

Mikołaj Przepiórkowski

Instytut Socjologii Uniwersytetu Warszawskiego

Technological Revolution – irrational fears and justified dangers

Abstract:

Technological Revolution became a revolution of our times. In this paper, a classification of most typical discursive fears concerning the future technological achievements - AI, robots, autonomous cars and wide-spread computer controlled infrastructure, fake images, user data security is presented and briefly described. An author uses different but most classical scientific approaches towards revolutions but also a few psycho-sociological theories on social change in attempt to answer a question: which of the mentioned technological breakthroughs and fears should be considered a real threat, and which are more of a psychological fear of change and natural conservatism in processes of generational transition? The study of 8 Facebook groups, 3 Twitter operating ones and 1 Reddit channel active for around 3 years at least serves as a basic material to present the mentioned problems and a discursive tendencies of interlocutors build both the core of analysis as well as base for conclusions and interpretations of possible technological advancements within scope of scientific theories selected earlier.

Keywords: Technological Revolution, change, modern technologies, AI, fears and hopes

Abstrakt:

Rewolucja technologiczna stała się już rewolucją naszych czasów. W artykule przedstawiono i krótko opisano klasyfikację najbardziej typowych dyskursywnych obaw dotyczących przyszłych osiągnięć technologicznych – takich jak sztuczna inteligencja (SI), roboty, autonomiczne samochody i szeroko rozpowszechniona infrastruktura sterowana komputerowo, fałszywe obrazy generowane komputerowo, bezpieczeństwo danych użytkowników. Autor posługuje się najbardziej klasycznymi, naukowymi teoriami na temat rewolucji, ale także kilkoma psychologiczno-socjologicznymi teoriami zmian społecznych, próbując odpowiedzieć na pytanie: które ze wspomnianych technologicznych przełomów i lęków należy uznać za realne zagrożenie, a które raczej za psychologiczny lęk przed

zmianami jako takimi i naturalny konserwatyzm w procesach transformacji pokoleniowej? Badanie 8 grup na Facebooku, 3 działających na Twitterze oraz 1 kanału Reddita aktywnych przez co najmniej 3 lata stanowi podstawowy materiał do prezentacji wspomnianych problemów oraz dyskursywnych tendencji rozmówców. Materiał ten zapewnia zarówno rdzeń analizy, jak i podstawę do wniosków i interpretacji ewentualnych, przedstawionych przykładów rozwoju technologicznego w zakresie wybranych wcześniej teorii naukowych.

Słowa kluczowe: Rewolucja technologiczna, zmiana, nowoczesne technologie, SI, lęki i nadzieje.

Introduction

Technological Revolution is happening right in front of our eyes and it seems to speed up every single year. It resembles the Industrial Evolution in XVIII c. in many aspects but also creates its own, autonomous areas and social phenomena. Technology develops faster, on a massive scale never seen before. New things turn common within a month while older standards disappear from stores and from society fast. I remember when I wanted to buy a micro-usb cable in Shenzhen (China) last year and I could not find a single one around the whole city – sellers both on street, in electronic markets and in official stores responded that usb-c became a standard “a couple of months ago” so looking for micro-usb seemed irrational and even funny from their perspective. Even small electronic hand fans had only usb-c charging port so in the end, I had to ask one of my friends to find her old one and give me the cable already catching dust in some cardboard prepared for recycling. Given example shows how drastically a time horizon for technological change to become common and previous obsolete has already changed. Of course, China is a specific society with a great urge for technology and fast-paced adapting but similar tendencies in technological life may be spotted all around the world. What was easily a standard for 10-20 years in second half of the XX c. and even longer before (plugs, signals, storage devices, CPUs/memory computing power), now changes much faster with more and more standards not lasting for 5 years now. New devices offer new forms of social contacts (virtual interactions, sex with dolls and possibly

robots), new ways of doing things and activities (gaming in VR¹, digital painting²) but also – new dangers – such as addiction to cyberspace, automation of manufacturing forcing people unwillingly redundant, political dominance of private marker corporations, surveillance and privacy concerns about personal data.

We may rationally predict that speed of developing and swapping technological standards is going to shorten and shorten even more. It is true that some basic platforms persist for a relatively long time before being abandoned for good (USB, flash memory, RAM DDR technology, GSM & mobile signals, computers and hand phones themselves), but new generations appear every couple of years and those new generations are totally changing the game – they often bring much bigger breakthroughs or differences in performance than the previous whole platform changes like a transition from VHS to DVD and they really cannot operate using the old base software/chipsets/ports/frequencies. Every new GPU/CPU architecture, every new phone connection technology, every new technological device appears, turns common and seems like a miracle, like a total game changer. However, that is only one perspective.

All of this being probably true, I do not deny it and I claim it myself, many argue that nothing really changes while all the fancy technology does the same basic things for us. Everything is only a tool in a new package – a tool creating new social forms and phenomena, yes, indeed, both good and bad too, but all of them would be just natural and a fuzz around them may turn out as a fuzz about nothing. Such an approach seems a bit ignorant but if we look closely, if we adapt a long time perspective, it makes much more sense – without denying all the facts on speed and densification of technological development – those claims are surprisingly parallel and supplementing each other instead of contrary. What we see today may be a technological revolution, the revolution may be a correct term, but it does not necessarily mean that all the changes, which seem to be so big and so drastic, revolutionary or “crazy” differ that much from everything we came through in all the previous technological and industrial revolutions. Those past revolutions also seemed vast, deep, tragic and

¹ Virtual Reality – devices creating literally virtual reality through helmets/glasses-like devices placed on our heads.

