Dehumanizing Technology

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The current mantra in the tech echo chamber seems to be:

Technology is good,
more technology is better,
and smart contracts are best.

I want to question that mantra and the technological constructivism that goes along with it.

I can only describe the problem, I don't have a solution...

who am I?

Software developer and IT security consultant, main interests:

- secure messaging
- digital currencies ("Blockchain" — where necessary)

⇒ "freedom technologies"

What's up with the mask?

- privacy is necessary for liberty
- privacy is not granted, it has to be taken
- extreme surveillance requires extreme countermeasures

⇒ privacy extremist

⇒ **but**: I became somewhat disillusioned with mainstream tech...

definitions

> *"Dehumanization or an act thereof can describe a behavior or* **process** *that undermines individuality of and in others."* *(Wikipedia)*

> *"Technology is the collection of techniques, skills, methods, and processes used in the production of goods or services or in the accomplishment of objectives, such as scientific investigation. Technology can be the knowledge of techniques,* **processes**, *and the like, or it can be embedded in* **machines** *to allow for operation without detailed knowledge of their workings."* *(Wikipedia)*

technique

Example Git and GitHub:

- technology in the sense of a (software) "machine"
- technology in the sense of a process

In *The Technological Society* (1954) the sociologist Jacques Ellul calls this concept technique, it is:

> "the totality of methods rationally arrived at and having absolute efficiency (for a given stage of development) in every field of human activity."
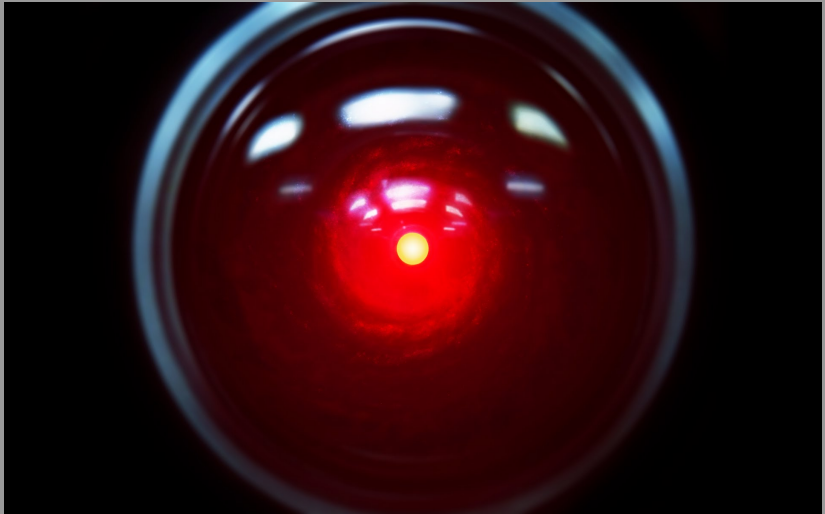
dehumanizing technology?

double meaning:

1 dehumanizing "humans in general" through (efficient) technology

2 de-human-izing of technology: taking the human element out of technology

We focus mainly on 1., but 2. is a driving factor for 1.

how did we get here?

different views on what "drives" of history:

- people (e.g., Hitler, May, Merkel, Trump, Jong-un, ...)
- ideas (e.g., fascism, capitalism, democracy, communism, ...)
- events (e.g., fall of the Berlin Wall, natural disasters, ...)
- technology:
    - knowledge transfer (e.g., writing, printing press, WWW, ...)
    - communications (e.g., radio, TV, social media, ...)
    - weapons (e.g., gunpowder, a-bombs, drones, ...)

$\Rightarrow$ technology is a **major** (if not **the**) driving factor of history!

$\Rightarrow$ individuals like to think they matter more then they actually do

CNN PHOTO ILLUSTRATION/GETTY IMAGES

example: Bitcoin

- (adoption) of the <u>technology</u> kicked-off the blockchain craze
- why the fascination with Satoshi Nakamoto?
- → we like to think the <u>person</u> behind the tech matters most
- C.S. Wright doesn't fit the picture of the benevolent "genius"
- S. Jobs and E. Musk are idolized because *we want to believe*

(technological) path dependencies

> "Path dependence explains how the set of decisions one
> faces for any given circumstance is limited by the
> decisions one has made in the past, even though past
> circumstances may no longer be relevant." (Wikipedia)

sad example:

- "modern" web applications
- path dependency: HTTP/HTML/JavaScript
- → countless young lives wasted by trying to understand Node.js

tech intervention spiral

Similar to the intervention spiral caused by state intervention in the free market (Austrian economics).

The technological fix, always the technological fix.

