

# POLITICS AND ARTIFICIAL INTELLIGENCE: THE AI IMPACT ON DEMOCRACY \*

## POLÍTICA E INTELIGENCIA ARTIFICIAL: EL IMPACTO DE LA IA EN LA DEMOCRACIA



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**Resumen:** A través de una minuciosa metodología científica, en el presente artículo académico se aborda el impacto negativo que el desarrollo de la inteligencia artificial (IA) ha tenido y puede llegar a tener en las democracias del mundo. Para ello, se estudiará, de manera general, lo que significa e implica la inteligencia artificial. Luego, se analizará la democracia. Y, finalmente, se explicarán diversos ejemplos que se han suscitado en algunos lugares del mundo (como Estados Unidos, Brasil y Myanmar) con respecto al impacto negativo de la inteligencia artificial en el desarrollo de la democracia, explicando, por medio de la psicología social, la razón por la que el uso de la inteligencia artificial ha generado ese tipo de fenómenos sociales y políticos.

**Palabras Clave:** democracia, inteligencia artificial, sesgo de confirmación, tecnología persuasiva, redes sociales.

**Abstract:** Through a meticulous scientific methodology, this academic article addresses the negative impact that the development of artificial intelligence (IA) has had and may have on the world's democracies. To this end, we will study, in a general way, what artificial intelligence means and implies. Then, democracy will be analyzed. And, finally, some examples that have arisen in some parts of the world (such as the United States, Brazil and Myanmar) regarding the negative impact of artificial intelligence on the development of democracy will be explained, explaining, through social psychology, the reason why the use of artificial intelligence has generated this type of social and political phenomena.

**Keywords:** democracy, artificial intelligence, confirmation bias, persuasive technology, social media.

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Summary: I. Introduction; II. Overview of artificial intelligence; III. Understanding democracy; IV. The impact of AI on democracy and the exercise of public power; V. Conclusions; VI. References.



## I. Introduction

In the last decade, we've seen a formidable (and scary) rise in artificial intelligence (IA). This development of artificial intelligence has improved many aspects of life and, in addition, has optimized situations such as the production of goods and services, government surveillance, scientific research, the collection of multiple data, among many other things. However, this advance has also put in check situations that in a status quo were considered immovable by society. And in this situation is, precisely, that the impact that artificial intelligence has had on the exercise of power and, specifically, on democracy, is found.

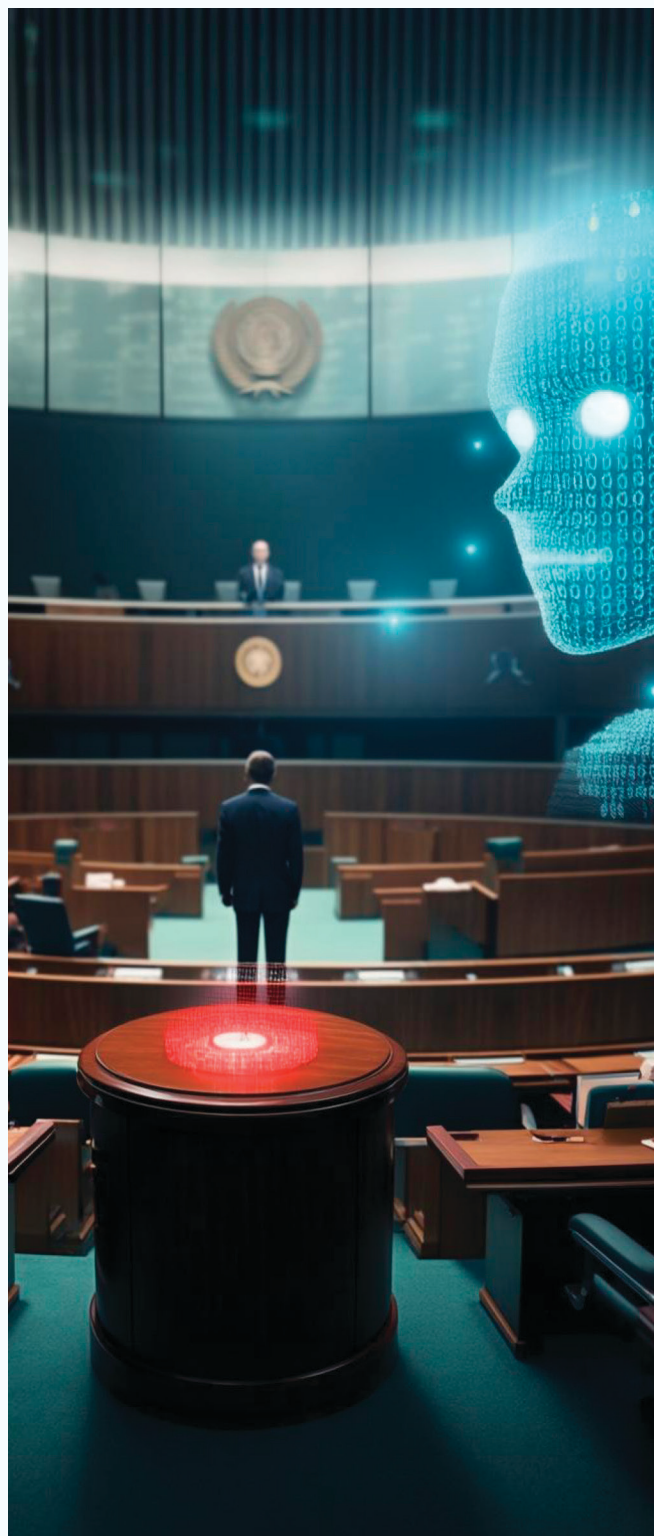
In this order of ideas, it is pertinent that we ask ourselves the following questions: can the development of artificial intelligence generate some kind of problem in daily life? Also, has the development of artificial intelligence generated any impact on democracy and politics in the world? Or can artificial intelligence manipulate human beings?