² Painting on a tablet using computer app instead of physical canvas/paper/brushes etc. It did not exist around 20 years ago and now it is common and digital art overtook traditional one in statistical numbers (Yazdani Chow & Manovich 2017).

destructive in eyes of their time scientists and philosophers but in the end – did they really change that much in core of the human society? From some perspective – yes – we live in a totally different world than people of XVIII c. but from the opposite point of view – basic processes of society, basic problems and needs remain the same since ancient times – we all work, we all have social lives – just in a different form, we all procreate, we all laugh and cry the same way we used to do and actually – about the same things with just new additional. It is all a matter of micro or macro perspective aka the accepted level of generalization – both in science and in everyday discourse. To understand such a complex phenomenon, we should probably use both perspectives and treat both equally seriously. We should go through the most common fears and predictions and understand the nature of thinking of them on different levels – in micro and macro perspectives.

Scientific goal and structure of the article

In this paper, I classify and explain most typical, discursive fears about future technological achievements - AI³, robots, autonomous cars and wide-spread computer controlled infrastructure, fake images, user data security. After presenting different scientific approaches towards revolutions from the past but also a few psycho-sociological theories on social change, I attempt to answer a question: which of the mentioned technological breakthroughs and fears should be considered a real threat, and which are more of a psychological fear of change and natural conservatism in processes of generational transition? For the sake of scientific clarity, I adapt a simplistic, phenomenological approach to do not drown in details and do not be tempted by over exaggeration of importance of “getting deeper, deeper and... deeper without generalizing” in relation between technology and society, because the whole field of sociology of technologies or cyber-sociology if you wish, seems to literally drown in those dilemmas. Scientists analyze details too deep and complicate simple processes to do not really present clear and useful claims nor conclusions. It seems more like an art of studying or discussing technological revolution for the art itself – not for using those studies in anything practical and not for stating short and succinct (in a sentence or two) what is really going on. Because of that, I decided to find as many technological

³ Artificial Intelligence – something much more than non-conscious algorithms, already advertised everywhere – in phones, cameras, on Internet and different apps while the real AI has not been developed yet by anyone – those are just big data analysis algorithms without any consciousness needed for intelligence to emerge.

revolution/change oriented groups on popular social portals like Facebook, Twitter and Reddit as I could and analyze their discursive content to classify most popular discussions on fears and hopes concerning specific inventions and comment on type of discourse around them. In the end, it turned out that I worked on 8 Facebook groups, 3 Twitter operating ones and 1 Reddit channel active for around 3 years at least. Some were typically cyberpunk, others just the opposite. They covered a wide sample of ethnicities, ages and sex/gender representations due to their international character.

Theoretical background

Revolutions themselves are usually perceived through the scope of two characteristic theories. One claims that revolutions break out unexpectedly, unstoppably and transform the social or any other area to relative opposite of what it used to be. Classics of such approach believe in change and true breaking points in basic matter and “laws of physics” of our social world, which revolutions truly cause and make a reality (Schnall, Henry et. all. 2006; Paine 2017; Price 2018; Jarvie 2010; Krasin 1972; Noble 2002). Their opponents however, claim that revolution is not any breaking point by itself - rather an effect (not cause) of the long chain of structural changes already happening for decades or that it even serves as an emergency defensive resort of the current system to defend and preserve itself – it brings the already unavoidable and systematically accepted changes due to other economic or structural reasons, but it only gives an illusion of agency or control by easing frustrations of masses while the real power always returns to elites, the general processes reproduce under new disguise and maintain the same basic nature (Tilly 1977; Tocqueville 2012, 2017; Burke 2018a; Noble 2002).

It is very hard to determine who may be right about the nature of revolution and all the big, deep changes at least called revolutions later are usually so complex that finding the answer may not be even possible. In reality, depending on perspective of time horizon we use for assessment, the same revolutionary change may be crucial in short perspective while the longer interval taken, the least important it is. Even French Revolution, traditionally seen as important in 500 or more years interval, would become much less important when second and same revolution of similar nature happens and when next 500 years pass. First Industrial

Revolution will be always the first one and famous one but the second will change everything equally deep by bringing full automation and robotics (or a big failure of this idea since we do not even know if it happens like we are used to predict; regardless of that, some second industrial revolution is inevitable if human race will not extinct before that). Then the third industrial revolution will seem crucial and more important than both first and second but in 1000 years (if we still exist), both of them may be described at schools as two similar realizations of the same process, which started 4000 years ago and did not change that much in its nature. We cannot even prove that the Industrial Revolution is really THE one, the first one because changing from travelling tribes to settled crops cultivation, then building homes instead of caves, then creating different tools and colonialism may also be seen as industrial revolutions in broad enough perspective. It is not possible to say if Polanyi was right saying that industry did not exist and was something really revolutionary transforming something called market – from one perspective it was, in short and detailed scope – but in so called *longue duree*⁴ – it was not that revolutionary and it might have been the continuous face of the same type of change just taking new colors and dressing new clothes (Tilly 1977; Tocqueville 2012, 2017; Burke 2018a; Noble 2002).

