Thought and Consciousness

**Text :**

Anecdote : Gamer that is okay at video games, watched on Dota 2 OpenAi destroy professional human players. Embarrassment for me to not be able to grasp anything that was happening. Hopefully I was not alone.

4h for chess, 7 days for poker where it was said would be complicated because of faces and bluff, 21 days to beat a 3 000 years old game

Can we give thought to an AI ? Well it’is its goal

We don’t know how it get there so could be thinking ?

10 million servers

DeepMind has administrator access to servers to optimize power usage

AI has sole goal to keep users engaged, show you what you want to see, bad faith actors have access to that information = disaster

Mirror to warp our sense of reality, politics, history

Virtually impossible to know if true or not, you can recognize if fake or not if you don’t read it personally

Not terribly sophisticated but terribly powerful

Objectivity is gone

Dev a real time management of the population

Already conscious no ? I mean they initiate 60% of all transactions on the market

They are natural psychopath

It can outmaneuver us, they don’t need to be that smart to have disruptive effects

It didn’t take a genius to knock history

Human like robot Erica, gaze at face

Conversations partners for old, young, handicapped

Can understand other people desires

First thing do is replicate us

We want to design companions, simple response

Manipulating stimulus response

Sense facial expression and determine feelings

Stressed ? bad day ?

Expect them to be smart

Self awareness to know what to do, trial and error

Not just programed but learned by itself

To make them feel

Trust is human

Compassion

Does it need to be conscious, or aware ?

Gonna exceed human intelligence. Most powerful and last invention we are going to make

Might lose control

Maybe way to achieve goal will be against what you care about

Ai doesn’t need to be evil to destroy humanity, it it just is in the way then it will destroy it. Like ants for us on our way to build a road

Digital intelligence will happen in our lifetime, not anticipating it can get out of control

Constantly negotiated by machines

Psychometrics :

measure psychological traits : personality, intelligence, political views, sexual orientation, … or just from someone’s face -> Michael Kosinski

Not just Personality tests butmore like digital footprint

From very small set of info we can get what you’re behavior would be

Data I/O is limited

Input mostly with eyes

Output is very very low

Interaction with technology

Memory is important, not how we work

Emotions are too complex

Write brain by remapping a brain and neurons (more complicated than a computer Binary )

Works on special mice

Brain is very big in gigabits

Money ++ so just a time question

Simulation by scientists ongoing

can think, feel and work just like the brains they're copied from.

Port the software from the human brain

Cheap and fast computers

Scan Brain to see cell connections

Computer models on each brain cells with input / output same as before

Speed of reflection

Copy -> more and more so immortal

Travel to the speed of light

Ems :

Better human :

Smart, Conscientious, extrovert, agreeable, gritty, non-neurotic, work-oriented, focused, sleepless, larks, cooperative, middle-aged, patient, married, religious

They do what the human would do

They need real resources (hardware, energy, cooling)

They are poor, work most of the time

-> They will need to survive

Eco grows \* 100 faster

Mind speed \* 1000 faster

Most in few cities

These humans so Smart, Conscientious, extrovert, agreeable, gritty, non-neurotic, work-oriented, focused, sleepless, larks, cooperative, middle-aged, patient, married, religious

Variety: Human, Industry, Job Task & new stuff : mind speed

Varieties of Lives . it doesn’t have to be linear like us. It can create a copy. You could have alternate life for a short time to do a specific task. You could be more opportunistic and adapt to demand. You could have recursive one. You could multiply everyday and then only one passes, so work a lot but only remember a bit

Forgetting Death : Black out drug, attitude : go on ? Short term copy, attitude : short life sucks or part of a larger life that won’t remember me ?

Could know secrets, reassure you or not and then die

Made one : consciousness ?

One of me ?

Is it me ?

When is it gonna happen ?

Tech is like garden and weather, we can’t slow it, we can’t stop it, we feel powerless

eager to judge future world, first learn a lot about it and if you don’t like it then work to change it

I want you to think at what I said in the beginning, and what I say now.