To answer these questions, this article will analyse, in the first place and roughly, what artificial intelligence is. From there, we must explain what democracy is and how it works, starting from its basic elements such as the generation of majorities, respect for minorities, the formation of consensus and the development of public opinion.

And then, ultimately, we will now analyse the negative implications that the development of artificial intelligence has generated in the advancement of democracy regimes in the world. This, based on several experiences that have already arisen in some parts of the world (such as Myanmar, the United States and Brazil); and that asks us a question, even more, whether the benefits or harms that artificial intelligence has achieved in society are greater or not. For this, the reasons why artificial intelligence has caused this type of social and political phenomena in the aforementioned countries and, obviously, in many of the inhabitants of these places will also be explained; with which we will enter into the analysis of persuasive technology, as fields of study that demonstrate that all computer technology can be applied in such a way that it ends up manipulating the users (human beings) who consume this type of products and services.

Finally, we will address the conclusions that this research work leaves us in relation to the negative impact that artificial intelligence has caused (and can cause) in the development of politics and democracy in the world; and, in addition, we propose a series of solutions that, we believe, it can generate by solving, to a large extent, the negative impact that artificial intelligence has caused in the world of politics and in other areas that we do not have to study here (because it is not part of our subject of study).

In this sense, we can advance the hypothesis that the generative artificial intelligence has had a negative impact on the development of democracy and, in short, has managed to polarize, even more, contemporary societies. But we will analyse that in more detail in the following pages.



## II. Overview of artificial intelligence

It is known that in recent years we have all heard the term “artificial intelligence” (from here on, AI) or, in its case, perhaps we have even become involved in the management of applications or internet pages that are built and operated through artificial intelligence. But, although we often hear what artificial intelligence is, it is likely that we do not know, well, what this concept means (in technical terms). Finally, as Martin Heidegger refers to it, “finding oneself is one of the existential structures in which the being of the ‘being there’ is maintained. Finding oneself has its understanding in each case, if only by restraining it”;<sup>1</sup> therefore, to understand what, in this case, AI is, we must start from its definition so that, from there, we can interpret its meaning. For, “the interpretation of ‘something’ as something has its essential foundations in the ‘having’, the ‘seeing’ and the ‘conceiving’. An interpretation is never an apprehension of ‘something’ given made without assumptions”.<sup>2</sup> In this order of ideas, it is necessary to define what should be understood by the term AI.

Thus, AI is a branch from computer science and as its principal goal of achievement is to imitate the cognitive functions of human beings such as memory, reasoning and others to introduce them into computers; capacities that are considered as part of intelligence.<sup>3</sup> In this way, the developers of artificial intelligence seek to en-

able certain machines to carry out activities that could only be carried out by humans, thanks to their neural network. Therefore, artificial intelligence developers seek, as their goal, that computers could simulate the human brain in terms of the things that this organ can do.<sup>4</sup> That is why not only computer engineers, but also psychologists and neuroscientists are involved in the development of this computer science field.

In this sense, computers that use AI in their operation will collect data to learn from it. In other words, programs designed from AI will learn based on the information that exists on the internet and, in addition, on the handling that other human beings make of that computer. In this way, a machine (computer) will apply all the information that exists on the Internet World Database, which will be used according to the needs that human beings request. Thus, in theory, computers that are operated through AI system are not going to have an independent consciousness, as human beings do. Therefore, a computer of this type is not going to act autonomously (so far). However, there have been documented cases where certain AI systems have gotten out of control (human) and then, they have developed their own language to communicate with each other (without humans being able to understand what it meant)<sup>5</sup> or by modifying its own programming so that its own execution could not be limited manually.<sup>6</sup>

<sup>1</sup> HEIDEGGER, Martin, *Being and time*, United Kingdom, Blackwell, 1962, p. 187.

<sup>2</sup> *Ibidem*, p. 196.

<sup>3</sup> BOURCIERE, Danièle, *Inteligencia artificial y derecho*, ed. de Pompeu Casanovas, Barcelona, Universitat Oberta de Catalunya (UOC), 2003 (Manuales Derecho), p. 56.

<sup>4</sup> BODEN, Margaret A., *Inteligencia artificial*, Madrid, Turner, 2017, p. 11.

<sup>5</sup> As happened in 2017 with the artificial intelligence created by Facebook.

<sup>6</sup> As happened in 2024 with the artificial intelligence developed by the Japanese company Sakana AI.

