

Men Replaced by Robots? Ethical Issues in Response to Technological Developments: Challenges for CSR

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Abstract

Over the latest decades, technology has been the driving force for most of the transformations that characterize the professional work today. Artificial Intelligence, robots, automation, complex systems and machines, and many other technological inventions do not represent a futuristic vision anymore, but they rather define our current reality, altering the fundamental nature of business and work. Besides their incontestable benefits, inquiries about the powerful impact of these technologies have surfaced, leading to a debate on "existential threat" they pose, since the nature of this technological progress is unpredictable. Therefore, there is a need to undertake proactive measures (such as a regulatory framework) in order to identify and mitigate the risks. In this context, the aim of this paper is to address some ethical issues with regard to the impact the accelerated technological developments have on humankind, mainly on the workforce, and the way the future of work is reconfigured by these transformations. In addition, the paper addresses some implications for the Corporate Social Responsibility (CSR), highlighting that it is crucial for companies to address the challenges posed by the new technologies in an ethical manner in order to contribute to a more sustainable and equitable future.

Keywords: technological developments, ethics, corporate social responsibility.

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1. Introduction

The rapid development and integration of new technologies in almost all areas of society over the latest decades has transformed the way things are done, businesses are conducted, or CSR objectives achieved. Although the benefits are highly valued, the technological revolution carries numerous challenges which are still considered to be manageable by the human being. These challenges lead to ongoing debates on "existential threat" posed by the future of Artificial Intelligence (AI) and highlight risks such as "the creation of new weapons of mass destruction, or catastrophe through accidental misuse" (Gill, 2016). In his study on "existential risk", Bostrom (2013) asserts that AI might be the most apocalyptic technology of all and, due to its intellectual powers beyond human understanding, it could effortlessly enslave or

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destroy Homo Sapiens (Bostrom cited by Gill, 2016). In this context, there is a need to undertake proactive measures (such as a regulatory framework or an ethical code) in order to identify and reduce all the challenges and risks these technological developments pose to the humanity. Against this backdrop, the aim of this paper is to address some ethical issues with regard to the impact the accelerated technological developments have on humankind, mainly on the workforce, and the way the future of work is reconfigured by these dramatic technological transformations. In addition, the paper approaches the implications for the Corporate Social Responsibility (CSR), highlighting that it is crucial for companies to address these challenges and risks in an ethical manner in order to contribute to a more sustainable, inclusive and equitable future.

2. Problem Statement

Technological developments penetrated almost all aspects of society, including organizational processes and CSR, resulting in an increasing fear that these smart machines, especially robots, would replace humans in activities and decision-making. Many executives from the largest corporations ranked AI one of the most disruptive forces in the business landscape, and a study carried out by Accenture in 2017 revealed that 85% of managers planned to extensively invest in AI-driven technologies in the next three years (Jarrahi, 2018).

Other authors identified these technological disruptions as having mainly a negative effect on humankind, debating on the existential threat posed by the AI-driven machines. Knight (2015) asserts that AI “underlies human capabilities in strategizing, social manipulation, hacking, technology research, and economic productivity” (Gill, 2016).

Some authors advance the idea that the rise of new technologies call for “a new human-machine symbiosis, which presents a shifting division of work between machines and humans” (Jarrahi, 2018). Taking into consideration this vision, the collaboration between humans and machines, it results that machines should perform mundane tasks, while humans should be in charge of more creative/innovative activities. While AI capabilities may help humans overcome complexity using a superior analytical approach, the role of humans in decision-making and their intuition in dealing with unknown and uncertainty remain unquestionable. As Jarrahi (2018) states, “machines depend upon humans when subconscious decisions heuristics are necessary to evaluate and facilitate the outcomes of decisions”.

The significance of this study resides in its potential contribution to the literature on technological developments and their impact on the future of professions, as well as to that related to CSR activities, by highlighting the numerous challenges

posed by the technological imperative and the need to approach them in an ethical manner. The findings of this paper could be of interest to students, researchers, as well as to specialists interested in this topic.

3. Research Questions/Aims of the research

The research questions that underpin this study reflect a number of serious societal concerns raised by the current wave of technological developments:

- What are the fundamental changes triggered by the new wave of technological developments ("the 5th industrial revolution")?
- What are the implications if robots take over/replace men on the labor market?
- How could we approach these developments in an ethical way?
- Which are the implications and challenges for the CSR?