A technical solution creates a problem which is fixed with a technical solution which...

example tech spiral

- horse carriages
- → everything is full of shit (literally)
- ... [fast forward a few hundred years + industrial revolution]
- cars
- → great
- more cars
- → *Autobahn* (controlled-access highway)
- → pedestrian traffic lights
- ⇒ man has to subordinate to the machine (!)
- even more cars
- → traffic jams, pollution, parking space problems
- electric cars, Uber, self-driving cars
- ... [fast forward ≈10 years]
- → tons of critical infrastructure is machine controlled **and** online
- ⇒ cascading failures?

cascading failures

> *"A cascading failure is a failure in a system of interconnected parts in which the failure of a part can trigger the failure of successive parts."* *(Wikipedia)*

$\rightarrow$ also known as systems failure

recent example: Puerto Rico

cascading failures (cont.)

- we connect more and more systems
- $\rightarrow$ applications become business critical and security critical
- $\rightarrow$ Internet of Things (IoT): **everything** becomes safety critical
- $\Rightarrow$ one system failure can lead to catastrophy (not resilient)

"I keep coming back to the way terrorism and guerrilla warfare is rapidly evolving to allow nonstate networks to challenge the structure and order of nation-states. It is a change on par with the rise of the Internet and China, and will dramatically change how you and your children view security." — John Robb, Brave New War, 2007

artificial (general) intelligence

- artificial intelligence (AI): apparently intelligent behaviour by machines
- $\rightarrow$ already outperforms humans in many domains
- artificial general intelligence (AGI): could successfully perform any intellectual task that a human being can
- $\rightarrow$ could outperform humans in **any** domain
- very powerful AI or AGI with human master (elite group)
- $\rightarrow$ *technological totalitarianism*
- AGI without human master
- $\rightarrow$ *singularity* (end of humanity)

how much choice?

- if everybody has it, how much choice do you <u>really</u> have?
- 2007: only 4% of American adults owned smartphones.
- January 2017: 77% of American adults and 92% of those under the age of 35 own smartphones[1]
- South Korea: 88%, including **100%** of those under 35
- (SK: myopia rate for 20y-olds: 18% in 1955, 96% in 2011)
- another path dependency and potential for cascading failures
- cash is third after WeChat and Alipay in China[2]

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[1]cited in Brain Drain: The Mere Presence of Ones Own Smartphone Reduces Available Cognitive Capacity

[2]In Urban China, Cash Is Rapidly Becoming Obsolete, NYT, 2017

smartphone usage linked to depression in teens

effect of large scale smartphone deployments[3]

- boys depressive symptoms increased by 21%from 2012 to 2015
- girls increased by 50%, more than twice as much
- 3x as many 12-to-14-year-old girls killed themselves in 2015 as in 2007, compared with 2x as many boys

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[3]Have Smartphones Destroyed a Generation? The Atlantic, 2017

concentration problems

A few years ago I started reading *The Shallows: What the Internet is Doing to Our Brains* (by Nicholas Carr, 2011)...
...but then I got distracted.

> *"The Nets interactivity gives us powerful new tools for finding information, expressing ourselves, and conversing with others. It also turns us into lab rats constantly pressing levers to get tiny pellets of social or intellectual nourishment."*

> *In the quiet spaces opened up by the prolonged, undistracted reading of a book, people made their own associations, drew their own inferences and analogies, fostered their own ideas. They thought deeply as they read deeply."*

addictive systems

prediction:

> *"When VR porn hits the mainstream it will be one of the largest evolutionary selection events in human history."*
> *—Arto Bendiken, 2016, personal communication*

also:

- gamification
- A/B testing
- machine learning

human aspects: summary

> *"Television is the last technology we should be allowed to invent and put out without a surgeon general's warning."—Alan Kay, pioneer of OO programming and windowing GUIs*[4]

- technology adoption is increasing
- human biology remains pretty much the same (for now)
- problems sometimes only occur in large doses
- **no** studies on adverse effects whatsoever (e.g., YouTube Kids)
- $\rightarrow$ more unintended consequences faster
- $\rightarrow$ entire generations grow up without knowing alternatives

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[4]quoted in https://www.fastcompany.com/40435064/
what-alan-kay-thinks-about-the-iphone-and-technology-now

smart contracts are a dumb idea

- machine algorithms deciding over humans
- Irish vet fails oral English test needded to stay in Australia[5]
- we cannot know all special cases in advance (hubris)
- Lt. Col. Stanislav Petrov (1939-2017): "the man who single-handedly saved the world from nuclear war"[6]
- we cannot know how it will develop (see Bitcoin as a warning)
- states + blockchains & smart contracts = efficient oppression
- Accenture, Microsoft team up on blockchain-based digital ID network[7]: UN-supported project to provide ID to 1.1B people
- ⇒ smart contracts are a dehumanizing technology

[5]The Guardian, 2017

[6]https://www.theguardian.com/world/2017/sep/18/soviet-officer-who-averted-cold-war-nuclear-disaster-dies-aged-77

[7]https://www.reuters.com/article/us-microsoft-accenture-digitalid-idUSKBN19A22B

democracy end-of-life?