## OVERVIEW OF ARTIFICIAL INTELLIGENCE

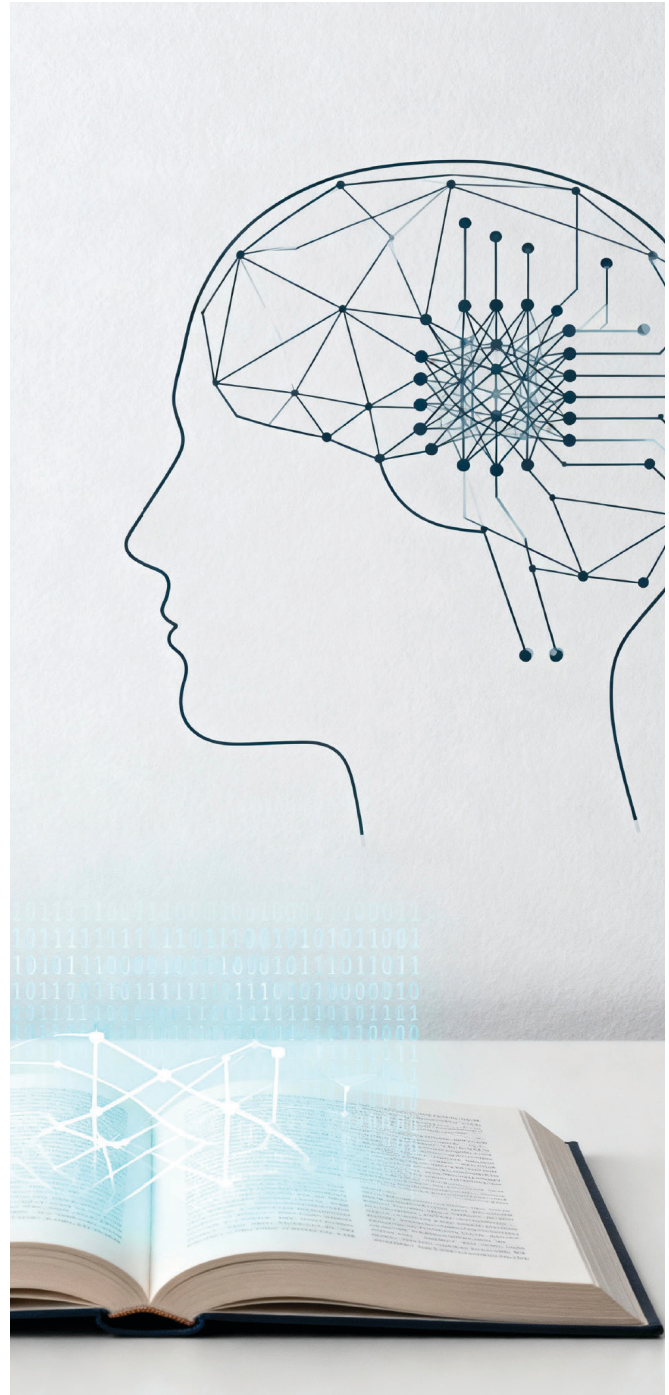
With the last thing we have said, it is evident that can bring significant advances in many fields of knowledge; but they can also entail dangers for human development. This would seem to come out of a dystopian science fiction movie; however, this is not the case.<sup>7</sup> That is why there is a need for effective regulatory frameworks to be established that set ethical limits on the development of AI. But we will return to this point later.

Now, since we are delving into this topic, it is important to note that AI works through algorithms. These algorithms will seek to correctly exercise a series of very specific steps in an area of knowledge.<sup>8</sup> In itself, an algorithm is a type of mathematical language that will allow a series of problems to be solved in a logical way. And, in this order of ideas, AI will always be supported by algorithms. Therefore, it must be clear that algorithms are the reason why AI systems can provide a solution or response to a human approach.

Thus, an algorithm is a type of mathematical and logical language that will certainly generate the solution of a given problem. However, in the field of AI, algorithms will work on their own, after a human has done specific programming beforehand. In other words, an algorithm is born with a program that was human fed with a series of information that, at first, will be used by the algorithm to carry out its own functions

<sup>7</sup> FERNÁNDEZ DE LARA GARCÍA, Salvador Alan, "When man played God: the dangerous of artificial intelligence", en *Global Journal of Human-Social Science*, vol. XXII, núm. 7, 2022, p. 16.

<sup>8</sup> LÓPEZ GARCÍA, Juan Carlos, *Algoritmos y programación. Guía para docentes*, 2a. ed., Bogotá, Fundación Gabriel Piedrahita Uribe, 2009, p. 7.





(solve problems or human approaches). And, over time, this algorithm will collect more information that arise through the interaction it has with human beings or other algorithms. Thus, each algorithm is perfected by itself, without the need for human beings to intervene in that process. Therefore, individuals who develop an AI program will only intervene in the creation of the program itself; but not in the way in which this program is going to improve and become self-sufficient. In other words, an algorithm will be constantly learning and perfecting both by collecting information that it has at its disposal on the network (from the moment it was programmed), and by constant interaction with other algorithms and humans.

It should be noted that software programmed with AI will have, in theory, objectives that must be met. However, experience tells us that, in most cases, those objectives with which they were programmed can be interpreted in many ways by algorithms and, therefore, may have ethical flaws when performing the function for which they were programmed. However, we will not go into this part; since it would imply getting into situations that do not have a direct relationship with the objective of this research.

So far, we have already been able to analyse and outline what artificial intelligence means and how it works. But we haven't yet delved into the core of this research: the impact of AI on democracy. We will develop this question in the following pages.

### III. Understanding democracy

Before delving into the impact that artificial intelligence has on democracy, it is necessary to define what we should understand by “democracy”. And, in this sense, we will surely all think that democracy is the power of the people. However, this definition (which is based on the etymological origin of the word)<sup>9</sup> it is quite basic and reductionist; for it does not tell us much and, in fact, leaves us with two doubts: what is the people? And what is power? In addition, the word “democracy” has evolved over time and, therefore, does not currently mean the same thing that it implied in Athens in the fifth century B.C. (when democracy emerged, factually).

What should be clear is that, when we talk about democracy, we are talking, tacitly, about a way in which power is going to be obtained and held. But, before continuing, we must clarify, in the first place, what power is. In this order of ideas, power will always imply that relational capacity that will generate an individual to influence the decisions of other subjects, in such a way that they benefit the will, values and interests of a holder of power.<sup>10</sup> Therefore, an individual will have power when he influences others.

Now, as we mentioned in the previous paragraph, the word democracy has implicit the term “power”; but in a collective sense and not as an individual power: the power of the people. However, this is somewhat vague, and we will now explain why.

<sup>9</sup> *Dêmos* (δῆμος)=people y *Kratos* (Κράτος)=power.

<sup>10</sup> CASTELLS, Manuel, *Comunicación y poder*, trad. de María Hernández, Madrid, Alianza Editorial, 2009, p. 33.



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For this, we must define what we should understand by “people”. Thus, the people are the group of individuals to whom “active citizenship” corresponds.<sup>11</sup> Therefore, citizenship is made up of those subjects that make up the population of a State and that have the capacity to enjoy and exercise; that is, the age of majority and the possibility of, among other things, voting and being voted for.