Technological Revolution itself may not be such a new concept either. For now it seems autonomous and modern because of a type of technology involved. In general, it may be or may not be the same or very similar to any previous revolution in widely speaking – engineering. Discovering fire seemed crucial and basically similar to developing a steam engine, then discovering and mastering electricity, then creating computers, launching into space. While those were totally different feats at first glance, they deeply changed their societies of those time, then still - at the same time – the human nature and basic problems of each one person remained the same and the nature of change/transition caused some problems, brought some advancements, generally happened with a great fuzz, which became forgotten and seems nothing today. Try imagining how ridiculous and serious creating cars seemed to people of old times. It was equal to creating robots or cyberware augmentations for people of current times. It really was even though we naturally deny it. Putting keys and magical holes on every door and gate seemed a ridiculous and even dangerous idea for people

⁴ Long perspective of time from French schools of sociology and knowledge.

used to open spaces and they may have really thought it might have caused casualties or the end of civilization. It seems funny but it is just how it was.

Making it more scientific, scholars may argue for decades that working by hunting, cultivating crops and manufacturing cars is different but at the end of the day – in both cases people wake up, drink after sleep, eat, spend big part of their day on their work, there is always some kind of boss, structure, promotions and kicking “employees” off, water may be swapped with grapes wine and then coffee, then with cyberstimulants and VR experiences out of cyberpunk movies but it is still the same action in its nature. From on perspective it is, from another it is not. Finding an answer who may be right in those perspectives – revolutionary or not – becomes impossible and eventually – not productive. It does not solve any problems of technology, revolutions or anything.

On the other hand, there are more useful processes in classical sociology used for describing phenomena of revolutionary change, which serve to actually understand not if something is good or bad, not really revolutionary or repeating itself, but more why it happens and what to do with it. One of such paradigms seems so basic and trivial that modern sociologists of technology rarely bring it up. It is called a theory of institutional conservatism presented by Veblen (1971) and it suggests a simple, psychological even reaction towards any type of societal change – be it technical or not. According to institutional conservatism, institutions of social life oppose new ideologies/technologies and in turn become outdated in comparison with current age and technological/societal/ideological development. Most typically, theoreticians bring up the school system, religion, public administration, public service and the politics as examples of such institutional conservatism where for instance – computers, tablets and phones may be already common and widely spread within society but kids still learn from books and write in their notebooks at school. It is a hot discussion and lots of arguments break out: people fight with each other that books have values themselves, that digital book would somehow “degrade” the value of education but is it really the case? Probably not – it seems much more like a traditional ritualization and adding symbolical value to the outdated technology when new might have its own values (problems too, obviously) but it is not rationally worse or degrading by itself. Social behaviors are another thing – they may be destructive or positive regardless of a tool or technology causing them but institutional

conservatism usually concentrates on a device/new tool rather than understanding and differentiating good and bad forms of using it. From a rational point of view, even if sociologists love bringing morals, digging a hole for the sake of digging a hole and understanding science as an art of working on terms, meanings etc., in reality it is a dead end a very dark one. Trying to understand the discursive fears requires more of a mathematical operations on argumentations and their rationality rather than comparing paradigms and theories and their terms for the sake of doing it itself and calling it science.

Taking all of that into consideration, it becomes clear that current Technological Revolutions, Technology/Internet 2.0, 3.0, 4.0 and no matter how much zeros we add, wake up the already known fears – both in traditional institutions and in minds of individual people. Societies oppose change – according to institutional conservatism theorists (Veblen 1971). When we think of all the typical objections against futuristic technology now – robots stealing our jobs, cyberspace corrupting social lives and children, schools, morality, automatic algorithms malfunctioning causing wars, accidents, corporations and invigilation breaking our freedom etc. etc. - those are mostly fears from the areas of education, economy, politics, ownership, religion and morality – all the typical systems from a theory of institutional conservatism. If we take the stated theoretical approach, we are going to see them as false and not justified.

In contrary, the “pessimist” theories of fear towards change stress that a fear itself is natural because a society stands on a fragile status quo, which has a natural tendency towards social anomy and social anarchy, it is dangerous itself, majority of people is not great – just normal or even stupid - so revolutions give field to radicalism, make a situation worse instead of repairing it while conservatism, natural lack of trust towards change and slow reforms should be the way to go. Such approach has its roots in social theory of social conflict by Hobbes and develops in societies in different forms of conservatisms invented as both an ideology and as a practical program of action by conservative classic philosopher Burke (2016, 2018a, 2018b; Smith 2010). Taking this approach, the Technological Revolution fears would be fully justified.