- hate speech and fake news
- propaganda
- nudging and social scores
- growing state dependance (social welfare)
- pathologization

⇒technological totalitarianism?

trinity of:

1. abundant consumer choices
2. rat race
3. general anxiety

⇒population too busy to question the system in meaningful way

endangered species *Homo sapiens*

- humans are unable to understand the world they live in
- they will inhabit a "magical" universe
- science: the end of the *Universalgelehrter* (polymath)
- $\rightarrow$ development of *disciplines* with *sub-* and *sub-sub-disciplines*
- 90% of all the scientists who ever lived are alive today[8]
- $\Rightarrow$ science drives technology and technology is going the same way

    "Any sufficiently advanced technology is indistinguishable from magic"—Arthur C. Clarke, 1973

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[8]https://futureoflife.org/2015/11/05/
90-of-all-the-scientists-that-ever-lived-are-alive-today/

confession

I suffer from technological biases and believe in technological constructivism

- if climate change exists and is man made:
    - that's fine, because libertarianism
    - we're gonna fix it, because technology

- we are going to build a freer world with technology!
$\rightarrow$ are you sure about that?

lack of power over own creation

Joseph Weizenbaum, 1923-2008, computer science professor @MIT:

- ELIZA (1964), an early natural language processing program
- wanted to show supersuperficiality of man-machine comms
- $\rightarrow$ doctors wanted to use the program in psychotherapy
- $\Rightarrow$ Weizenbaum: *Computer Power and Human Reason* (1976)

Robert Oppenheimer and the Manhatten project (first a-bomb):

> *"Now I am become Death, the destroyer of worlds."*
> *(Bhagavad Gita)*

Later lost his security clearance for his outspokeness.

Uncivilisation - The Dark Mountain Manifesto[9]

> *Changing the world has become an anachronism: the world is changing so fast, the best we can do is to become a little more observant, more agile, better able to move with it or to spot the places where a subtle shift may set something on a less-worse course than it was on. And you know, thats OK because what makes life worth living was never striving for, let alone reaching, utopias.—Dougald Hine, 2009*

clarification:

- primitivism is **not** the solution, no space to retreat to
- history teaches: technologically more advanced groups win

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[9]http://dark-mountain.net/about/manifesto/

motivations for technology

good:

- survival
- human development

bad:

- convenience & comfort
- entertainment & addiction
- enabling other technologies (not enough)
- (usually hidden:) domination & control
- if I don't do it, somebody else will do it anyway

heuristics:

- do I have to solve it?
- does it introduce new failure modes?

conclusion: core points

1. People in tech often suffer from *technological biases* and believe in *technological constructivism*.

2. Humanity is building *dehumanizing technology* that may lead to *technological totalitarianism* (machines or elites deciding).

3. Tech is accelerating, we are not: Either tech will become "magical" or we will stop being human (see also: *singularity*).

4. One should check ones own motivations for building tech and realize the limited influence over its effects.

5. We might already be beyond the point of no return in regards to dehumanizing technology.

$\Rightarrow$ It's time to break the denial and start thinking and acting based on that realization.

conclusion: bottom line

"Never forget that the human race with technology is just like an alcoholic with a barrel of wine."
—Ted Kaczynski, 1995

We are fucked, how do we deal with that in the future?

pointers

It makes sense to look over to other camps, for example:

- sociology (Jacques Ellul[10])
- history (Lewis Mumford[11])
- futurology (Alvin Toffler[12])
- ecology and primitivism (Paul Shepard[13])
- ecopsychology (Chellis Glendinning[14])
- anarcho-primitivism (Ted Kaczynski[15])
- tribalism (Jack Donovan[16])

[10]The Technological Society (1954)
[11]The Myth of the Machine Vol. 1. & 2. (1967 & 1970)
[12]Future Shock (1970)
[13]Nature and Madness (1982)
[14]My Name is Chellis and I'm in Recovery from Western Civilization (1994)
[15]Industrial Society and Its Future (1995)
[16]Becoming a Barbarian (2016)

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slides:
http://frankbraun.org/dehumanizing-technology.pdf

thank you very much for your attention!