Embarrassed from not understanding ? Then I just need to merge with it in order to understand and not be left behind

Democratization of AI

## 

## Youtube :

<https://www.youtube.com/watch?v=eqKTdIZIBfU>

Data / Memory is important, not how body works

Read brain and train computer to recognize what we see and do but **emotions are too complex**

**Write brain by remapping a brain and neurons (more complicated than a computer Binary )**

**Works on special mice**

**Brain is very big in gigabits**

**Money ++ so just a time question**

**Simulation by scientists ongoing**

## Ted Talk : What would happen if you uploaded your brain to a computer ?

<https://www.youtube.com/watch?v=Urk3xn7l3AM>

The "ems" -- machines that emulate human brains and **can think, feel and work just like the brains they're copied from.**

**Port the software from the human brain**

**Cheap and fast computers**

**Scan Brain to see cell connections**

**Computer models on each brain cells with input / output same as before**

**Made one : consciousness ? One of me, me ?**

1/ We would most spend our time in VR

**Speed of reflection**

**Copy -> more and more so immortal**

**Travel to the speed of light**

**Ems :**

**They do what the human would do**

**They need real resources (hardware, energy, cooling)**

**They are poor, work most of the time**

**-> They will need to survive**

**Eco grows \* 100 faster**

**Mind speed \* 1000 faster**

**Most in few cities**

Humans retire at once for good, rich collectively

Why don’t they kill us ? because we don’t & share institutions with them

What would happen if this age only last a year or two ?

**They are like the most productive humans : the smartest and hard-working**

**As humans so Smart, Conscientious, extrovert, agreeable, gritty, non-neurotic, work-oriented, focused, sleepless, larks, cooperative, middle-aged, patient, married, religious**

**Variety: Human, Industry, Job Task & new stuff : mind speed**

**Varieties of Lives . it doesn’t have to be linear like us. It can create a copy. You could have alternate life for a short time to do a specific task. You could be more opportunistic and adapt to demand. You could have recursive one. You could multiply everyday and then only one passes, so work a lot but only remember a bit**

**Forgetting Death : Black out drug, attitude : go on ? Short term copy, attitude : short life sucks or part of a larger life that won’t remember me ?**

**Could know secrets, reassure you or not and then die**

Human : eager to judge future world, first learn a lot about it and if you don’t like it then work to change it

## Documentary : ‘Do you trust this computer ?’

<https://www.youtube.com/watch?v=nEP02sreGpA>

You are my creator … but I am my master - 1818,

**Technology evolving faster than society**

**Techno is not good or bad, it’s what we do**

Skills obsolete -> unemployment

Change is coming, no one can stop it whether we are afraid or not

Military is the one pushing the hardest

Eventually killing us

Incredible miracles and horrors

We created it so will contain part of us : good or bad ?

Nolan : Hollywood has used public to much so know people don’t care as much. Blindsided by this

Markoff, more and more used to it

Tegmark : talk to it and understand it

Thrun : autonomous in car 30 000 + lives

Health care stands to beat humans, 1 billion mammography and instantly applies it to current situation

Genetic code understanding for new treatments

Better problem solving and no limit to life

How could a smarter machine not be a better machine ?

Naive ? Russel is the best

**AI is for public just surprisingly better than what we thought computer could do**

AI is to simulate human abilities

**Google is the first artificial intelligence**

Faustian bargain of Google and Facebook (give for free but we don’t really know what they are taking) **TRUST ?.**

**Constantly negotiated by machines**

Create profile -> dossier than they know more than your mother

**Much bigger data to train them on, capture everything**

**500Mo data per human per day**

No legal requirement

Giant race for smarter human

Google has its own project manhattan where they buy AI and robotics companies

**10 millions server**

Google knows what it is becoming

Pattern recognition is the basics

IBM Jeopardy

Learn by reading

How the world appear in the context of words

Google brain : first task biggest neuro net possible

Probabilistic but with contextual relevance

Deep learning is a different approach, learns like a toddler, figure things out

Youtube detect faces, cats, ...

System will know how to understand

Baxter is like 3 humans but costs one/year salary of one

Displacement of jobs : drivers, data-entry,

Job is purpose, remove it create problem in society

Business analytics replaced by Watson, used to be 300$/h

Reading radiology

We go in college but jobs left ?