Therefore, my main goal here is not to criticize every fear and promote techno-enthusiasm nor to spread catastrophic prophecies of Terminators wiping out all the human civilization from Earth. The short run through theories of revolutions and social change itself presented above by returning to the most basic ones serves another purpose. I am trying to show and explain that no matter how much theories we create, how long books with them we could analyze here and how much deeper in details we get into, all the problems actually come from simple, basic questions and dilemmas only building more and more substance on them but not changing the stake or the nature of the game itself – it is more if we believe a theory and not if it is true, rational or not and sociology concentrates too much on this belief rather than cold analysis. It may be not possible to say who is right and who is wrong, which theory is correct and which is better or worse even. However, being aware that there are usually two opposite basic paradigms, concentrates our attention on the more technical and mathematical effects or possibilities of effects opened and presented by futuristic technologies in Technological Revolution. All in all, I suggest studying what people say, how they discuss and dividing rational arguments from emotion/belief driven ones to assess which technological advancements may really pose a threat and which are much overestimated and exaggerated by tech-savy interlocutors.

Typical fears and hopes concerning Technological Revolution

In popular discourse – both academic and casual one – there are around 11 main concerns about modern future technologies. Some people take extremely positive and enthusiastic approach denying all the possible dangers like they are non-existent while others predict apocalypse in everything without even imagining a scenario that problems will be real and true but in general, nothing terribly bad is going to happen and nothing will really change in a long term. In general, both sides of the conflict usually point out important matters and present valuable arguments or at least – areas to think about even if in general, they are fighting believers and crusaders for their own version of a predicted future – especially on social media.

In this part of the article, I will list the most commonly discussed future technologies, typical fears about them and I will try explaining which fears come from rational analysis and which from emotions or beliefs without justifying them properly.

1. “AI” generated faces

This invention has been extremely popular in discourse of cyberpunk-oriented groups on social media. People generally find computers creating artificial people “cyberpunk” and terrifying (it is still not real AI – just big data learning algorithms without consciousness⁵). As psychologically inconvenient as it may be, I could not find any actual justification to why it would pose a threat. I have searched 8 Facebook groups, 3 Twitter operated ones and 1 Reddit channel for corresponding discussions within last 5 years but literally I could not find any proper justification in terms of formal logic. The typical discursive debate starts with people stating it is scary and dangerous and half of interlocutors agreeing with them just by stating it without justification and other half presenting counterarguments. Most of those being not afraid literally ask what is scary in creating people who do not exist? They argue that graphic designers may create artificial faces today already without any problem and in a great, photorealistic form – it just requires skill and hours of work invested. Some participants state that of course, it may be easier creating artificial faces for fake documents, taking a mortgage or other kind of credit but banks and public service institutions will find a way of securing clients and most of all – their own money – basically, a better authentication solving those troubles. Technology follows technology in terms of hacking/defending – it has always been a never ending circle. We have had security systems like personal ID code required to take a mortgage for ages, now an electronic signature and trusted profiles backed up by government become more and more popular. It is indeed rational to think that there will be also other ways we cannot imagine no matter how sophisticated ways of scamming and stealing thieves may invent. We may return to physical, non-cybernetic forms of authentication, we may design better cyber ones – it all does not matter at the end.

In the end, the main rational argument, which allows to classify this threat as irrelevant and rather psychological one comes from mathematical analysis of interests. Here both rich

⁵ I am going to address a problem of the real AI vs algorithms in further parts of the article but I have already given a brief explanation of a difference in one of previous annotations.

companies, banks and governments have the same interests as clients, which does not happen so often and it seems ironic that such a coincidence happened in this specific area. Companies will always work hard to secure their own money – in case of artificially created faces it just works for the sake of clients too. Good security defends money of capitalists and the client with life ruined by credits causes a problem of money lost by a bank. A bank itself does not give credits out of good heart but to earn on interests, which are highly insecure when identity theft occurs. All in all, this threat will probably not be bigger and not be less dangerous than it is now already. Some failures will happen, some thefts will be prevented. People are afraid of it mostly due to the fact that a consciousness – a simple consciousness that a computer is creating realistic, artificial “life” – even a graphic – is inconvenient, unpleasant. It also undermines areas we have been used to treat as stable and trustworthy for ages. With a generational change those fears may disappear or may not but a fear itself does not find any rational cause – is purely psychological.

2. Artificial nudes, deepfakes, artificially created porn with famous people, artificially created speeches of Presidents and politicians

The same as with a fear of artificial faces created by algorithms, this topic has become the second mostly discussed in recent years among technologically-oriented social media groups I came across on Facebook, Twitter and Reddit. It is very tightly related to the algorithms learning on big data and unconsciously creating graphical content depicting people but bases on a different type of fear. This fear is both psychological again because it touches a culturally sensitive area of sexuality and practical – just like the previous one – because it undermines reliability of news and information we get from any kind of media. Here opponents of technology have usually no rational arguments in sexual area (just like with artificially created faces) but have a rational set of arguments in fake news area.

When it comes to artificial porn with any face we imagine, it is clearly a cultural fear of privacy. It is psychological, not mathematical. People not afraid of artificial porn and nudes claim that privacy of literally “not being watched naked nor in sexual situation” should not be of such a value and importance. So strange as it may sound, they have a mathematical argument here, which defeats natural, psychological fear due to which we may scream in

denial. Actually, a development of such porn and nudes faking technologies may work in our benefit – in benefit of victims – which is a paradox but a welcomed one. Natural question why gets a clear, rational answer. When faking every porn with everyone becomes common and possible, no one is going to care anymore about it. If we go through a great insecurity and inconvenience period of resistance of current, even young generations, then the nudes/porn movies will stop being of any value in harassment situations with fakes becoming common. Now our private sexual life or nudes are of harassing value because we care and because they are hard to get. If it is as simple as a click of a button and common, we are going to stop putting so much attention to that and it is doomed to lose any harassing value.

