Individual's rights in facial recognition

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Abstract: the development of new technologies and the daily improvement of IA[i] and Machine Leaning, sometimes, are overreacting, and this can cost a huge price for the global community. The uses of facial recognition to capture criminals and people who can possible commit a crime can be outrageous and affect individual's rights. So, the aim of this text is to prove why machines can not judge humans and how they can be used, in a less dangerous way.

Key-Words: Rights. Digital Law. Individual's Rights. Face Recognition.

Introduction

Tempters to find and understand what is a human has been done by thousands of years. The human singularity, in the European Medium Ages was the soul, which was given by God and because of this, everyone should be afraid and worship him. Although, in the Ages of Light, the philosophers thought that rationality was the men's essence. Despite of these facts, nowadays we are still not sure of what is our main core, but we must accept one thought: it is not intelligence. The Machines, a human creation, have already passed our capacity of processing, achieving unimaginable levels of thoughts and rationality, such as Deep Blue- which won the Championship of chess- and recently, Alpha Go- which won one of the most difficulties games in the world, a Japanese game entitled Go.

So, today what is human singularity? Many books, films and articles try to understand this enigma, one of them is Hybris (CANDEAS, 2019), the conscious, in this fiction, has transmuted the people into a "new level of human beings*", Human-Machine*, which are based on *the hyperconscious,* they supressed theirs instincts looking forward to potentialize the mind whereas forget the emotional, which, for them, is the worst part

of mankind because it impacts on theirs productivity. Furthermore, theirs goal is the rising of the most rational state possible.

As Byung Chul-Han claims in this book Fatigue Society, the currently population lives in a state of extremely positivity which may lead them to a life which needs to be perfect, pretending to be machines. This new path that the society is leading to, may be seen in the "new methods" of biohacking, such as inserting caffeine inside yourself aiming to stay awake for a longer time to fulfil all the tasks that were given. This effects directly in the creation of new technics and programmes which are made with a large data base, that helps the machine to learn from itself, (deep learning) whereas the coders deal with other problems, such as hardwares that as able to contain the programme or fix the bugs.

So, the article: *Responses to Critiques on Machine Learning of Criminality Perceptions* made by the chinese couple, is not be the best way to deal with the criminals' problems: because judgement involves moral and ethics, two things that machines do not have (yet). Giving such a task to a non-human would interfere incisively in the results, because, you can not judge someone just by the way the look like or by the probabilities that one system. Resulting in a trespass to the Age of Lights while Lombroso used to studied the facial recognition of the supposed criminals.

Individual's Rights

Human rights are a new sub group inside the law. Duties were always intrinsic, however the claim inside the legal world is recent. The antique Greece used to have the penalty of being a slave, when someone did not follow the duties. In the Age of Light, some Documents asserting individual rights, such as the Magna Carta (1215), the English Bill of Rights (1689), the French Declaration on the Rights of Man and Citizen (1789), and the US Constitution and Bill of Rights (1791) are precursors of the actual human rights. Despite of the fact that many of them excluded women, coloured people, some social, political groups nevertheless were the inspiration of our conquests.

After the second world wide war, the majority of people were afraid of facing another tragedy as the nazi system, and it was the fuse to create ONU, which establish

international human rights and law, aiming the constant global peace. Even the efforts in the 19th century to prohibit the slave trade and to limit the horrors of war were not enough to conquered individuals' rights. In 1919, countries established the *International Labor Organization (ILO)* to oversee *treaties* protecting workers with respect to their rights, including their health and safety.

Created in 1948 right after the second world war, the Universal Declaration of Human Rights claims that it rights are interdependent and indivisible.

> Whereas recognition of the inherent dignity and of the equal and inalienable rights of all members of the human family is the foundation of freedom, justice and peace in the world (…) (Universal Declaration of Human Rights, 1948)

The United Nations was fundamental to de development of an environment of international instruments that defends individual's rights. Others instruments were adopted as a regional level, reflecting the concerns about each region's problems. Most of the countries accepted this treated looking forward to a global peace and also, trying to be closer to the Europeans nations.

Although, with the world's changes, that occurred much more in the liquid society[ii], some people claim that the internet must be included as a human right. In Brazil, there is a PL 6/11 which tries to include the internet in this group. The Marco Civil da Internet, in its 7th article also affirms about the internet as essential for the exercising of individual's rights too. Furthermore, in this new liquid society the nations will be trying to achieve the internet as a fundamental right.

The technological advances have been a faster way to communicate, so, it potentialized the capacity of data storage and sent, which could be desirable or non desirable for the individuals. This kind of internet's use may be dangerous because the regulation gap in this area might turn into an unstoppable data marketing, which everyone (who could buy the data) would know about everything and everybody. In this case it was approved the ONU's resolution A/HR/20/L.13 which claims that peoples' rights must include the virtual ones as the internet, such as freedom of expression, which may be applicable in conclude with the 19th article of Universal Human Rights Declaration.