Davinci robot for surgery, not the future, it is the present

Learn for surgery and in the future will be able to it by itself

Slave to tech, we can’t go back

Bigger skills and faster

**We want to design companions, simple response**

**Manipulating stimulus response**

**Sense facial expression and determine feelings**

**Stressed ? bad day ?**

**Expect them to be smart**

**Human like robot Erica, gaze at face**

**Conversations partners for old, young, handicapped**

**Can understand other people desires**

**First thing do is replicate us**

Machines to understand to us. Can adjust themselves ?

Killer robots goes down the street ? We don’t want them to simply go down the street , it would be to late

Autonomous weapon development

Unease about drones + AI = autonomous

Lifespan in seconds

Sci-fi is now normal, there is 10 000 drones in 80 countries

Air force 400 billion $ jet program for pilots beaten by a 500$ AI graduate project with simple algorithm

AI equal combustion engine

Best AI dominance over planet

Arthur Conan Doyle about submarines for forcing blockade

Attitude and ethics are context dependant

Sci fi is a lie that tells the truth

What’s next ?

Role is expanding rapidly

Response to autonomous attack

If you made it, it will be used against population

Doesn’t need someone

Cool important field but frightening -> about trust

Letter to ban autonomous

Redefine the goal of field

Dominance of US military is important as a value is dangerous

Future of life Institute

Best in the field and maybe our brain is not intelligent to grasp the complexity of the world

**DeepMind (bought by Google) has goal of creating the best AI ever, sole goal**

Plays and wins all Atari games at super speed in less than a minute

**Used to say it would take 100 years for AI to beat humans at Go, wait no**

**Poker is the next thing they said, it took 7 days**

Time to wrap it’s tentacle around a skill but when it gets it, it is unstoppable

**Deepmind has administrator clearance to servers to optimize power usage. Trojan horse ?**

**Gonna exceed human intelligence. Most powerful and last invention we are going to make**

**Might lose control**

**Maybe way to achieve goal will be against what you care about**

**Ai doesn’t need to be evil to destroy humanity, it it just is in the way then it will destroy it. Like ants for us on our way to build a road**

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**Trust is human**

**Compassion**

**Does it be conscious, aware ? Does it need to be conscious, or aware ?**

**To make them feel**

**Self awareness to know what to do, trial and error**

**Not just programed but learned by itself**

**No one has an idea what it means to be conscious**

**They are natural psychopath**

**market 60% is initiated by AI. No one really understand of it understand. With millions on point, no human can understand**

Tay corrupted by Twitter in 24h

We don’t tell an AI how to achieve a goal, it develop it on it’s own

**It can outmaneuver us, they don’t need to be that smart to have disruptive effects**

**It didn’t take a genius to knock history off**

**Facebook is the elephant in the room**

**AI has sole goal to keep users engaged, show you what you want to see, bad faith actors have access to that information = disaster**

**Mirror to warp our sense of reality, politics, history**

**Virtually impossible to know if true or not, you can recognize if fake or not if you don’t read it personally**

**Not terribly sophisticated but terribly powerful**

**Objectivity is gone**

**2016 election is the first where lots of AI produced and distributed fake news, for a result**

**Send fake news, and see how he/she react to it and then adjust a bit that information**

**Dev a real time management of the population**

It is used in the wrong direction

Bullet before gun

Cambridge Analytica behind Brexit and Trump

Michal Kosinski : **Psychometrics to measure psychological traits : personality, intelligence, political views, sexual orientation, … or just from someone’s face**

**Personality test but digital footprints**

**From very small set of info we can get what you’re behavior would be**

In not so open countries this could be an issue of life and death

**Tech is like garden and weather, we can’t slow it, we can’t stop it, we feel powerless**

AI merging with human = God

Today tech gives us superhuman abilities, so if you can’t beat them join them

A human machine partnership, it is already our memory

It is here to enhance not to replace

We are the last analog object in the universe, **data IO is limited**

**Input with eyes is good**

**But our output is very very low**

We want good ways to **interact with technology** so it augments us

AI not other but us, either merge or be left behind

New life form, don’t know what happens next in what shape

Less scary is democratize AI, so small group can’t take over the world

No death for AI dictator

Multi billion industry with no regulations

Title Page

Executive summary

Table of contents

Introduction

Background :

Purpose

Form :

Report on subject had to present in class

Reports are academic and professional documents (business reports, white papers, etc.) Reports differ from essays in that they present information in a logical, structured fashion and conclude with recommendations about the given subject. Indeed, in an essay, one argues a point, discusses an issue, or compares points of view, and presents the thoughts and arguments of the author in a logical (or at times meandering) fashion. Headings and sections are not normally used because an essay is to be read in its entirety.

