Hybrid Conscience – Between Evolution and Threat

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Abstract

The possibility of a confrontation between A.I. and humanity is widely discussed by scientists and not only. Even it still seems sci-fi, the threat is here and becomes real in our day to day lives. The main factor is the hybrid conscience that the new generations are actually living in, mixing a real life with a virtual one. The second one is like a drug, it develops addiction, but the biggest problem is that it comes with its own ethical values. Virtual games are just an example, with their violence, rhythm and color, with different rules than the real world. Young people are more than affected, and these new generations seem to give up on very important parts of their wholeness as human beings: their memory, general knowledge, their ability to communicate, etc. We can't just sit and watch. What the adults have to do, from the ethical point of view?

Keywords: *Hybrid Conscience, Technology, Existential Risks, Public policies, Education.*

Status quo

A.I. has brought a new era of humanity. The discovery of computer and internet started a race with some multiple transformations of our society, of our selves. We all feel the benefits of this world of virtual information, as we want to communicate easy, like the real distances are no longer exist, as we want to pay our bills without getting out, to buy our stuff, to see our movies, to find almost everything in a matter of seconds. And the list could go on and on. The development of this domain is getting closer to the robotic era, the stage of a new creation: an ambassador of the A.I., as a partner for humans to communicate with. It is becoming clearer than ever that we have two worlds collide and reject in every single second on Earth: the real life and the virtual one. The creation of an algorithm that can answer to a human and be self-learning gave form to this virtuality that can detach from his creator and become a partner. This new kind of reality makes its own rules, comes with its own values, some good, but some bad. Not so bad for the humans that created it, but bad enough for the ones that become addicted to it. Growing and living between those two worlds is transforming us, humans, into something new. Our conscience is modifying, our

human conscience becomes impregnated with the values and marks of the virtual world, of this conglomerate that we could call "artificial conscience". The new structure that is rising from this mix could be named "hybrid conscience" and new rules must be established for it, until it's not too late. The responsibility of humanity is to see the threats, the illness and to search and find a treatment.

Conscience

The concept of "conscience" can be explained as

> *always knowledge of ourselves, or awareness of moral principles we have committed to, or assessment of ourselves, or motivation to act that comes from within us.*[1]

It means that we have to assess its philosophical and psychological aspects altogether. Psychologically thinking, "conscience" means knowledge and a good functioning of brain and senses. It means memory, thinking, language and imagination, reason, intuition and all that "the epistemic function of conscience"[2] implies. Are these human capabilities of knowledge affected by the omnipresent technology?

Philosophically thinking, "conscience" means moral principles, values that must crystallize in every child in order to function like an inner-court that makes possible the "self-assessment" and the "motivation act that comes from within". Is it possible that the moral structure of a young man to be affected by ethical aspects of the virtual worlds?

MEMORY AND KNOWLEDGE

A smart-phone brings to a child a whole new universe: games, messages, information, funny pictures, funny movies, sex, music, almost anything you can imagine, but no real life. Violence, rhythm, color, and new rules. Young people are more than affected, and, day by day, they seem to give up on very important parts of their wholeness like human beings. Their memory, basic knowledge, their ability to communicate, etc.

The inflow of information from internet, at one touch distance, means that our children are not trying to memorize notions anymore, as they were, "because it's here". And that's how, a very important part of their brain, the memory, is not trained in a period when this training is crucial for their further development not only memory, but knowledge, thinking and mind. Psychology teaches us that it is impossible to isolate all the different processes that contribute to human thinking and action.

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[1] Alberto Giubilini, "Conscience," *The Stanford Encyclopedia of Philosophy* (Winter 2016 Edition), Edward N. Zalta, https://plato.stanford.edu/archives/win2016/entries/conscience/, accesed: 10.12.2019.
[2] Giubilini, "Conscience."

> *Attention to aspects of the perceived world are interpreted on the basis of past memories; thinking and language help to keep track of future plans and in turn direct attention to new events. Despite the apparent chaos of beliefs, prejudices, routine actions and conscious attempts to solve problems, humans are continually learning from experience.*[3]

In the cerebral constellation memory beholds a main role, as all the superior cognitive processes are symbiotic. An insufficient development of this important brain capacity would affect more than the storage of information. It will affect the ability of thinking, creating, reacting, solving and communicating. The general knowledge is no longer accumulating over time, because the information is not passing in long-term memory/semantic – memory. This mechanism is important because general knowledge is a major component of crystallized intelligence.[4]