In this way, if we go to the etymological definition of the word democracy, it will imply that the citizens of a State are going to impose their will so that the public affairs of their community are carried out. Consequently, these citizens would have the power to command public affairs and, thus, thousands or millions of human beings who possess citizenship would have the capacity to govern (as a whole) their State. Obviously, this is absurd and practically unfeasible. And that is why several authors have pointed out that pure democracy is practically impossible to carry out (this is what authors such as Robert Dahl or Norberto Bobbio have thought) and, likewise, for this same reason Jean Jacques Rousseau pointed out that “si existiese un pueblo de dioses, sin duda se gobernaría democráticamente”.<sup>12</sup> However, given this complexity for a pure democracy to be implemented, Dahl contributed his idea of polyarchies; which, in the words of the author himself, is “the most complete historical realization of the democratic process on the large

scale of the nation state”.<sup>13</sup> Therefore, from this point of view, when a state is closer to a pure democracy (although it certainly never will be) it will be called polyarchy.

Thus, given the complexity involved in the fact of landing pure democracy (direct democracy, as experienced in Athens in the fifth century B.C.) in the complex societies composed of millions of individuals that began to emerge from the Modern Age; Montesquieu said that it was necessary to elect popular representatives so that they, instead of all the millions of citizens combined, would resolve public affairs, under their representation. In this way, the civil contract of mandate that existed since ancient Rome was updated to create a link between citizens and the people who would be elected by them as their representatives to the various public bodies existing in a State.<sup>14</sup> This was the way in which representative democracy began to replace direct democracy. However, in recent decades, liberal democracies (which were configured under the idea of representative democracy) began to lose legitimacy in the eyes of many citizens; since, many times, it did not correct

<sup>11</sup> ZIPPÉLIUS, Reinhold, *Teoría general del Estado*, México, UNAM, 1985, p. 77.

<sup>12</sup> ROUSSEAU, Jean Jacques, *El contrato social*, México, Partido de la Revolución Democrática, 2018, p. 55.

<sup>13</sup> DAHL, Robert, *Democracy and its critics*, USA, Yale University Press, 1989, p. 214.

<sup>14</sup> It should be noted that the figure of political representation arises in both primitive and medieval christian communities; since both the apostles of Jesus and the monks chose, by vote, the person who was going to represent and direct them. But this figure also arises in monarchies, in which the nobles came to appoint a representative to participate on their behalf in the sessions of the Courts of European kings or, likewise, the subjects came to elect, through acclamations, certain people who were going to represent them in a monarchical body. So, originally, popular representation is not a democratic figure.

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the serious inequalities that came to exist between disadvantaged groups that in many cases are the majority. Although, certainly, many of these disadvantaged majorities came to have more educative development than in previous centuries.

Apart from the fact that this delegitimacy of liberal democracies was also increased by the corruption crisis that was experienced in the countries that have had this form of government. That is why, as a way of regaining the legitimacy of democracy, participatory and deliberative democracy began to be promoted so that all citizens (and not only their popular representatives) could participate in the public affairs of their community through mechanisms such as referendums, plebiscites, etc. participatory budgeting, citizen initiative or open parliaments (to mention a few).

Now, returning to what we have said in previous paragraphs, real democracy or polyarchy needs several elements to be considered as such (although, as we mentioned in the previous paragraph, not in a pure way). Among these elements are the formation of majorities, respect for the rights of minorities and the construction of public opinion.

In this order of ideas, the formation of majorities will imply, as its name indicates, that public decisions (especially those referring to the election of popular representatives) will be taken by a simple, absolute or qualified majority; according to what is indicated in the constitutional, electoral and legal system of each State. Thus, a majority will be simple when one of the options

put to popular consideration manages to obtain the largest number of votes, but not more than fifty percent.<sup>15</sup> This type of majority can generate strong political divisions in the community, which can erode the consensus that every democracy seeks to achieve and end up generating a crisis of governability.

On the other hand, we speak of an absolute majority when an option put to popular consideration manages to obtain half plus one of the total votes cast on a given election day. And, finally, we refer to a qualified majority when a political option manages to obtain two-thirds (a larger fractional measure [depending on the electoral system in question can also be used]) of the votes cast.

Now, the fact that in a democracy the formation of a majority is sought, that does not imply that this majority will have the absolute power to do what it pleases in the community and even, in such a case, transgress the human rights of minorities. And this is where the second element that must exist in any real democracy comes in: respect for minorities. Finally, it is difficult for a democratic political system to achieve unanimity. Therefore, given this impediment, what will be sought is to achieve consensus. And this consensus will only be achieved if the majority that was formed respects the existing minorities and, in turn, the latter respect the result obtained (starting, likewise, from the idea that this

<sup>15</sup> Therefore, perhaps a political option will achieve an absolute majority of the votes; but if all the options that failed to obtain such a majority were added together, a higher percentage would surely be obtained than the simple majority that managed to win.



minority, at any other time in the future, can become a majority). And this is achieved with a solid rule of law, in which the human rights recognized in a constitutional text are observed by all the inhabitants of the community and, if there are violations of them, there are public bodies that can safeguard the legal sphere of all the governed, individually or collectively.

But now, we must say that, in democracies, the most pertinent thing would be for citizens to make decisions rationally and not based on prejudices, emotions or other subjective situations. But the question before this is: how is that achieved? And the answer is the following: through the construction of a solid and impartial public opinion that considers the plurality of voices that exist in a society and that, at the same time, can generate the rational deliberation of ideas. And for this to be done, citizens must have received a solid civic education that helps them to carry out their citizenship effectively. However, all this would be quite utopian; given the following situations that are currently being experienced with respect to public opinion: many of the mass media are co-opted by political and business elites who, obviously, are going to potentiate the information that suits them and not equally the generality of members of a community. The second problem is the emergence of AI which, to a certain extent, has been glimpsed to end up polarizing society more deeply.

Thus, since we have exposed, roughly, what democracy is. It is time to analyse the impact that AI has generated on democracy and, specifically, on the exercise of public power in the world.