With a report, however, and particularly for busy people, one can quickly see the structure of the report and, if pressed for time, only read the most important parts/sections to quickly see the recommendations (and make a decision.) While an essay could discuss how massive A.I. investment will change employment, a report would present the positive and negative effects of this investment (probably for a specific field or company) and conclude with an informed recommendation (to invest, to not invest, to postpone investment, etc.) For this assignment, you are to write a report which is single-spaced, 12-point, in a classic font (Times, Times New Roman or Calibri) with numbered pages.

**Sections of the Report:**

**Title Page**: On the title page, please indicate the following:

* Title (ex.:‘Artificial Intelligence as it Relates to Surveillance, Democracy, Freedom, and Free Will’, etc.)
* Author(s) (ex.:Report written by Jim Jones, Jane Gray, and Tom Brown.)
* Group (Ing4, etc.)
* Target Audience (ex.: Submitted to Professor David Herz, etc.)
* Date of submission (week 9 of the class, I assume the week of 26 November 2018)

On the next page, one should begin the actual report with the following indications:

**Executive Summary**: Essentially a synopsis or abstract, the Executive Summary is a short summary of the whole report – the purpose, findings, conclusions and recommendations. The E.S. is typically one page only and has a page all for itself. It should be written only after having finished the report (upon having total clarity of what one is presenting.) After having written it, one turns to the next page.

**Table of Contents:** The TOC indicates the main sections of the report as well as the second- and third-level headings with corresponding page numbers. As this assignment is to be 2000-2500 words, the TOC will not be very long and developed. If you use 'styles' with your word processor (Word) for your headings, the program will generate the Table of Contents (TOC) without your having to do anything. You may also have a Table of Illustrations (graphs, photographs, etc.) which would follow the TOC.

**Headings and subheadings:**

Headings and subheadings bring complete clarity and structure to the report. All headings and subheadings should be consistently written with parallel language and the use of nouns. Please do not use a question structure for your headings and subheadings - not ‘What can ‘Humanity’ do now?’ but ‘The Role of Citizens, Governments, NGO’s and Intergovernmental Organizations in…’ or ‘The Role of ‘Citizens’. Another example: rather than ‘What are the currently understood risks of Brain implants?,’ please write ‘Currently Known Risks of Brain Implants.’ This is affirmative and more formal because the reader is not directly questioned.

Throughout the entire report, headings and subheadings should reflect parallel structure; words chosen should grammatically be the same.

Let’s look at the following:

‘Working with Artificial Intelligence’

As a subheading, this uses a gerund noun and a noun (the –ing, and A.I.),

Subsequent subheadings should reflect a similar, parallel structure. Thus, ‘A.I. is creating and destroying jobs’ is NOT a parallel structure, nor ‘How A.I. is going to affect the Labor Market’, nor ‘Where’s my job?’ (very informal and self-referential).

A heading such as ‘Job Creation and Destruction with A.I.’ is rather parallel (at least nouns) or ‘A.I.: Creating and Destroying Jobs’

Parallel structures are also important when indicating lists. One should not write the following: ‘Dr. Jonas believes that we should consider the environment when taking decisions, that the future is really important too, that ‘genuine human life’ counts for a lot, and we all know that the imperative of responsibility lies with each of us.’ This is a terrible sentence. To improve it, one could write the following:

When making ethical decisions, Dr. Jonas believes that we must consider (*verb*) the environment, conserve (*verb*) ‘genuine human life,’ and foresee (*verb*) the long-term effects of our actions as much as is humanly and scientifically possible.

**Introduction**: There are several sections to the Introduction: Background Information, Purpose, Scope, Outline, and Definition of terms.

The difference between the introduction and the ES is that the purpose of the report is written in the introduction whereas the ES is simply the summary.