There are studies that explain the strong relation between working-memory capacity and reasoning ability.[5] In the same time, the addiction to external memory might damage the process:

> *our reliance on such forms of external memory, particularly when they are internet-connected, may have important cognitive consequences (Smart 2012).*[6] *Some have worried that these are purely negative, with external memory diminishing internal memory in one way or another (e.g., Carr 2010)*[7]*. […] There is some research suggesting that, when we know that information will be available online, we tend to remember how to find that information, rather than remembering the information itself.*[8]

The virtual worlds of the games are colorful, the events come fast and the satisfaction is reachable in a few moves, steps, levels. Because the virtual world is about speed, too. The real life seems boring, compared to all these. The teacher is boring, the school, even the colleagues. The compulsive players have no patience for results in real life, where you have to work sometimes hard and for a long time to achieve something. They want the quick reward and the possibility to go on very fast. The goal is not very clear but the satisfaction of "going on" seems to be enough.

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[3] Judith Greene, *Memory, thinking and language: topics in cognitive psychology*. — (New essential psychology). 1. Cognition I. Title II. Greene, Judith. Thinking and language III. Series 155.4` 13 BF311.

[4] Raymond Cattell, *Abilities: Their structure, growth, and action* (New York: Houghton Mifflin, 1971).

[5] Patrick C. Kyllonen and Raymond E. Christal, "Reasoning ability is (little more than) working-memory capacity?!" *Intelligence* 14 (4) (1990), 389-433, doi:10.1016/S0160-2896(05)80012.

[6] Paul R. Smart, "The Web-Extended Mind," *Metaphilosophy* 43(4) (2012), 446-463, doi:10.1111/j.1467-9973.2012.01756.x

[7] Nicholas G. Carr, *The Shallows: How the Internet Is Changing the Way We Think, Read and Remember* (New York: W.W. Norton, 2010).

[8] Kourken Michaelian and John Sutton, "Memory," *The Stanford Encyclopedia of Philosophy* (Summer 2017 Edition), ed. Edward N. Zalta, https://plato.stanford.edu/entries/memory/ #CognConsNewFormExteMemo.

Bogdan Popoveniuc presents, in a systemic way, the main modifications brought onto human structure by the technological products. They are somatic, perceptive, mnemonic, cognitive, affective and even in the area of personality disorders. *Cyberamnesia,* or *the Google effect*, distorts the natural mechanisms of memorization, through decreasing the volume of information able to be retained by the human brain and altering the ways the information is processed.[9]

VALUES

Adam Alter[10] is explaining very clear how the game-makers, the movie-makers, the Social Media-makers are using psychological tricks to catch us in their spider web. Half of humankind from the developed world, are addicted to something like phone, shopping, exercise, job, e-mail, etc, briefly we have "behavioral addictions"[11], and the ones that involve a screen are the most difficult to treat. Because the screen is always at one arm's distance.

According to Alter, there are more than 400 treatment centers in China, the first country in the world that has declared internet addiction a "clinic disorder," labeling it as "the biggest threat for the public health among teenagers". More than 24 million teenagers are treated, by force in many cases, with pills or even harsh methods.

> *For now the American government has decided not to interfere between children and behavioral addiction. There are no public clinics for treatment, and the reason could be that a relative small percentage of addicted children need psychiatric help*.[12]

In real life, the rules are not like those from the games, where everybody respects the lines of a software program. We live in societies with all kind of people and some of them do not obey the rule. Teenagers have to be prepared for that. A car can kill you on a crosswalk when you are crossing the street and watching your phone. A thief can attack you in a "neutral" zone as your house, and the internet can perfectly hide a malevolent who wants your money, your body, your life, your intimacy, or anything else that brings him some valuable or satisfaction.

The same virtual reality comes with a deformed or malformed concept about life and death. Here, in real world, killing is irreversible. A life once lost, is lost for good. This kind of loss is losing its importance because of the virtual world amongst the youngsters. Furthermore, it seems that the world of games is making our children more aggressive.

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[9] Bogdan Popoveniuc, "Technophreny. Etiology and symptomatology," *Revista de Filosofie, Sociologie şi Ştiinţe Politice*, nr 1 (170), Academia de Ştiinţe a Moldovei - Institutul de Cercetări Juridice şi Politice, 2016, 163-173.

[10] Adam Alter is an Associate Professor of Marketing and Psychology at New York University's Stern School of Business.

[11] Adam Alter, *Irezistibil: Dependența de tehnologie și afacerile din spatele ei* (Bucharest: Publica, 2017), 31.

[12] Alter, *Irezistibil*, 270.