Situation does not seem so simple when it comes to fake speeches at first and here rational arguments of interlocutors afraid of them appear quite often. However, while studying further discussions, I understood it is actually very similar. People discussed that if anyone is able to create a massive amounts of videos of anyone (president etc.) saying anything, the consciousness of the society about news may even rise. It is rational to assume that when everything may be fake and we do not stop using media, after a relatively hard period of transition with old generations being totally lost for a time being, the generalized society will accept it is possible to fake any political coverage so people will naturally just stop believing everything they see like we do currently. Our world will not collapse, governments will not fire nuclear missiles at each other because someone creates a fake video with a president claiming something. There will be thousands of not reliable sources but there will be also thousands of those marked with official, government reliability grade or some other mark of this sort.

In the end, the transition period may be hard indeed but if we come through it as a society, then massive amount of fake videos and news (both porn and political ones) may paradoxically work for a benefit of humans raising social consciousness and forcing people out of the current media bubbles structure⁶. In case of porn, we may also come across ridiculous situations when sword has a double edge and people start using it for covering their shameful actions too. If our real nudes or porn movies get leaked or someone documents us

⁶ A situation when for instance – conservatist watch and listen only to the conservative media while liberals do the same with their own ones – no one has any chance of even seeing and interacting with a media coverage alternative to the one he or she already beliefs.

cheating on our partners, then we may always claim those are just fakes and if technology gets so good it will not be possible to say for sure. However, the most valuable gain here is a possible loss of threat of any porn movies/photos harassments. Another argument of interlocutors seemed to be that many new inventions take a world by storm but then pass, normalize and lose their attraction returning to the natural balance when some people still do it and majority does not while all the important areas are already secured by previous experiences.

Inner-Summary no. 1

From a theoretical perspective presented before (or rather – alternative perspectives), the AI generated images⁷ may be generally perceived just as another form of art/painting. In its substance, it is not new – it may only become automated. Everything done by algorithms is achievable for humans already but requires skills. Creating artificial characters in any situations including sexual or drawing portraits has been known for years. Movies also include speeches, statements, depictions of whole alternate settings in extremely realistic form even if we think of sci-fi movies today showing things, which do not even exist but could exist and look convincing enough to fool anyone not aware of current world technological advancement to believe in them. If we displayed a sci-fi movie to a middle-ages knight, he would obviously believe it is some magic showing real events happening somewhere. It is just a matter of approach and knowledge when interacting with a medium/tool and not a tool being dangerous itself. A tool turns out to be revolutionary in a micro/short-term perspective but in a *longue duree* horizon it really does not differ from painting. There is much more psychological problems concerning those technological revolution than mathematically viable threats. Of course, alternative interpretations could stress that people interactions with such mediums will not go so well, that we will be always bound by our current, long-term culture, beliefs, behaviors and habits no matter if beliefs are true or not so not every tool and not every medium should be allowed or even designed. It is not possible to solve this problem using rational thinking – it is more a matter of decisions, actions and reactions. Most likely threats are not rational but people behaviors are not so rational as conservatism claims so it is still worth reflection with all the positive outcomes mentioned equally included.

⁷ Or audio.

3. Sex robots, sex dolls & virtual sexuality

A third most popular topic within technical-savvy groups on social media also touched the sexuality area revealing sex related fears but from a different perspective. Interlocutors usually claim that sex robots/ultra-realistic dolls will replace our sexual lives. In a more radical approach, armageddon theory supporters predict that society is going to stop procreating, then we will all die out because there will be no reason for human-human sexual relationships anymore when great customizable in both physicality and personality robotic sexual slaves will become available (it naturally reminds a vision from a famous movie “Demolition Man” where S. Bullock denies S. Stallone a sexual encounter in reality offering a VR helmet based intercourse).

In reality, while there will be some problems for sure – with self-retracted people, depressed ones, extremely introverted ones in high stress societies⁸ – predicting a full scale extinction of human race because of sex robots sounds ridiculous. Natural instincts of species procreating and reproducing through sexual encounters efficiently keep the ratio of sexually interested (and successful) specimens above a dangerous minimum (Ferin & International Institute for the Study of Human Reproduction 1974; Cole 2014; Cassan 2006). Even if this arguments did not appear literally, I feel obliged to present such a scientific fact to support the instinctive claims of people denying this to be a threat on social media in hot discussions concerning the given topic. Some individuals will surely choose only artificial partners and stop procreating, some already do it willingly or they are forced to do it. Some will have a sex every single day or three times a day seven days a week but decide not to have children. It is not going to endanger our species, it may create more psychological and conservative wing problems in a transition period but with time it will probably lose any interest or importance. It is the most ridiculous fear out of them all – not only a fear of sexual robots originated extinction of humanity but a fear of sexual robots at all – in any form. There will be social problems, psychological ones on a bigger or smaller scale but probably nothing serious. All

⁸ Typically East Asian ones but it is worth noting that the current interest and sale of realistic sex dolls/pre-robots is actually higher in the USA, Russia and Europe with more factories and brands only based in Asia (<https://www.vouchercloud.com/resources/sex-toy-world-rankings>).

the same may be said about the VR based sex simulators. “Demolition Man” movie is just a joke and a pun. Period.