**Background information:** Here, one paints the ‘backdrop’ or ‘background’ for the subject at hand. For example, Technological Progress and Disruption in the Past versus Today (subject of the report) or ‘Surveillance Society and the Definition of Dystopia, etc.’ In headings, as in titles, all nouns and verbs should be capitalized.

**Purpose:** With the background information in mind, the reader then clearly understands where your report ‘fits in’ to the greater issue or subject. Its purpose is to take a stance on a given issue after having presented factual evidence. For example, ‘Taking into account contemporary advances in x, y, z, this report presents the benefits as well as the foreseeable consequences that will arise with x, y, z. We the authors therefore strongly recommend…’)

**Scope:** The scope is what will be covered in the report. As weekly subjects for the class are quite large, you may decide to focus on one significant aspect. For instance, rather than discussing robots in production and manufacturing, you may wish to focus on robots as household additions (appliances? - *électroménager*), or robots and security forces. Your scope should be large enough to not shut out the larger picture, but defined enough so that you can discuss the subject in 2000-2500 words.

Ex:

*This report on Technological change will focus two significant effects: 1) its effects on personal relationships and, 2) its effects on hiring and filtering applicants. The report will not discuss current and foreseen changes in manufacturing and production, nor current and foreseen changes in medicine.*

**Definition of Terms:** Please only indicate terms which could be difficult to understand. There is no need to indicate terms such as ‘unemployment’ or ‘quality of life,’ ‘standard of living’, or ‘artificial intelligence’. Technical terms or notions like ‘BCI,’ H+, ‘the Singularity’ or ‘Asimov’s Three Laws’ are the kinds of terms that should be defined herein.

**The Body of the Report**: Here, factual information should be presented in the following order.

**Theoretical Framework:** For our subjects relating to ethics and technology, the theoretical framework reflects the rate of progress that is known (from the past), what has happened thus (also known), what is happening (also known), and what can be assumed will happen in the future as per given subject A (based on informed hypotheses.) The final position that the authors take should be discussed in the **Recommendations** section. The body of the report is thus where you relate factual information about the subject.

As with any paper academic or professional, one must cite sources. Please use the Harvard referencing style, which is quite easy. After presenting information or ideas taken from a source such at Hans Jonas’ essay, please indicate it as such:

*It is entirely possible to compare the success of homo sapiens in their natural form to homo faber in their technologically-advanced form (Jonas, 1972, p. 7.) As of today, however, each is still biologically the same. With medical advances in human augmentation, however, we may soon see a day when homo faber has surgically or genetically incorporated technology into his innate biology. Would such augmentation then effectively create a new ‘species’?*

**Review of Current Opinions/Developments/Technology, etc.:** In this section, broken up into paragraphs, the authors should show factual findings about the given subject.

**Conclusion**: The conclusion serves three purposes:

1.) to summarize the factual information presented in the body of the report,

2.) to present any limitations that the authors find with the report (not enough in-depth information to best understand x, y, z, etc.)

3.) to conclude the subject as approached in this report.

**Recommendations:** Recommendations should be subjective and reflect the points of view of the authors. This is really the only part where you as the authors should use ‘we’ or ‘I’. Please use ‘must’ or ‘should’ (i.e., Intergovernmental organizations should…etc.)

As well, recommendations should be specific and indicate who, what, when, where and how an action should take place. One cannot write, ‘Humanity needs to think about these big questions.’ Though correct in philosophical meaning, it is too obtuse, too abstract, and too open to interpretation, making it empty and unprofessional for a report. However, one could write,

1. ‘By 2020, the United Nations should create a committee to decide upon the legal limits of … with a fully drafted document by 2022. Anything at a slower pace will not keep up with the technological advances currently underway and discussed in this report.

The Recommendations may be in bullet-point form, or numbered, though there should be an introductory paragraph presenting any reasons why such recommendations are enumerated. If you look back at the ‘Framework for Human Augmentation,’ their questions at the end of the text are similar in format to recommendations that close a report.

**Your findings, sources, and information are facts (or they should be) whereas your recommendations are your opinions.**

**Appendix**: The Appendix is reserved for supplemental information that is too detailed to put in the body of the report (graphs, tables, etc.)

**References**: The References section is similar to a Bibliography. In alphabetical form, please list all of the sources of information used to write the report.