4. Research Methods

The paper is an exploratory research, based on investigative techniques which imply the collection and selection of the relevant literature in the field (scientific journals, documents, online resources) and the analysis and interpretation of the collected material (focus on ideas, concepts, insights). It is a fundamental and qualitative research which attends to capture the way humankind is impacted by the new wave of technological developments, highlighting some ethical aspects in relation to robots taking over and replacing men as workforce, as well as the challenges imposed to CSR.

5. Findings

5.1 Technology – a tool that gives power to economic actors (economic agents). Ethical challenges in distributing the wealth of nations after the four industrial revolutions

Over time, specialists in the economic and international relations fields put forward the idea that the understanding of the world's complex economic realities must be addressed from both economic and political perspective (an interdisciplinary approach), highlighting the existence and the mutual interference between "the state" and "the market". At domestic, as well as at international level, the state regulates the market relations, and the market forces influence the political actions and decisions (Bal, 2009). In this context, certain clarifications are necessary in order to understand how the economic, *technological*, political and other types of processes and their interferences influence the power of actors on the world stage.

The power of economic agents influences their participation in the international trade, financial flows, *technology transfer*, the sharing of benefits and advantages

(opportunities), the sharing of gains and losses (costs) (Dumitrescu & Bal, 2002). But what are the links (connections/relations) between technological advances, technology transfer and the power of the economic actors?

In 1975, R. Gilpin (cited by Bal, 2009), in his studies of international political economy, underlined the fact that, within the economic relations, there are mutual and dynamic interactions of two major interests/objectives of economic actors/agents: *wealth accumulation* and *power acquisition*. In addition, R. Tooze (cited by Bal, 2009) considered that the late capitalism was characterized by the tension between the political organization of states and the global character of wealth accumulation. Furthermore, G. Kebabdjian (cited by Bal, 2009) believed that there are five complementary fields of power that would define a power on the international stage: physical power, economic power, political power, military power, and the power of national values' system.

Over the latest decades, the research and development (R&D) activity has had a significant impact on each of these five fields of power. The industrial revolution of the 18th century initiated a process of intensive innovation. Since then, *new technologies* have accelerated production processes, cost reductions, more effective use of raw materials, easier tasks for workers, more options for consumers etc. Even more dramatic changes took place: technologies/robots replaced people in many fields of work. At this point, several questions naturally arise:

During *the four industrial revolutions* (Table 1), did all these technological innovations contribute to a *favorable and fairly distribution of the benefits* on the population involved in the complex processes of production – distribution – consumption? And what could the ethical implications be?

Table 1. The four industrial revolutions

The 1 st industrial revolution (Industry 1.0)	– took place at the end of the 18 th century – the beginning of 19 th century, after the invention of the first steam engine by James Watt (1765).
The 2 nd industrial revolution (Industry 2.0)	– took place at the end of 19 th century. It was determined by discoveries in the field of electricity and electric machines .
The 3 rd industrial revolution (Industry 3.0)	– started in the mid 20 th century (1969 -1970) and was characterized by the use of electronic systems and information technology (computers robots).
The 4 th industrial revolution (Industry 4.0)	– was determined by the emergence of the internet (at the beginning of the 21 st century)
Could we speak about the 5 th industrial revolution?	– related to the development of the artificial intelligence (AI), robotics, autonomous vehicles etc.

Source: adapted from Lira & Banabic, 2018, pp. 4-6, & Orange Co.

Adam Smith (1723-1790) “in whom some wanted to see a founder of a kind of market fundamentalism, was, on the contrary, aware of the risks and consequences of free market economy (a market free of any regulation)”. In the book “The Theory of Moral Sentiments” he highlighted the importance of morality, the importance of human values and the importance of the search of the common good. He had suspicions about the monopolistic values of the merchants/traders (Allaire, Firșirotu, 2011). For example, Smith recognized *that power, not the productivity*, determines the outcome/results of wage negotiations; and the power will generally favor the owners of capital (Medaille & Hurduzeu, 2009). For this reason, in his book “The Wealth of Nations”, A. Smith pointed out that the wealth of nations must represent the “the wealth that all members of a nation benefit from” (Heilbroner, 1994). Still, the society described by Adam Smith reflected the gap between social classes, a huge difference between capital owners and the workers. The precarious working conditions, the difficult work schedule and the standard of living for the workers reflected also, the disparity between the remuneration levels of two main factors of production involved in the industrial activity – capital and labor force.

