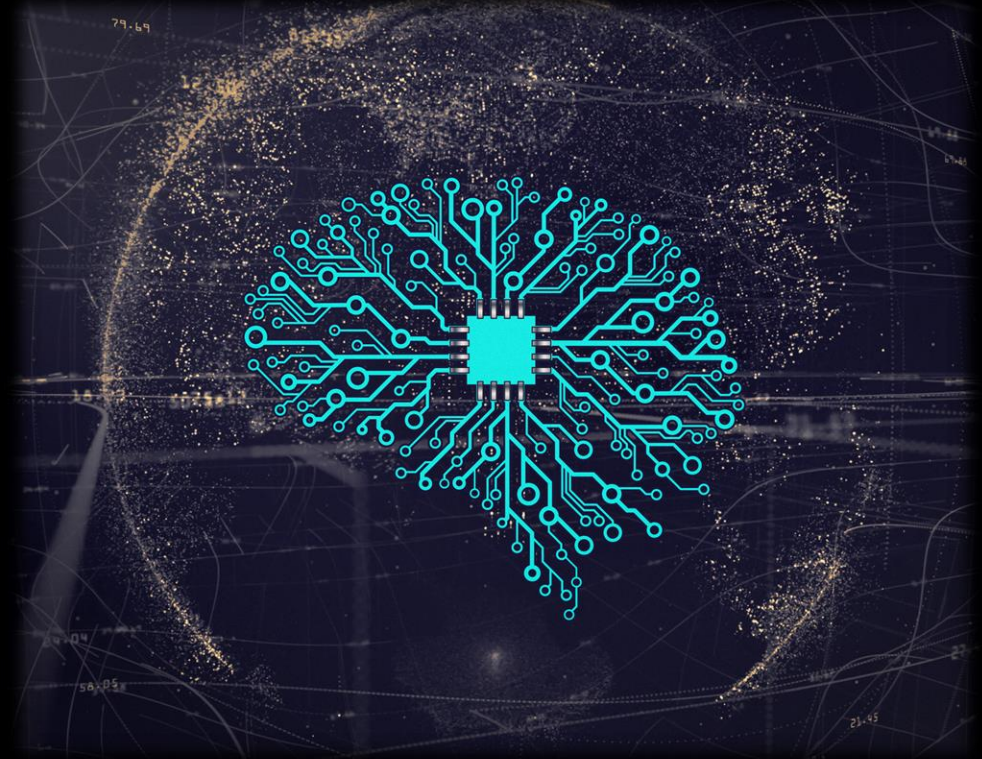
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THE SINGULARITY

- “Machines making better machines” – also includes “AI making even smarter AI” [13]
- Philosophers believe it is possible
 - Humanity has to be able to create AI more intelligent than itself (AI+)
 - AI+ should be able to do the same → create AI++ that is more intelligent than itself (AI++)
 - Assumed to be likely to happen because it has happened in nature already (evolution created human intelligence)
 - No common prediction of date
- Will most likely fundamentally impact the world when it happens
 - Possible positive impact (superintelligence helping humanity solve modern-day problems)
 - Possible negative impact (superintelligence decides that humanity is a threat)

THE GLOBAL BRAIN

- Connecting human minds into one big network
 - Many possibilities
 - Hive-mind of independent beings interconnected into one network
 - Integration into one *superbeing* [14]
- Ability to merge with the AI
 - Artificial General Intelligence as the main component of the network
 - Human minds and possibly weak AI able to connect into the network and to use its resources



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CONCLUSIONS

- The next chapter in mankind's evolution might be coming soon
- Transhumanism is an idea of using technology to ascend humanity as a species
- The result of this ascension is a posthuman – human being that has surpassed its natural limitations
- One of those limitations is the fact that our brain is very fragile – it is slowly falling apart with age and can be easily permanently damaged
 - To fix that, Transhumanism suggests that we might want to move our brains onto platforms that can be easily fixed or repaired – *Substrate-Independent Mind*, *Whole Brain Emulation*, and *Uploading* concepts
- Another thing that can be enhanced is our intelligence – through the usage of the AI
 - Artificial General Intelligence that matches our own intelligence will present us with new concepts (different point of view, fresh look at modern-world issues)
 - In the process of The Singularity (should it happen), superintelligence will be created which might impact the world as we know it in various ways
 - The Global Brain might offer unique opportunities for connection and integration of humankind into one superbeing, alongside chance to merge with the AI

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