Artificial Intelligence

The idea of creating a machine which is able to process and think is antique. The Artificial Intelligence entered in the human imaginary a long time ago, in the fictional literature of Jonathan Swift "The Gulliver's voyage" where there was a machine called "The Engine" which could "improve knowledge per practical operations" using a "force". The second entrance of IA was since 1990's in a large variety of books, films and series, such as Enemy of the State, Star Wars, Star Treck, Matrix, Truman's Show. Some Gadgets as Tablets were shown in these films, like the Skype. In the 20th century the computer was the big creation: it, at principle, could analyze mathematical calculous quicker than a human being, and, in the end, it thinks autonomously.

It is important to remember that in less than 50 years technology grew and expanded unimaginability, also, the internet is in process to be part of the fundamental's rights in many countries, one of them is Brazil.

Harari (2018) shows that in the Liquid Modernity, the Machine Learning-Artificial Intelligence's phase when machines learns from itself, create algorithms really hard to decode, as in the Facebook case, where the machines built an special language in a few hours, and the own programmers had to turn them down because they could not understand and comprehend theirs communication.

The study by Zhao, Grasmuck, and Martin (2008 apud LANG; BARTON, 2015, p. 148) reveals that Facebook users show their identities through the use of photographs rather than saying them. Lang and Barton (2015) understand that the photographic album, traditionally private, has become increasingly public, creating a huge amount of data. For the authors,

> The traditional photo album, usually curated by a family member or friend and stored in the privacy of a home, is limited to the range of archived photos within a physical location. As photographs continue to be collected in their physical albums, the Internet has changed the way we use and share images. Two factors influenced the evolution of photography from a private artifact to a public identity tool: the transition from analog to digital cameras and the emergence of the Internet. (LANG; BARTON, 2015, p. 148).

The first step to a machine domination might be near, it could be seen when humans would stop working because they would be reply per automation, so not having

enough (or at all) jobs for the mankind, as Harari explain in his book. The author also affirms that technologies based on Artificial Intelligence can and will achieve a higher capacity of processing than humans. These algorithms are being deployed in small objects used in our daily life, as smartphones' cameras, social medias, IoT[iii] equipments and gadgets.

These artifacts direct the human behave, shaping it to some way that the people get used to the consume and do not allow a variety of thoughts and interests, creating something entitled Social Bubbles[iv]. If a person has a perfil on Facebook and follow certain pages which post photos of puppies, per example, she/he might see more contents similar, as others pets, than one person which follows pages of decoration. One classic of Social Bubble was the 2016 election of president Trump, in USA. In this case, Cambridge Analytica with Zuckemberg's enterprise manipulated the votes utilizing algorithms which only showed favorable opinions to de actual president of USA.

The Expression minted per Debord (1967) The Society of Spetacle, may be used in this cybercultural context, which is verified a growing in anxiety and angriness when two different opinions crash. It is due to this that the modern community, rapt by internet, and shaped by the media to feel safer behind screens, that the Society of Spetacle grows everyday. Because of this the persons put all their thoughts and lives into these machines, without any social filter, and these actions might cause problems in a near future. The web's structure, in certain way, promote or make it easier to disseminate the opinion above others content which were shared in the virtual side. Thus, the hatred culture teem until one point that the social relationships turns flammable and so polarized.

The disciplinary Society were in force since XVII until the second world war, and the following years tend to the collapse while there was a new ascendency, the Controlled Society. Later, entitled per Gillis Deleuze (APUD COSTA, 2014), shows the presence or existence of an individual which is always in alert, constantly vigilant about himself, 24 hours per day, 7 days of the week, exposing himself in certain ways that your data base are like extension of his body, and these informations are in everywhere down the virtual world.

Algorithm rationality is a new term minted per Bruno (2019) which refers to the place where the algorithms occupy into the processes of knowledge in a new reality, in

this case they are the core of everything and also are the decisions makers, which shape the reality and manage it. in her thesis she explains about how humans thought and accept that the machines would trespass them intellectually and in the production of informations. The triumph of algorithms as a management system of rational decision is related to a change in the epistemological sight (which was done in the half of the XX century, after the second world war and cold war) which there is a clear passage of the luminism with a critical reflexion to a rationality based on algorithms rules.

The facial recognition

From earliest times, image has played an important role in society, regardless of the technologies used for its creation, transmission and access. Empowered by today's information and communication technologies, image - especially digital imaging - is increasingly part of human life.

The facial recognition utilizes patterns to achieve its goal: determine who is who using only cameras. Silva & Cintra, in their studies affirms:

> O uso de reconhecimento facial dispensa a necessidade de o usuário realize uma ação para o reconhecimento aconteça. Isso oferece vantagens em aplicações como vigilância eletrônica. (Silva; Cintra, 2015)[v.]