4. Virtual reality overtaking our lives

This fear has been voiced out for more than 10 years already – not only on social media groups but in everyday life. Many people complain that young generations live their lives on a phone, play video games, communicate much more through online communicators rather than in real life. It is true for some and not true for others. There has been a vast rise in cyberspace interactions, cyberspace activities – that is true (Oluga, Samson et al. 2014; Suler 2004). It has both good and bad sides deserving whole books and research projects to be written or carried out instead of a comment in a short scientific paper. It is of course worth monitoring in all the countries but here again – probably it will not cause much troubles to our society in general. There may be crisis in local areas or in general when robots take our jobs and people will have lots of free time (if it ever happens) but from a long term perspective – it is not such an important topic as it seems. There are both rational and irrational fears fueled by psychological fear of older generations rising about the topic and it has all been reflected in discourse of social media groups I studied.

All in all, it is a real threat to some extent but it is also a very natural and not justified fear of new things equally. It seems not possible to determine it clearly without analyzing specific cases and the only thing, which should be said is probably that education of the society on a complexity of this phenomena will be crucial to determine the future. Cyberspace offers some good and some evil, it is all very subjective too because those terms are also subjective. The threats are real as well as equally positive gains, the future unknown even though it has already became our present – especially for young generations.

Inner-Summary no. 2

Artificial substitutes for different things have been also known for many years. Kids have dolls pretending to be real people and it does not necessarily mean that if they tear their limbs apart for 10 years consecutively they will become sadists or murderers in adult life.

Many years ago young kids were working, treated totally differently and there were no schools, people bathed once in a couple of months. Many scientists show that virtual relationships or long distance relationships, cyberspace or sex robots/dolls, all new forms of interactions presented in opposition to “real life” may be naturally considered a part of real life like many other activities. Atheists consider religion as a 10 000 years old cyberspace causing many interactions, taking much time of our lives. Homo sapiens but also many other intelligent species have been always finding ways to play, have fun, explore and theoretically “wasting time” in very creative ways and many wasted big parts of their lives on writing letters to people they never personally knew but considered friends – were they correct or wrong? All in all, those are not the new phenomena either. The same as with previous technological revolutions, those presented here may be considered as something totally new and as just new substantial forms of the same, long known processes not changing that much as we currently think living in times they were introduced as new.

However, many people will argue that cyberspace itself and the new areas of life being touched and reformed drastically by the change are something new, not comparable to anything before. There is obviously some truth in that – depending on a perspective we choose and none of them seems to be genuinely correct or wrong. That is basically the main problem because maths may show rational or irrational statements, wrong deductions, may determine if something is contradicting, not presenting a full spectrum of possibilities etc. but choosing how to interpret them and what to believe in terms of good or wrong is not a solvable problem. Those are just decisions and their results. Even a calculus of probability does not tell anything about solutions, final effects or whatever we want to believe. Those are just possibilities – less or more mathematically likely to happen.

5. Smart homes, automatic opening doors/voice controlled infrastructure, cyber-tech solutions integrated within physical space on a massive scale

Next popular topic found on social groups touched the automatization of physical infrastructure – in our homes and in our cities. People are usually afraid that when everything is automatic and it breaks, then the society will be doomed, people will not escape a burning skyscraper, we will not enter or leave our apartments etc. It makes sense at first, it will surely

happen in transition period but here again – in longer perspective it has a high chance of becoming irrelevant and that is also what most of interlocutors think. This topic causes relatively few fights too because it is much less psychologically sensitive and literally mechanical than sex or human existence and reality vs imitation of news/statement so people think of it more rationally.

The main counterargument in the field of automatization and integrating our infrastructure with algorithms and cyberware on massive scale seemed to be that technologies always need to have a security system allowing it to open/turn on/off or just operate with a mechanical, secondary level security backdoor. There will be always a handle, a hole for a key, a button hidden underneath some cover. We already use such solutions now. We may always reset our phone, modem, notebook and any other device of that type putting a needle in a small hole, using a special code etc. Every fingerprint, code or face verification lock may be forcefully and easily turned off – it just requires a knowledge of how to do it.

All in all, this fear seems to be also irrational – just like typical institutional conservatism against the change. Panic prevents people from thinking rationally but if you had asked 200 years ago, people would have said the same – that panic could kill all of us if we build a skyscraper and put doors with holes for keys in there. If people know, people adapt, then people normally operate and panic may stop us from performing simple actions now or it may not stop us. It is a matter of panic – not a technological solution operating those doors.