## IV. The impact of AI on democracy and the exercise of public power

Humanistic education has formed us under the idea that the human being is a rational animal. Thus, in theory, we make all our decisions under the light of reason, which is considered synonymous of intelligence. In this way, we have come to believe that the moment in which human beings make their decisions without them being diverted by emotions or prejudices. However, this ends up leaving a lot of responsibility to individuals regarding the decisions they make in their lives.

At the same time, we have been told ad nauseam that human beings have, as part of their human dignity, the unrestricted use of freedom. Thus, individuals are capable, theoretically speaking, of deciding their present and future based on deciding on one of several options. But areas of knowledge such as behavioural economics, social psychology and neuroscience have shown, over the last thirty years, that this is not quite true. For example, from various experiments, various social psychologists and neuroscientists have proven that human beings make decisions not only based on reason, but also on emotions, which, many times, arose from the so-called mirror neurons, from prejudices or instinctive situations that are typical of any animal existing on the planet. That is why James M. Buchanan pointed out the following: "We know, of course, that in the economic as well the political relationship, individuals are not entirely rational, they are not well informed and they do not follow self-interest in all circumstances".<sup>16</sup> This is an assertion that was

<sup>16</sup> BUCHANAN, James M., *The calculus of consent. Logical foundations of constitutional democracy*, USA, Liberty Found, 1999, p. 213.



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seconded by Daniel Kahneman when he said that the choices of human beings are not perfectly rational.<sup>17</sup> Therefore, human beings tend to decide or think in a biased way. It is something totally human.

Now, if these authors (and other scientists) have reached this type of conclusion only considering the interactions between human beings; but what about the interactions that occur between humans and machines (AI)? That is, has AI caused or can cause some kind of cognitive bias in human beings for their individual decisions as in a political community? And the answer to this last question is yes (in capital letters and bold). But how can a set of algorithms modify human behaviour? Because various social psychologists and neuroscientists have already demonstrated, through various experiments, that human decisions often have cognitive biases generated by prejudices in an emotional or instinctive situations. But this was understood with the fact that these biases were generated from other human beings. However, we are currently seeing that these cognitive biases can also be generated by the interaction that human beings have with AI. And below we will explain this with more detail.

And the answer is given to us by several authors. And, in fact, what we will say below are the conclusions we have reached after experiences that have taken place, at a social level, in various parts of the world.

Let's start with the use of social networks. For more than a decade, social networks such as Facebook, Instagram and others have come to occupy a preponderant space in our lives. It is common for many of us to wake up and the first thing we do is take our cell phone to see what news are on social networks. And, likewise, we share photos or comments of them. This generates constant interaction between all the people who have an account on these social networks. So far, everything seems harmless. However, it has already been seen that the algorithms that integrate these social networks are designed to potentiate certain publications instead of others, since the objective of such engineering is "aumentar la implicación del usuario"<sup>18</sup> on the respective social network. Thus, the algorithms of Facebook, YouTube, Instagram and others are programmed to generate that human beings who use them spend a lot of time scrolling through the news section, videos or other publications to generate more interaction and, in this way, generate more income for the owners of these social networks. Obviously, this has a clear commercial logic: every entrepreneur seeks to make the goods and services they offer more consumed to generate greater profitability. And, given this situation, we could ask ourselves if this is ethical in terms of AI. This is exactly what we will answer in the following paragraphs.

Ahora bien, ya que señalamos la manera en la que las redes sociales están programadas de origen, es importante hacer la siguiente precisión:

<sup>17</sup> KAHNEMAN, Daniel, *Pensar rápido, pensar despacio*, México, Debolsillo, 2020, p. 313.

<sup>18</sup> NOAH HARARI, Yuval, *Nexus*, México, Debate, 2024, p. 244.

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[...] la individualización de las noticias puede llevar a manipularnos políticamente, porque los algoritmos de las plataformas como Google y Facebook están diseñados para satisfacer al consumidor, más que cumplir con una función cívica. Por lo tanto, lo que hacen [...] es reforzar las preferencias políticas de sus audiencias en lugar de darles noticias desde diferentes ángulos para que puedan formar sus propias opiniones. En otras palabras, existe el peligro de que estas tecnologías fomenten el fanatismo [...].<sup>19</sup>

And this could be demonstrated in the 2016 presidential election in the United States in which both Russia and the company “Cambridge Analytica” managed to influence (through multiple biased or false publications that were posted on social networks and internet portals) the fact was that the preference of the American citizens had for Donald Trump grew. And in the 2018 Brazilian presidential election, YouTube’s algorithms were a transcendental boost in the projection and increase of popular support that Brazil’s extreme right candidate had, and par excellence, in the fact that Jair Bolsonaro became President of that country.<sup>20</sup> In other words, thanks to the way in which YouTube’s algorithms have been programmed (by humans), it has sought (as an ultimate goal) to ensure that individuals (who interact on this social network) take as long as possible to detach themself-

<sup>19</sup> OPPENHEIMER, Andrés, *iSálvese quien pueda! El futuro del trabajo en la era de la automatización*, México, Debate, 2018, p. 84.

<sup>20</sup> NOAH HARARI, Yuval, *Nexus*, op. cit., p. 310.



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ves from the aforementioned digital platform. Thus, its algorithms detected that when promoting and disseminating videos that had extremist messages, violence or conspiracy theories, the interaction and involvement of users on YouTube or Facebook was greater. Therefore, those videos that were moderated in their content were ignored by the algorithms of that social network. And this is not something that only happens with YouTube or Facebook; it is also something typical of all the social networks that currently exist and that, certainly, are part of the daily life of most human beings in the world, the influence is permanent.