In this case, it is shown that facial recognition can be used at any time and everywhere. So, do we have privacy? Because it will "read" ourselves constantly. It should have been regimented after GDPR[vi], however, there are a lot of gaps in de cyber law and rights. This recognition can be done in a simple way, just with a camera which allows the identification of an individual, or more than one. This does not happen in biometric technologies, which needs one equipment per person. The algorithms of facial recognition need a data base previously, to compensate the variations such as, orientation, scale, light, age and facial expressions.

There are different methods which can be used in facial recognition: a) Holistic: use the image complete of the face to extract global characteristics, and variations of individuals' faces. This recognition is made by metrics, like distance, and similarity between images. Eigenfaces, Neural Networks and ICA are classical methods which use

this type of study; b) Geometrical: based on characteristics of images, extract and measure facial distances, such as nose, eyes, lips. Secondly, it makes calculous about geometric relations between the dots, making a vector with geometric characteristics. The method Kanede, filter Gabor are classical methods of facial recognition. c) hybrid: utilizes multiple technics combined looking forward to built a system with higher accuracy than the individual technics.

Lombroso was the precursor of the geometrical analyzes of facial recognition at the time. In 19th century, this professor maped all de characteristics of the individuals trying to achieve a sciential method comproved to distinguish criminals and non-criminals. For him, it was an essence colligated with facial structures which could lead the authorities to a supposed criminal first than the committed a crime.

Xiaolin Wu and XI Zhang in theirs studies characterized a criminal since informations on a large data base, this BigData would be given by the government looking forward to minimize the criminality. In their research, 1.856 (a thousand eight hundred and fifty-six) photographs were identified, following some criteria: chineses, men, 18-55 years old, without facial hair, without scars. From this amount, 730 were criminal.

The Technologies, in general, are known of making mistakes, mainly, with prejudice actions against women and coloured people. There was a case of the Correctional Offender Management Profilling for Alternative Sanctions (COMPAS), in USA which this algorithm had a larger probability of making mistakes in the classification of black people more than the white ones. It demonstrate that even the machines have prejudice. But, how do they have it? It is because their coders built a software putting emotions into it, and also their prejudices, fears, and knowledge: the machines are not neutral, because they were created in a non neutral environment. Because of this, it is needed a strong ethical base behind these new models for not allow these anti minority groups.

The ethical gap and moral are seen by Lombroso (1876, p.179) as one of the fundamental characteristics for the framing of an individual as a criminal. Lombroso theory was based on the physical characteristics of an individual, however, it turns into a prejudice sight when you judge the person previously than the possible fact happen. There are a lot of variations that may change the supposed crime, and because of this we should

not arrest the people only because a program showed that there is a high possibility of this to occur. Some of the persons who were separated and labeled as criminal were innocent and had to pass a time in prison, even if they did not commit the crime. Also, with the natural grow of technologies, IA and algorithms are used in our daily life even when we do not notice it; and on due to that it may be more dangerous than was in 19th century: because there is a scientific explanation about geometrical spots in the face, a large database or a hybrid about variety of technics.

Conclusion

After all this text and ideas that have been exposed here, it is obviously that the use of only one technic of labeling the person as a criminal is not enough and may contain prejudice. The majority worldwide studies are based on 3 types of methods, and the "best" of them is the hybrid one, because it has a large group of technics that are done in the middle of the process.

Wu and Zhang have shown to the world the force of facial recognition, using biometric researchers to built a bigdata base which was fundamental to their research about criminals and algorithms. There are a lot of articles and studies in this area, despite of this fact, theirs was one of the most certain because they utilized a hybrid method which included a huge type of technics that lead them to a more accuracy system.

However, judging people only by them appearance it is not right. Our individual's rights of being innocent until someone proves the opposite must be used in this case too. The Brazilian's Criminal Code is based on this principle, which no one is doomed till the legal process is finish and pass all the rightful path to the conviction.

The individuals' rights were created in a long process which still being done nowadays. Some countries do not respect them, mainly in poor regions, which proves that we should try to connect all the world places at first, and them think about using technology to others areas. In Africa, per example, there are few people with internet access, so, it would not be fair to implement this kind of technic in a place where there is not technical, material structure and even less knowledge and researchers about the use of algorithms in criminal justice. If these methods were used in this kind of place, it could

turn into a tragedy, because the population would not know about it, and probably would not allow its use in these locations.

In conclusion, the hybrid method of facial recognition is the more accuracy one, however, it may cause a large variety of problems to innocent people, just because one machine calculated an algorithm- non ethical nor cultural- to judge and arrest humans. It is clear, in this case, that rightful and legal debates should stay in humans' hands until there is a completer and more ethical been.

Notes

[i] Artificial Intelligence.

[ii] Bauman (2001), A Society which changes very fast, constantly.

[iii] Internet of Things.

[iv] It is a term which corresponds a only being connected in the social medias with arguments and opinions similar to yours. This is usually made by algorithms which aims to "arrest" the person into this parallel reality.

[v] The use of facial recognition does not need that the user realizes an action for the recognition occurs. This offers a great advantage in applications of electrical surveillance. (Free Translation)

[vi] General data protection regulation

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