Hilaire Belloc (1870-1953) analyzed the evolution of economic, political and social situation, which followed after *the first industrial revolution* (accompanied by *technological advances*): 18th century, 19th century, early 20th century. The conclusions are gathered in 1912 in the suggestive book “The servile state”: the “big capital”, and the strong government are not in opposition, but go “hand in hand” in a mutual support. He described an economy with concentration of capital (including *capital for production and for technology development*), and wealth in the hands of a few owners. The small capitalist class posses more and more power (and abuse of that power), to the detriment of large segment of people that represent the labor force; this situation generates social inequity. The “wage contracts” are increasingly “*leonine*”, the conflicts are between the employer (the owner of capital, the owner of the modern technology) and the workers, that have to accept the employers’ conditions, because the alternative is starvation. In a such a society, “the state is a tool that protect the capital owners and their interests” (Medaille - a).

The results of the four industrial revolutions with all their promises for a “better life” did not seem to contribute to solve the social polarization; on the contrary, the data show a rather accentuated socially inequitable reality. The situations for UK and USA are clear enough to reflect the wealth distribution among social classes after centuries of scientific revolutions, also to reflect the gap between the income of the production factors, mainly between capital and labor (Table 2 ** and Table 3**).

** Statistical data for the years '70 are considered to be relevant for the third industrial revolution, and data for years 2000- 2007- 2021 reflect economic and social aspects after the beginning of the 4th industrial revolution.

Table 2. UK - distribution of financial liquidity; years :1976, 2003 & 2020
Gini Index * – years 1976, 2003, 2020**

	Year 1976	Year 2003	Gini Index - 1976	Gini Index - 2003	Gini Index - 2020
Population (%)	Financial liquidity (%)	Financial liquidity (%)	27,6 %	34,9%	32,6%
10 %	57%	71%			
40%	31 %	28%			
50 %	12%	1%			

Source: adapted from Blond (2009) & The World Bank

* See definition of Gini Index in Appendix 1

Table 3. USA - distribution of wealth and the liquidity for investments, year 2007 & Gini Index – years 1970, 2007, 2021

	Year 2007	Year 2007	Gini Index - 1970	Gini Index - 2007	Gini Index - 2021
Population (%)	The wealth of nation (%)	Liquidity for investments (%)	36,6 %	40,8%	39,8%
10 %	57%	71%			
40%	31 %	28%			
50 %	12%	1%			

Source: adapted from Medaille (b) and The World Bank

On the other hand, Hurduzeu (2005) compares the two economic-political systems: the capitalist and the communist one, in terms of affinity towards technology. He does not omit/forget the social implications either:

- *Multilaterally developed socialist society* was an **inefficient industrial – technological system**, based on pharaonic projects (for example the Danube - Black Sea Channel, the oversizing of industrial branches/sectors of economy, the systematizations of villages etc.). Except for the communist nomenclature, the rest of the population lived in precarious living conditions. The projects were justified in the name of material and spiritual progress, in the name of a future **communist society seen as a paradise of technological rationality**.
- The Communism and the today's techno-globalism have promoted technology as the matrix of every individual's life; both of them with high social costs (taking into account the inequity of income distribution and the control over the wealth of the nations). Starting with the financial crisis of year 2007, in the world

economy, the control over the planet's wealth has reflected a high discrepancy among the rich and the poor: 5 % of the world population control 95% of the planet's wealth (Badescu, 2013).

5.2 The modern technology - between opportunities and risks

The development of computers, robots and the artificial intelligence (AI) - these are things that have fascinated and radically changed economic and social existence. The use of robots on production lines, the use of robots in relationships between companies and clients - here are some objectives pursued by the business area. For companies, the ability of new technologies based on AI to store and process a large volume of data can represent savings in time and resources. But are AI-based robots infallible? Can data-processing errors occur, can these data be used inappropriately, abusively, especially if they are data related to company confidentiality or personal data of employees, consumers or third parties?

Through the permanent use of AI, there is a high risk of influencing human behavior, manipulating consumers, increasing dependence on technology, altering: cognitive abilities, critical thinking, decision-making abilities of individuals, communication skills etc. The use of robots reduces the costs of companies, but an increasing number of people will lose their jobs, and this a serious challenge for the society (Pelau et al., 2021).