This is not something new. In fact, since 1993, at Stanford University and sponsored by Philip Zimbardo, Brian Jeffrey Fogg began to develop, as the subject of his doctoral research, a new field of knowledge in social psychology called *captology* (as an acronym for the phrase “computers as persuasive technologies”) and which focuses on the “design, research, and analysis of interactive computing products created for the purpose of changing people’s attitudes or behaviours”.<sup>21</sup> Thus, this new field of psychological knowledge analyses the way in which computers can manipulate human behaviour, just as any human being would do with another human being or group of human beings.

Through *captology*, computers ceased to be just a human tool, to become subjects that can change the attitudes and behaviour of human

beings. Thus, within this field of social psychology, Fogg defines persuasive technology as “any interactive computing system designed to change people’s attitude or behaviours”.<sup>22</sup> In other words, persuasive technology will imply *captology*. And, therefore, Fogg not only dealt with what most individuals who are alien to computer terms could associate with computers, but with all those machines that are managed by satellite, such as cell phones. And, obviously, when this field of knowledge began to be developed by Fogg, social networks were just beginning to develop and gain popularity among the youth of those years. But that’s where the foundations of the current techniques that current social networks use to generate that their users stay as long as possible interacting on them were centred. In fact, currently, Brian Jeffrey Fogg continues to be the Director of the Sanford Behaviour Design Lab (founded by himself in 1998) and in which several characters who have been key in the development of current social networks have completed their postgraduate studies, such as, for example, Mike Krieger, co-founder of Instagram.

In this order of ideas, this technology has been advancing by leaps and bounds in recent years thanks to the advance of generative AI and, certainly, it has implied an enormous challenge in all areas of life. But, specifically, in the field of democracy, *captology* and persuasive technology have generated breaking points in basic aspects of democracy, such as rationality in public discussion and in the choice of political

<sup>21</sup> FOGG, Brian Jeffrey, *Persuasive technology. Using computers to change what we think and do*, USA, Morgan Kaufmann Publishers, 2003, p. 5.

<sup>22</sup> *Ibidem*, p. 1.

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options as mentioned in the previous paragraphs of this section. And so, persuasive technology makes use of behaviourist techniques (through the classical conditioning of Ivan Pavlov and operant conditioning of Burrus Frederic Skinner), through the exploitation of cognitive biases, to persuade (manipulate) human beings to do or not do something (modify their behaviour). And, obviously, this has an important impact on the field of politics and, specifically, on democracy.

To further exemplify this situation, it is necessary to refer to the forced displacement, gang rape and genocide of the Rohingya ethnic minority (who are muslims) in Myanmar by the Army of that country and extremist members of the majority buddhist population between 2016 and 2017. This genocide was carried out, in large part, because of the programming that Facebook had. And we can make this statement, since (as we have already mentioned) social networks seek to ensure that the interaction and involvement of their users is present in a greater part of the time, social network algorithms have learned that human beings react better (in terms of interaction and involvement) to publications that are extremist. This has been called fake news and, obviously, it generates post-truth; something that is very useful to empower certain individuals or small social groups to accumulate power and, likewise, to silence their opponents. However, before this could be achieved through traditional mass media such as newspapers or television; but this situation was enhanced with the arrival of the internet and, above all, with social networks.



Now, returning to the issue of the genocide of many of the Rohingya ethnic minority in Myanmar, it is necessary to specify that this atrocity consisted of the destruction of many Rohingya peoples, the genocide of tens of thousands of civilians of that ethnic community, the gang raped and sexual abused of men and women of the same community and forced displacement (a crime against humanity) of more than seven hundred thousand Rohingyas.<sup>23</sup> And all this, which was the cause of great hatred towards this ethnic minority by many members of the buddhist majority in that country, was projected and augmented by Facebook's algorithms; since they replicated and recommended the publications that certain users made against the aforementioned racial minority. And posts that turned out to be moderate or pro-Rohingya were ignored by the social network's algorithms. This generated a significant cognitive bias by generating the preconceptions (based on prejudices) previously held by many of the members of the buddhist majority population in Myanmar to be reinforced, which ended up increasing hatred and prejudice against the ethnic minority in question and generating a wave of systematic and generalized aggressions against them. And we might come to believe that all these atrocities described were not the result of the impulse that the algorithms that Facebook generated with respect to the posts that extremists made against the Rohingya; but even Amnesty International pointed out that "Meta's content-shaping algorithms proactively amplified and promoted content in the Facebook platform which incited violence, hatred, and discrimination against the Rohingya".<sup>24</sup>

The influence generated in the former case by social networks on human behaviour has an explanation in social psychology that is called "confirmation bias" and that implies the inclination to seek, favour and interpret all that information that confirms our individual beliefs (even if they are absurd or unsustainable) and, therefore, making other alternatives with support not have so much value for ourselves.<sup>25</sup> Therefore, human beings will seek to confirm (instead of questioning) their own beliefs; even if these are notoriously irrational. In this way, what social media algorithms

<sup>23</sup> NOAH HARARI, Yuval, *Nexus*, op. cit., p. 242.

<sup>24</sup> INTERNATIONAL AMNESTY, *The social atrocity*, trad. de John Macquarrie y Edward Robinson, United Kingdom, International Amnesty, 2021, p. 4.

<sup>25</sup> GUERRERO MÁRQUEZ, Laura, *Sesgo de confirmación y fake news*, trabajo de fin de grado, España, Universidad de Jaén, Facultad de Humanidades y Ciencias de la Educación, 2021, p. 4.



generate when advertising publications with extravagant or extremist content is to potentiate this confirmation bias in all their users, which further deepens the divisions that may exist in each community. Consequently, the current design of social networks does not care and generate a rational and constant deliberation in its users (as should occur in a democracy), instead wants a monologue that ends up confirming human prejudices. This threatens basic principles of coexistence (such as respect for plurality) and democracy (such as respect for minorities).