All that being said, it is worth mentioning that a rational fear in this case lies in engineering mistakes. They may be common (or may not) but it is rational to assume that due to costs reduction, lack of laws and forced standards in transition period, many technological solutions will not have physical backdoors (not cyber ones) unless a first big tragedy/scandal occurs. It used to be the same with planes and it actually still is. New regulations, safety measures etc. are introduced after something bad happens exposing weaknesses so the transition period may be dangerous indeed. In a long term, not much is going to change so the fear is psychological again but in a short term – the opponents of technology may stress important problem requiring attention and predicaments in law before the actual technological

change spreads massively. From current experiences, we may say it is usually the opposite so this problem may be a real threat – especially when we bring a bit of similar but autonomous case of... autonomous cars.

6. Autonomous cars, flying cars, hoovering transportation

As described above, the problem with automation is that it breaks. That for sure causes a literal danger of hoovering cars falling down from skies and just killing people randomly, destroying infrastructure etc. It might be probably solved by creating sky highways (fixed routes) and some kind of extremely durable net underneath it/durable roofs with pedestrians prohibited from walking on them, which would protect at least infrastructure and people walking the ground so here it seems a similar problem to the one with a mortgage security measures – solvable when transition period (always hard) brings first mass casualties.

The real problem would be autonomous decisions of the AI/algorithms operating the autonomous cars. When an accident is unavoidable and the card needs to choose who to kill – a passenger, a random pedestrian, a child, an adult, an elder – we enter a very hard dilemma. Research shown that such decisions differ from culture to culture when humans took decisions (Maxmen 2018) but here taking part in a survey is a gain something different than driving a car and deciding in a blink of an eye. People have a natural tendency of protecting their own life over lives of others. Some overcome it for the sake of their children and parents hit something with their side of the car when a child sits in the other seat and some people do not. It is not a matter of maths. It is a matter of morality, beliefs and living with consequences.

We may force algorithms to always maximize efficiency defined by numbers of people saved, by mathematical probability of success or anything else (like in a famous “I Robot” movie). We may choose any religion, moral codex, base decisions on a global survey or national survey – there will be never a single, correct answer to this dilemma so the threat of this technology is mathematically real even though it lies in abstract dilemma. Pure maths would suggest that this problem is unsolvable so it may be even random. Some people may claim that every algorithm should always prioritize own survival or and not take any decision but consistently do as much as possible to avoid own casualties. It is a very, very hard

dilemma and people discussing on that usually came to such a conclusion. All the participants in conversation were able to present rational arguments supporting their claims. It seems one of the hardest phenomenon about Technological Revolution and what is most ironic – a technology probably available literally next year in some countries without any solutions of such problems prepared. It will arrive first from the whole list and it is least seriously approached. It may be tragic in results but it is understandable due to the complexity of a problem, its totally subjective nature without anything to base on and because it seems much less attractive than sexual fakes for common public.

7. “Hackers gonna hack’n’kill”

Shooters gonna shoot’n’kill as well. A tool used for killing does not really matter and does not change much in this scale – it is not a tactic weapon. It does not matter if we are shot or if our cyberbrain gets fried. A real problem is that the same as people created nuclear tactic weapons without cyberspace, there will eventually emerge new, equally destructive tactical weapons in cyberspace. The scale of phenomenon remains unknown as well as its implications. If we have such a terrifying tool in our hands (mathematically terrifying because it may cause an extinction of our race and destruction of the whole planet), a cyberspace mass destruction weapon could be just equally bad or even less problematic. Mathematically thinking, it will not be worse so the fear of being hacked is not really rational. With a development of the hacking skills comes a development of defending measures and they form a never ending circle. That was a consensus achieved in most discussions on a social media in groups I explored.

8. AI may kill us, Terminators⁹ will come etc.

This fear appeared almost as often as sexual area connected ones but I decided to write on it here to keep a logical structure of topics and narration. It seems very often discussed and quite deeply understood. There are obviously opponents of AI and its enthusiasts. There is actually a big fuzz about a definition of what an AI is – is it just a perfect imitation, is it a skill of learning, is it self-consciousness, how to measure it? All the existing tests (Touring-related

⁹ Deadly AI machines created by men, which gained self-consciousness on their own only to destroy the whole planet and almost annihilate any life in a series of sci-fi movies.

and others), all the laws of robotics and suggestions entwine with each other, struggle to bring a clear answer. Many movies reveal this problem may be much deeper than we think and at the same time – market advertisements label everything as an AI already.

Robots without consciousness or without free will are one thing, androids may be just considered humans without getting into typical cyberpunk problems created mostly for the fun of thinking on them when there is no problem at all. AI is another thing and no matter if we treat it as a slave, a tool or as an equal being, if it really becomes similar to people, then it is very likely to follow much of our mistakes and achievements. Destruction, wars, annihilation of humans also seems possible.

That is why this specific fear seems rationally justified and not only psychological. We do not have any influence or anything to say if we meet another already existing species trying to destroy us but it is fully up to us if we create ourselves one, which at least has a possibility of doing it, which seems likely.

Inner-Summary no. 3

Technology malfunctioning and causing disasters is not a new thing. Slaves rebelling against their masters are nothing new. A question where those slaves came from – were they created or emerged through evolution or aliens designed them may not matter at all. The possibilities are just possibilities and events from history may repeat, may happen, may not – with a bigger or smaller probability. There are areas where some things seem to be naturally dangerous and destined to happen but a destiny is also a social construct.