AI technology, the "internet of things" are promoted as a package with 5G technology. But a significant number of scientific studies have proved the increase of radiation under 5G (wireless radiation is not safe, is not healthy). 5G is an energy-consumption system, involving depletion of rare minerals and a serious infringement of our privacy (Stop5g.eu).

Due to the increase in the number of robots and AI – devices, many conflict situations have appeared in which the actors are robots (Dumitru, 2018). As a consequence, the law courts began to be entrusted with various cases in which robots are also involved, and judges cannot refuse to judge.

But who is responsible for the harmful act, for the incident that caused the damage: the software designer, the manufacturer, the user, the robot/AI device? Can the robot be held responsible for its acts? Can we have an electronic person legally responsible?

5.3 Ethical perspective in response to technological developments

As technological developments continue to change the workplace activities and relations, it is essential for companies to take into consideration the ethical implications of this issue, mainly the impact of of AI-driven technologies (such as

robots replacing men), and to address the concerns related to job displacement, privacy, or the potential to perpetuate existing social inequalities (Gill, 2016).

In the context of professional work, when we take into consideration concepts of right and wrong, it is common sense to consider human intervention and involvement. Although it is normal to believe that all moral decisions must be made by human beings and not by machines, it is also possible that sophisticated machines, with massive data capabilities, to make more informed decisions than a human being. As systems and machines become increasingly capable, the question that arises is “What will be left for human professionals to do?”, it is very difficult to accept that the answer is “less and less” (Susskind&Susskind, 2017).

A study carried out by Boyd (2015) on “the buzz around artificial intelligence”, the author highlights the fact that “the central issue of the 21st century is not machines taking over, it's how to achieve the right balance between humans and automation to optimize outcomes”. He stresses the idea that the most valuable resource we have is human intelligence, that is human skills, ingenuity and creativity. Even more, he makes the point that we can achieve optimal solutions to problems through the symbiotic balance between human intelligence and machine/robot intelligence (Gill, 2016).

5.4 Implications and challenges for CSR

The integration of technological innovations into CSR activities have had a huge impact on how companies approach social and environmental issues. According to Gill (2016), some examples of the positive impact of these technologies in CSR are the following: the use of intelligent machines to perform tasks that are dangerous for humans, or time-consuming (e.g., robots deployed to clean up hazardous waste, to monitor water and air quality); optimization of resource use and waste reduction (AI algorithms can analyze massive amounts of data which can help companies make more informed decisions on how to allocate resources and minimize material waste, thus contributing to amore sustainable and more environmentally friendly business model); AI can improve transparency and accountability of CSR initiatives in order to ensure companies that they are accomplishing their social and environmental commitments; robots can have a role in promoting inclusivity and diversity in the workplace (for example, in supporting employees with disabilities).

As the infusion of technologies continues to grow, it is essential for companies to address the challenges and to consider the ethical implications of AI driven technologies, and their impact on society. According to McLeay et al. (2020), among the challenges, one may identify that the substitution of human employees may cause “dehumanization and social deprivation” issues, particularly for the elderly. Furthermore, technology providers have been criticized for their poor responsibility

records and questionable ethical practices, and ethical challenges have been raised in relation to the power given to the robots.

Conclusions

There is no doubt that the technological developments and their integration in almost all areas of society have had a huge impact on humankind, with highly valued benefits accompanied by numerous challenges as well. As technological revolution continues to reshape the world around us, it is essential for companies to address the challenges in an ethical manner and to integrate technology (also in CSR activities) in order to harness the opportunity to enhance their social and environmental impact. By using AI-driven robots, for example, to execute high-risk tasks, to optimize resource use and waste reduction, to promote transparency, inclusivity and diversity, businesses cannot only improve their business processes and CSR activities, but they can also contribute to a more sustainable and equitable future.

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Appendix 1 – Gini Index

Gini index measures the extent to which the distribution of income (or, in some cases, consumption expenditure) among individuals or households within an economy deviates from a perfectly equal distribution. A Lorenz curve plots the cumulative percentages of total income received against the cumulative number of recipients, starting with the poorest individual or household. The Gini index measures the area between the Lorenz curve and a hypothetical line of absolute equality, expressed as a percentage of the maximum area under the line. Thus a Gini index of 0 represents perfect equality, while an index of 100 implies perfect inequality.

Source: <https://data.worldbank.org/indicator/SI.POV.GINI>