A "meta-analysis[13]" published in October 2018 shows that violence from the video-games affects the behavior of our children. Beyond all the debate regarding this problem, the authors pointed their attention on 24 studies over 17.000 subjects of various nationalities and ethnicities with ages from 9 to 19, time lags ranging from 3 months to 4 years. Their conclusion was that:

> *playing violent video games is associated with greater levels of overt physical aggression over time, after accounting for prior aggression. These findings support the general claim that violent video game play is associated with increases in physical aggression over time.*

The same devices that lead us to the new worlds are keeping us and our children isolated behind a keyboard. Our communications in real life is more than limited, the main consequence being poor vocabulary and reduced conversational skills. The human interaction in real life is strongly affected and the result is an increasing risk of depression. Some studies in that direction showed that

> *Social Media use was significantly associated with increased depression. Given the proliferation of Social Media, identifying the mechanisms and direction of this association is critical for informing interventions that address Social Media use and depression.*[14]

It's obvious that mixture between real and virtual is leading to a new form of conscience, because not only the mind structure is affected, but also the moral compass. The values that the young man is using as principles tend to be different because of the virtual life. The isolation leads to inability to empathize, for example. Behind the keyboard a child does not see how his words affect the man from the other side of the message. And, day by day, he becomes insensible, selfish, with no ability to prioritize. The future adult will be a passive citizen, with no interest for public life, for life in general,[15] for political stage, he will become an insignificant element from an amorphous mass of people, that can be manipulated and used like a "sheep in a flock".

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[13] Anna T. Prescott, James D. Sargent, Jay G. Hull, "Metaanalysis of the relationship between violent video game play and physical aggression over time," *PNAS* 115 (2018): 9882-9888, https://www.pnas.org/content/115/40/9882.

[14] Center for Research on Media, Technology, and Health, University of Pittsburgh School of Medicine, Pittsburgh, Pennsylvania - Ariel Shensa, Cezar G. Escobar-Viera, Jaime E. Sidani, Nicholas D. Bowman, Michael P. Marshal and Brian A. Primack, "Problematic social media use and depressive symptoms among U.S. young adults: A nationally-representative study," *Social Science and Medicine* 182 (2017): 150-157, https://www.ncbi.nlm.nih.gov/pubmed/28446367. Liu yi Lin, Jaime E. Sidani, Ariel Shensa, Ana Radovic, Elizabeth Miller, Jason B. Colditz, Beth L. Hoffman, Leila M. Giles and Brian A. Primack, "Association between Social Media Use and Depression among U.S. Young Adults," *Depress Anxiety* 33(4) (2016): 323-31, https://www.ncbi.nlm.nih.gov/pubmed/26783723.

[15] B. Lachmann et al., *The Role of Empathy and Life Satisfaction in Internet and Smartphone Use Disorder*. *Front. Psychol* 9 (2018), 398, doi: 10.3389/fpsyg.2018.00398.

Need of Control

So, the answer to our questions regarding the possibilities of the conglomerate that could be called "artificial conscience" to affect the human conscience is "yes". It does and the result is the hybrid conscience, a cognitive-moral structure of abilities and values that will change, for sure, humanity in the future. The elite of our world, the men in power, should take necessary actions to guide these changes, in order not to lose our human essence, not to become more "artificial" than "human".

The need to regulate in this domain – for protection and treatment – has been spoken many times and from high authorities.

The scientists sow the threats of this new world, and proposed e.g. "a set of regulations"[16] for robots and supercomputers. Gunter Meissner[17] says "it is critical". These regulations are for "physical robot":

> *All commercially available robots should be slow moving, so that humans can just walk away if the robot becomes aggressive*

for "supervision of Engineers":

> *The production of robots must be regulated, in particular engineers who create robots must be supervised to ensure that they cannot create an army of powerful "war-bots".*

and for "robot control":

> *On/Off-switches and power-sources must be uncontrollable to the robot. In addition, every robot should be controlled with overwriting code, possibly a "kill-switch", from an undisclosed, fire-walled, remote location, similar to the activation and deactivation of nuclear weapons.*

In the same direction, a course of *Robot Regulation* from University of Oslo,[18] examines how robots and artificial intelligence are regulated by *de lege lata* (the existing laws) and tracks the discourse about the need for new law (*de lege ferenda*). In accordance with the official website of Oslo University, the relevant legal and regulatory issues must include "Responsibility, accountability, liability and insurance", "Human dignity, gender issues and privacy in the context of healthcare robots, cyborgs and augmented humans", "Regulatory responses to emerging artificial intelligence", "Artificial intelligence and copyright protection," etc.