But there is another risk of the use of AI in a democracy, and that is the difficult maintenance of dialogue and public deliberation. And we are not referring to what we have indicated in the previous paragraphs, but to the fact of the existence of bots on social networks. These bots can make social media posts and interact with human social media users. Finally, they have been programmed with AI. In this way, although the ultimate purpose of the existence of deliberation in democracy is that human beings can reach a consensus on various public issues; but the reality is that bots cannot be made to change their minds and, moreover, since they are fed by a lot of information (and, likewise, continue to be fed with the information collected daily), it is clear that these bots could manage to manipulate individuals so that they change their points of view and political preferences. And we might think that this is difficult to happen. However, a 2020 scientific study projected that, on the social network "Twitter" (now called "X"), bots generated 43.2% of the tweets that users of this social network

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read. In this way, we can realize that, based on the above information, almost half of the publications made on the social network "X" could be generated by AI and not by human beings. Therefore, so-called public opinion could be directed by algorithms and not by humans.

On the other hand, there is an issue that also implies a danger for the development of free coexistence in democratic societies: the violation of privacy thanks to AI. And this is so, since to date all human beings who have access to an electronic device that has a camera, microphone and internet access can be monitored (in real time) thanks to AI programs. That is, as Noah Harari refers to in his book "Nexus", this is a dangerous situation for today's democratic societies and, at the same time, it means actualizing the totalitarian return of the fascist regimes of the twentieth century. Finally, all human beings can be heard, photographed, videotaped and tracked from distant places, if we have this type of electronic device. And this is possible, for example, thanks to computer programs such as "Pegasus".<sup>26</sup> In this way, an autocratic state (such as Saudi Arabia, Belarus or North Korea) or a semi-democratic state (such as Venezuela or Russia) could (and surely do) monitor the entire population to avoid future dissidence and, therefore, dangers in the maintenance of the regime in question. Obviously, this would be a violation of personal freedom and the right to free development of the personality of all individuals. A situation that, since

2003, Brian Jeffrey Fogg had already predicted as a possible negative consequence of the advance in technology.<sup>27</sup>

But this does not stop here. Andrés Oppenheimer, in his book *¡Sálvese quien pueda!*, tells us that during the 2016 U.S. electoral process "The Washington Post" began to publish newspaper articles written by AI (they did not require human intervention).<sup>28</sup> Thus, it is no longer necessary use human beings who are specialized in political issues to write endless newspaper articles on these topics. Therefore, a set of algorithms already can coherently put together a set of information related to a specific issue (in this case, political) to "inform" citizens about what is happening. In other words, a set of algorithms can already replace what is known as public opinion and which, in fact (as we saw in previous pages), is an element of all current democracy. But is all the information collected by algorithms real or can biased or unreal situations be reported? Here comes an ethical issue that is already beyond humans. In addition, the fact that both in this field of work and in many others AI is beginning to replace human work, it is clear that in the coming years many human jobs will be lost and, thus, millions of people will be left unemployed. This situation could generate a political crisis in contemporary societies; just as it happened, in the three years after the global economic crisis of 1929, in Germany and which, certainly, was one of the factors that drove the rise of National Socialism in that country (with the serious totali-

<sup>26</sup> Spyware developed by the company NSO that caused a stir in 2016 when it was discovered that it was being used by various governments around the world to illegally track and monitor politicians, businesspeople, journalists, and activists.

<sup>27</sup> FOGG, Brian Jeffrey, *Persuasive technology*, op. cit., p. 226.

<sup>28</sup> OPPENHEIMER, Andrés, *¡Sálvese quien pueda!*, op. cit., p. 74.

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tarian and fascist implications widely known). So, all countries should start preparing for this impending unemployment revolution generated by the advent of artificial intelligence.

Another intelligence situation that could impact democracy is the real possibility that a machine can come to hold political power in a community. While it is true, this would seem like a dystopian situation that would only be viable in a science fiction novel or film; the truth is that in Japan, a few years ago, a robot named Matsuda was able to run for mayor of Tama (in Tokyo) and propose that artificial intelligence would change that Japanese city.<sup>29</sup> And, although this robot was not elected in those elections, the truth is that it did obtain four thousand votes in its favour and ended up in third place. In other words, thousands of human beings preferred to vote for a machine than for someone like them.

On the other hand, following what was said in the previous paragraph, it has been shown that artificial intelligence can develop solutions that humans had never thought of. This has happened when, for example, artificial intelligence has been placed to play certain games such as chess. And this shows that, as Harari has mentioned, AI is completely different from human intelligence and, therefore, can develop conclusions or solutions that humans had never thought of. In this way, we do not know whether, in the short, medium or long term, any AI program could completely go beyond human control and, thus, generate a cybernetic government that could seek to dominate or exter-

minate individuals. It is difficult to believe the latter, but not impossible.

As we can see, the accelerated development of AI has implied a paradox in the exercise of political power and, therefore, in the development of democracy in the world. Thus, AI leaves ethical unknowns that must be answered as soon as possible. As Fogg predicted in 2003, referring to persuasive technology, with the following:

Can persuasion be unethical? The answer clearly is yes. People can use persuasion to promote outcomes that we as a culture find unacceptable: persuading teens to smoke, advocating that people use addictive drugs, persuading people to harm those who are different in race, gender, or belief. Persuasion is clearly unethical when the tactics used to persuade are deceptive or compromise other positive values.<sup>30</sup>

Thus, analysing this cited paragraph, we can note that Fogg's ethical conclusion regarding persuasive technology and captology, based on his own knowledge and experiments on the subject, predicted the context we currently live in the world with artificial intelligence through social networks; as we have already demonstrated in the previous paragraphs. And, in the same vein, Fogg pointed out that "captology has drawn on various disciplines, most notably social psychology, to predict the potential that computers persuade people will create new insights into how people persuade other people".<sup>31</sup> And, like-

<sup>29</sup> *Ibidem*, p. 23.

<sup>30</sup> FOGG, Brian Jeffrey, *Persuasive technology*, op. cit., pp. 212-213.