In contrary, if we create an intelligent race, which constitutes its own society naturally or not, it may also create or adapt our constructs following a relatively standard path of evolution. Anthropology likes denying evolutionism and claiming it has been already “abandoned” by science but this is just an outcry of emotions – not any fact and especially not something objectively true. Evolutionism may have been a cause for racism as well as many tragedies but it is hard denying that in a very long time horizon even fates of the whole planets and species may follow a limited, similar ways. It is also a specific orientation within

evolutionism, which should not be blindly denied just for the sake of idealism and fighting bad effects of interpreting reality by denying reality itself instead of those effects – only for tribes, states, cultures or other people to feel better.

9. AI will take our jobs and make us redundant

This fear was relatively rarely voiced in some groups and very visible in others on Facebook, Twitter and Reddit. Generally speaking, cyberpunk style groups were less concerned while general-technology oriented groups seem to show much more interest in a possibility of full automation stealing our jobs. According to many people from different countries, it has already started – especially accelerated by current COVID-19 pandemic forcing many factories to rely on robots only to see that it works perfectly and saves money.

Most of fears seem rational here and concentrate not on a technology itself but on behaviors of people, corporations and governments. It theoretically should not be a different cause than points 1, 2 and 3 from the list but a difference here is that the interest of the owner of capital goes in contradiction to the interests of employees in this particular case making it much more likely that capitalists (or any other owners) would take advantage of their position, lack of regulations and lobbying power to prey on weak.

Many people discuss a future and need of introducing regulations securing salaries even without work, ideas like basic universal income or paying for data already collected from us on Internet and being converted into money. Others voice problems with such solutions - like a current balance between earnings of portals offered for free and using our data, which would have to start charging and the situation would not turn better for people. Universal income may not be possible to afford by governments because it would still need to have the same source only redistributed by country and capitalists will not magically start paying 2-3 times bigger taxes when they have such a powerful lobbying strength and harassment tools towards governments.

All in all, this fear seems rational because of the long-term structure of society, markets and capital. Even though it is easy and tempting to conclude that much of it is still

psychological because the solutions must be found this way or other if the race starts extinction due to lack of resources. It may be true, it may be true that here also only a transition period will be hard, many will die but eventually – everything is going to settle down and normalize. It is really hard to say. There may be also new professions not available for robots or even AI – the future remains unclear.

10. Governments will spy on us using all the big data collected

Let us be realistic and succinct here. Everyone already spies and already has full control over us. Our governments, big corporations and national intelligence agencies. Not a single country is different from others. When it comes to sellers, they are not interested in anything personal if it does not serve the purpose of earning money on us. If a government wants to destroy anyone, it will do it already and new ways, new forms, cyber-technocratic-dictatorships etc. will not make a situation worse because we mostly are just not aware of how bad it has already become. Governments like crossing borders, blaming other countries for doing the same and hiding their own abuses by pointing out others. In conclusion, our lives and situation will not change much no matter what happens in this area and it does not really matter who collects our data, where it goes and why. We may only obey law, avoid troubles and hope for the best but we may do nothing to prevent worst already so in future it is not destined to be worse even though it seems that more advanced algorithms may worsen our situation.

Some groups studied seem to have a full consciousness of this situation while a relative majority continues hot discussions and arguments – even flamewars¹⁰ on a topic.

11. Powerful and rich will have better technology and weak are destined to suffer

It has been like that for centuries, since the beginning of mankind when a first strong individual crushed the skull of a weaker one to steal his or her food (no matter if it was a man or a woman). It is just as simple as that. Almost all studied groups agree on that matter and there is nothing more to say. Any revolution will not change that, nothing here will be new

¹⁰ Flamewar – a pointless argument on Internet. Very often it is artificially provoked just for the sake of making people fight each other without any trace of rationality or goal.

and nothing, which did not happen previously may happen in the future. Even if we develop cyber augmentations depending on medicals taken (like in Deus Ex video games universe), it also does not differ much from medications taken by many people today for diabetes and other common diseases. Without money and corporations controlling everything already thousands would die within next year – without COVID 19. It is very sad but it is true.

Conclusions

All the fears and hopes studied, catalogued and presented here with comments from different perspectives explaining social revolutionary change in short and long perspective, in micro and macro perspective, turned out to be both rationally and emotionally justified by people operating on social media. In terms of some fears, interlocutors were lead almost purely by emotions, habits, our natural opposition towards new or mentally labeled as strange/degrading transitions. Others have a very strong, rationally mathematical foundation and we should probably take a deeper reflection on them, discuss them broadly and widely before they are actually introduced. In a current scientific discourse there is a lot of speculations treating almost ready inventions as some far-distance sci-fi. In contrary, many things are overrated and exaggerated without a reason with those really important not being recognized enough. The role of governments and regulations, which turned out to be rather a matter of choice and consequences than objective good or evil will pose a great challenge for the humanity itself and the real problem is that this challenge already exists, the first casualties of some inventions appear and other breakthroughs create a no turning back ultimatum situation where we drift faster and faster with both making fuzz about nothing and not respecting or even differentiating important things from those less vital ones.

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