It might seem more sci-fi than real, but the threat is here and becomes real in our day-to-day lives. It is the hybrid conscience that we need to shape, using our greatest weapon: human reason. There are many studies that show the damages technology can

[16] Gunter Meissner, *Artificial Intelligence-Consciousness and Conscience* (2018), 12-13. 10.13140/RG.2.2.36626.76488.,

[17] Gunter Meissner PhD is President of Derivatives Software (www.dersoft.com), and Adjunct Professor of Mathematical Finance at Columbia University and New York University

[18] University of Oslo, https://www.uio.no/studier/emner/jus/jus/JUS5690/.

do, the scientists have repeatedly warned us. It's time to react in order to treat and prevent, and this reaction must come from decision-takers. We need laws to protect our children from aggression and addiction. We need, in every school, specialists that can see the problems of our students, and know how to manage them. We need I.T. specialists to work with psychologists in order to find out how to use technology in a harmless way.

In one of the scenarios Yuval Noah Harari[19] is presenting in *Homo Deus*[20], the humankind, in data era, risks losing his status and becoming insignificant, the algorithms taking its place. The human being is no longer important as soldier or worker, but as a consumer, so the differences between poor and reach will divide humanity in two, the useless peoples and the humans that will have enough money for becoming younger, healthier, more intelligent, more powerful, all thanks to technology. They will be in charge with A.I. progress, and will try to dominate the new reality: the world of information,

> *these "new superhuman caste that will abandon its liberal roots and treat normal humans no better than nineteenth-century Europeans treated Africans."*[21]

The solution that appears in order to prevent our universe being conquered by the reign of information is to regulate. Harari is warning that the politicians shouldn't be that unaware of all these, because their absence in this field could leave the power in the hands that has no human conscience at all.

> *Yet mixing godlike technology with myopic politics also has its downside. Lack of vision isn't always a blessing, and not all visions are necessarily bad. […] It is dangerous to trust our future to market forces, because these forces do what's good for the market rather than what's good for humankind or for the world. The hand of the market is blind as well as invisible, and left to its own devices it may fail to do anything about the threat of global warming or the dangerous potential of artificial intelligence. […] If in the twenty-first century traditional political structures can no longer process the data fast enough to produce meaningful visions, then new and more efficient structures will evolve to take their place. These new structures may be very different from any previous political institutions, whether democratic or authoritarian. The only question is who will build and control these structures. If humankind is no longer up to the task, perhaps it might give somebody else a try.*[22]

[19] Professor in the Department of History at the Hebrew University of Jerusalem, the author of the popular science bestsellers *Sapiens: A Brief History of Humankind* (2014), *Homo Deus: A Brief History of Tomorrow* (2016), and *21 Lessons for the 21st Century* (2018).

[20] Yuval Noah Harari, *Homo Deus: Scurtă istorie a viitorului* (Bucharest: Polirom, 2016), 303-307.

[21] Harari, *Homo Deus*, 307.

[22] Harari, *Homo Deus*, 329.

According Dr. Mary Aiken,[23] even the creators of the World Wide Web[24] became more and more circumspect, in the last few years, regarding their creation and shaped their plans for a "Magna Carta of Cybernetic".

> *From my point of view it would be a very good idea. With what to begin? In order to find solutions we have to clearly identify the problems." (…) Let's ask that technology should serve the general good. We need a global initiative. The United Nations Organization could lead in this field and the states from the entire world could involve.*[25]

It is clearer than ever that we need regulations for the big companies, the big players in virtual life. Similar to the ones in tobacco world: they should pay for public relations strategies and information campaigns. In order the people to know the risks. As the one of addiction or psychological alienation. The governments should act in the field of treatment infrastructure, in order to assist doctors, teachers, parents and, of course, children.

So, we admit the advantages of a world build with A.I., but we have to remain human. And we need help! It is time for the intervention of the authority, because a great power comes with the responsibility. The humanity must understand more, and act. The concept of "responsibility" must be brought in the virtual world. Not only to protect money, but to protect happiness, innocence, the hunger for wisdom, patience, the ability to work, attention, critical thinking, the real life and human conscience.

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[23] Mary Aiken, Cyberpsychologist and honorary Professor in the Department of Law and Criminology at the University of East London.

[24] Tim Berners – Lee, named "the father of web" by Mary Aiken *The Cyber Effect Psihologia comportamentului uman in mediul online* (Bucharest: Niculescu), 336.

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