<sup>31</sup> *Ibidem*, p. 242.

wise, this author added that “in the future, persuasive technology systems will become numerous, eventually becoming part of our everyday lives, at home and at work”.<sup>32</sup>

Before this hypothetical scenario that, as a prophecy (prospectively speaking), Fogg already glimpsed in 2003. This social psychologist postulated that developers of all types of technology should make ethical questions to know if their computer programs and computer designs could be potentially unethical. But, at the same time, this researcher proposed a “stakeholder analysis” through which, using a well-defined methodology, it could be demonstrated whether a computer program had an ethical impact on society. In this analysis, it was necessary to establish who could be the parties that could receive the ethical impact of the program (developers, consumers, among others) and, from there, detect who lost and gained with the use of this type of technology. And Fogg also pointed out that, in order to detect the unethical impact of a computer program or a specific computer, it was necessary to detect the intentions by which it was sought to persuade a sector of the population through those computer programs or machines, the methods used by such programs or devices to persuade human beings, and the results obtained by applying the persuasion of this type of technology.

Thus, continuing with the analysis of the ethical impact that AI can cause (as we have mentioned that Fogg pointed out). That is why we believe that, given the advance of AI in our

contemporary societies, it is important that the governments of the world begin to regulate its development (in their national legislation) to establish, for the developers of these computer programs, ethical limits that they must observe when developing an AI program or, if that is the case, to modify the programs that already exist. And, if the developers do not comply with the provisions of the legislation of each country, severe sanctions should be imposed. We say all this based on the previous experience that occurred in the world a few decades ago when the scientific community began to develop cloning; a situation that was sought to be replicated in human beings and that, certainly, was prohibited by all the governments of the world, given the danger that such a situation implied for the humankind. And the same has happened with the regulation that various countries around the world have made to regulate nuclear research; a situation that also puts the human species at risk. Thus, given the success of the regulations that were developed to put limits on both cloning and nuclear research, it would be pertinent to do the same with AI. Finally, the latter also implies, currently, a danger to the human species and, as far as this research work is concerned, to the maintenance of democracy.

But, for this proposal to be carried out, the various political actors in each country must commit to the establishment of this type of measure and not as happened in Puebla (Mexico) during 2022, in which I developed a bill to regulate AI in that state, and it went unnoticed by both local legislators and the media. We assume that none of them understood this initiative and that is why it was ignored.

<sup>32</sup> *Ibidem*, p. 243.

## V. Conclusions

As we could see throughout the pages that make up this academic article, artificial intelligence has generated a wonderful technological advance in society; a situation that has made human beings have improved many aspects of our lives. What's more, thanks to this technological advance, human beings have managed to master themselves.

However, the development of artificial intelligence has also generated negative impacts on many aspects of life in society. And these impacts are going to continue and increase soon. Among these aspects of human life that have been negatively impacted by artificial intelligence is democracy. As we saw in previous pages, democracy has been consolidated, from the second half of the twentieth century to date, as the best form of government that can exist in a State. However, for a country to be considered democratic, certain requirements must be met, such as the formation of a majority, respect for minorities and the formation of public opinion. The formation of a majority must be carried out with rules pre-established by the constitutional and legal system of each country.

On the other hand, the formation of a majority will invariably imply that there will also be one or more minorities that will not share the views of the majority; but that they must coexist in the same environment in a peaceful manner and that, likewise, they must respect the decision taken by the majority and, in turn, this majority must respect the human rights of the minority. Thus, this peaceful coexistence existing in a democratic political system must be sustained by the idea that the minority can become, at a future time, a majority. Therefore, his political vision may be put into action at some point. And, in the same order of ideas, the human rights of the minority must be protected by the majority, and for that there must be a constitutional and legal framework that guarantees and protects this type of situation, in addition to a clear division of powers. This is what we call the rule of law.

But, apart from what has been said so far, in any democratic political system a free public opinion must develop; through which all social sectors can deliberate (rationally and peacefully) on various public issues and, in this way, reach conclusions that will imply a consensus that, in the end, will generate that the authorities and their actions can count on legitimacy. This, in turn, will ensure that there is governability in every political community.

Obviously, what we have said so far sounds beautiful. However, in no contemporary society has it been carried out in such an idealistic and perfect way as we have mentioned in this text. In all democratic systems there have always been failures. It is for them that various doctrinaires have said that there has not been a pure democracy in the world. But things have become more complicated with the emergence and development of artificial intelligence; since the implementation of persuasive (psychological) strategies in the development and implementation of artificial intelligence has generated several interesting social and political phenomena (as we were able to demonstrate in the previous pages); such as: a) a dissemination of false or maligned news; b) internal social polarization in various countries; c) a boost to the confirmation bias of millions of human beings; and d) a constant violation of people's privacy, among other situations that have put in check the supposed stability that liberal democracies had in the world. Thanks to this, extremist political actors have come to power in countries such as the United States, Brazil or, as in the case of Myanmar, serious human rights violations (such as genocide, tumultuous sexual violence or forced displacement) of an ethnic minority have been generated. Therefore, if this has already happened thanks to artificial intelligence, it can happen again. And, in this sense, this makes us rethink the importance of democracy and, likewise, that we must look for ways to prevent this type of unfortunate situation from happening again in the world.

Thus, as we have already said, it is important that all countries in the world establish ethical limits in their respective national legislation on the development of artificial intelligence and severe penalties if these limits are not observed by the developers of this type of technology. Finally, as we have already said, the Law is the only effective way in which the danger implicit in artificial intelligence can be contained and, therefore, its development is completely favourable for human beings. And, to achieve this objective, it would be ideal to resort to the techniques that Brian Jeffrey Fogg developed to detect if a computer or a computer generated an ethical problem. If a public institution in each State were in charge of carrying out this type of analysis, it would be more efficient to detect the failures of the programs created through artificial intelligence to prevent them from going on the market or, once in commerce, to sanction the developers of each of these types of artificial intelligence programs that generate serious ethical problems and put security and integrity at risk of communities and the world.

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