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Editorial

Ethical Issues of Digital Transformation

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Abstract

Ethical issues are involved in the increasing use of emerging technologies by organizations. Several business forums and academic research have been exploring the relationship between ethics and digital transformation, as digital technologies are essential for the so-called Fourth Industrial Revolution, which combine the use of technologies, such as artificial intelligence, machine learning, robotics, blockchain, and neuro and biotechnologies, to create numerous innovations in products, services, and business models. The issue is that these technologies advance at a much faster pace than human institutions, and clarifying how they can be applied to bring development for all, while preserving inalienable human rights, becomes necessary. Thus, in this editorial, we will address important aspects about the ethical issues of digital transformation and propose a series of issues for future studies.

Keywords: ethics; digital transformation; fourth industrial revolution, research.

Introduction

The movie *Don't Look Up*, directed by Adam McKay, which recently broke viewing records on the Netflix¹ platform, makes a scathing critique (among many others) of the indiscriminate use of personal information. Currently, corporations and digital platforms collect large volumes of data (the so-called “big data”) to run algorithms that not only outline our psychological profile, but mainly predict our behavior (such as voting intentions or consumer desires).

In a hilarious scene between the actors Leonardo DiCaprio and Mark Rylance, who plays a multibillion-dollar CEO of a smartphone-maker corporation, the infamous businessman claims to DiCaprio (who plays a somewhat wicked scientist) that his company has all his personal data and an algorithm capable of predicting how the character's death will be. Moreover, the CEO gives a spoiler: "Your death will be so unremarkable and boring. I can't remember the details, apart from one thing: you're going to die alone." Focus on the scientist's astonished expression facing this harmful prediction.

This scene makes us think about the ethical issues involved in the increasing use of digital technologies. They are essential for the so-called Fourth Industrial Revolution (Schwab & Davis, 2019), which combines the use of various technologies, such as artificial intelligence, machine learning, robotics, blockchain, and neuro and biotechnology, to create numerous innovations in products, services, and business models. In this editorial, we will address important aspects of the ethical issues of digital transformation and propose a series of issues for future studies.

Human-technology entanglement and emerging ethical issues

The management literature continuously states that data are the "new oil". Because of this "oil", our data are constantly tracked, and, despite regulatory attempts to preserve our privacy, we all know that we easily exchange it for digital services that bring us more and more convenience, entertainment, and—of course—dependence.

The human-technology entanglement—ranging from the use of mobile devices (such as the smartphone itself) to wearable technologies and digital platforms for daily tasks—contributes to increase more and more ethical issues (Trevino, 1986). Considering this, we could even wonder if they are issues for organizations. Just to remind some of them: artificial intelligence decision making, substitution of humans for machines, prejudice and exclusion practices in algorithmic decision-making rules, indiscriminate use of personal information for manipulative purposes... Well, "issues" are plentiful.

Currently, forums of large organizations focus on the discussion and creation of ethical principles for the use of technological advances such as artificial intelligence². In legislative terms, regulations to protect our data and privacy are increasing³. These initiatives are essential so that we can define possible limits on the use of new technologies as a society (as long as we have autonomy for this?).

Facing any ethical issue, the solution seems simple: seek as many benefits as possible, avoiding the risks as much as possible. But what will the benefits be for? And to whom? And how will the risks affect us? Most digital technologies are ubiquitous, complex, opaque, that is, their operation is often clear only for their developers (Introna, 2007).

These technologies affect not only their users, but also people around them, who may be indirectly involved, either because they do not have direct access to these technologies or because they chose not to access them (Ferneley & Light, 2008). A clear example is advances in surveillance processes (Zuboff, 2015) in social media. Digital data are generative (Zittrain, 2006), which means that they can be shared, sliced, recombined, and resold (Kallinikos, Aaltonen, & Marton, 2013; Reuver, Sørensen, & Basole, 2018) without the involvement of those who generated them (Klein

Sørensen, Freitas, Pedron, & Elaluf-Calderwood, 2020; Kolloch & Dellermann, 2018). This situation added to the high level of human-technology proximity will provide us a plate full of controversies (Klein et al., 2020) and ethical issues.

The issue is that technologies advance at a much faster pace than human institutions, which we can briefly define here, based on North (1991), as the “rules of the game” of how society works. In this sense, Schwab and Davis (2019), regarding the Fourth Industrial Revolution, propose a fundamental reflection:

If the technologies of the fourth industrial revolution can be matched with appropriate institutions, standards and norms, people around the world will have the opportunity to enjoy more freedom, better health, higher levels of education and more opportunities to live lives they value, while suffering less from insecurity and economic uncertainty. (Schwab & Davis, 2019, pp. 35-37)

This reflection leads us to a question: who will define the “rules of the game”? Who will be part of the creation of standards that aim at collective well-being and preservation of human rights? For example, Internet and digital platform companies nowadays hold powerful monopolistic positions in the global market and generate extraordinary incomes, which gives them unprecedented hegemonic economic and political power (Trittin-Ulbrich, Scherer, Munro, & Whelan, 2021). It creates a power disparity between these large technology companies and most other organizations.

Notes and challenges for future studies

Recently, several academic researchers have been exploring the relationship between ethics and digital transformation. Vial (2019), reviewing the literature on digital transformation, states that the uses and the potential effects of scale, extent, and speed associated with this transformation requires research. The author suggests two main lines of research: the first involves studying how the dynamic capabilities of organizations contribute to digital transformation, and the second addresses the strategic importance of ethics in the context of these transformations.

Trittin-Ulbrich et al. (2021) organized a special call in which several researchers addressed dark and unexpected sides of the digitalization of organizations. Kirchsclaeger (2021) addresses the ethical issues of digital transformation, especially those related to robotics and artificial intelligence. Ensuring social justice, sustainable development, human dignity, trust, solidarity, and many other inalienable values is essential when thinking about the application of these technologies in organizations.

In this sense, new scientific studies on the subject are necessary, as this is a permanent discussion since technologies change as their uses and ways to use in working and management processes. Thus, we propose questions for future studies:

- In the context of the Fourth Industrial Revolution, how are ethical issues related to the use of emerging technologies **perceived** (if they are) by entrepreneurs and managers in organizations?

- How do organizations deal with these issues? What decision-making criteria are used to “solve” such issues?
- How are technologies designed considering possible ethical issues? Are possible issues considered in their design?
- What collective strategies can be adopted by technology users and other social groups affected by it so that they have a voice before ethical issues and collective well-being and human rights are preserved?
- Considering that technologies can act autonomously, interact and communicate with each other—Machine to Machine (M2M)—how is it possible to define ethical standards for them?
- How can we, as a society, act so that our institutions adapt “synchronously” to the development and dissemination of emerging technologies, ensuring their application in an ethical way?
- What role has the academy and scientific community played in the face of ethical issues related to technologies of the Fourth Industrial Revolution?

These are just some issues that can instigate studies with potential social effect. As scientists, we must remain active in ethical debate and engaged in understanding issues and controversies. This is a role from which academy cannot omit itself in this era of great transformations.

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Notes

1. Source: <https://www.netflix.com/watch/81252357?source=35>
2. For example: <https://fortune.com/2021/12/13/ibm-artificial-intelligence-ethics-regulation-francesca-rossi/>
3. For example, the LGPD: <https://www.serpro.gov.br/lgpd/menu/a-lgpd/o-que-muda-com-a-lgpd>

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