The interfaces between communication and artificial intelligence technologies

As interfaces entre comunicação e as tecnologias de inteligência artificial

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1 INTRODUCTION

The development of artificial intelligence technologies, the centralization of the media and the changes in social relations and personal and professional aspects, have made the human being more connected in digital media, each in its own way and paradoxical complexity (MARTINO, 2014). Thus, technology is increasingly deep in people's daily lives, especially in large urban centers, and even routine leisure or work activities are somehow linked to technology/connection (CARDOSO; FERRARI; BOARINI, 2020).

People's bond is what is being most impacted in this scenario (GUEDES, 2019). Artificial intelligence (AI) technologies should further emphasize the deconstruction and construction of new paradigms. The new communication through algorithms is a reality and institutes a new learning. The algorithm is already inserted in the reality of everyday life, as for example in the suggestion on Netflix or Amazon book and the communication process is not outside of that. Professional areas are being surprised by this type of interruptive scenario, with reformulations not always idealized, but forced by technology (CARDOZO; FERRARI; BOARINI, 2020).

In addition, "the development and implementation of artificial intelligence (AI) technologies has provided effects that can often no longer be understood in purely quantitative terms, and which imply a change in the subjectivity of the relationships between people and technology" (DONEDA *et al*., 2008, p. 2). Thus, the introduction of increasingly intelligent machines can be understood as an important development opportunity, but it also emerges as a challenge for human communication, increasingly automated and with bodily, emotional and affective distance.

2 OBJECTIVE

Conduct a literature search on the interfaces between communication and artificial intelligence technologies.

3 METHODOLOGY

This is a qualitative research, based on the narrative review of the literature based on recent articles from the Google Scholar database. The descriptors: Artificial intelligence and communication, without language limitation, were used. The inclusion criterion was: to present discussions related to artificial intelligence, communication and the interfaces between both.

4 DEVELOPMENT

It was identified that many studies present discussions on the inclusion of artificial intelligence technologies in the areas of Medicine, Information and Technology. Among the studies that discuss the relationship between human communication and artificial intelligence technologies, many do not delve into the effects of AI on human communication and interaction.

According to Jonco and Silveira (2015), several points are opportune to differentiate machines from human beings, but these have been losing meaning today. Virtual assistants, chatbots or robots, have characteristics of imitating human feelings and interacting with people, which has been presenting AI with empathy. In 2014, the Turing Test proved that the *chatbot* could be mistaken for a real person. Held in London at the Royal Society, five AI programs were tested and Eugene Goostman was the winner. Eugene simulated a 13-year-old boy and was the first to convince 33% of human judges that he was a human being (JONCO; SILVEIRA, 2015).

A robot is the reflection of what is expected, they are manufactured to be docile and submissive and mostly manufactured in human female form, such as Alexa, Siri and Cortana. Thus, the individual is induced to trust machines, as they are the expressions of accuracy, technology and concrete science (WALLITER, 2016). Virtual assistants represent people who offer a way to assist the routine, making it more practical and affirmative, by performing several tasks at the user's request in a short period, such as finding information online, indicating the best route to be taken, remembering an appointment or even the alarm clock (JONCO; SILVEIRA, 2015).

Thus, communication and AI are related, both in theory and in practice. Communication is the tool that provides AI with experimental evidence. The development of "emancipated" machines, learning-enabled algorithms and intelligent systems opens up new opportunities and challenges for communication scholars. Working with the consequences of technological innovations will require more than acquis of discipline and focus, it will need modern philosophical ideas and instrumentalist theories of technology (GUNKEL, 2017).

The meaning of a sentence, or even a word, is related to the human body. The abilities people have to perceive, act and have emotions. Human cognition is strengthened by being interpreted. People's understanding and perception is what defines the object, its uses, and the feelings and emotions attached to it (GLENBERG; JONES, 2023).

Similarly, human relationships are complex, as are their manifestations. Over the years and with social advances through communication, relationships have become more ramified and more comprehensive. The possibility of communicating with people who are physically many kilometers away has changed the human relationship and made technology fundamental (RECUERO, 2014). In this way, one can talk to people who are not physically close and not even known personally, but who are known through social networks. This facility makes speeches and speeches freer, without control or convention, and easily propagated by social networks (CARDOZO; FERRARI; BOARINI, 2020).

Social networks encompass ideas and resources that involve shared values and interests of autonomous participants. The central point is the valorization of relationships. The technology directly linked to the social network is a communication between people via computers (CARDOZO; FERRARI; BOARINI, 2020). According to Recuero (2014), connections translate into how information is exchanged, emotional support, proximity and trust, which has led some companies to organize content on social networks in order to serve their customers more directly using AI, avoiding the spread of *fake news on* their brand, products or services. For Jonco and Silveira (2019), the use of virtual assistants and *chatbots* with AI is more humanized in relation to the service of companies, and thus brings consumers closer.

Thus, communication dynamics are deeply affected. The high flow of information, the accelerated pace of emergence of new modes "of audience, narratives and channels has been constantly reconfigured in a deep and fast way, forcing the communicational ecosystem to incorporate the emerging trends and dynamics" (CARDOZO; FERRARI; BOARINI, 2020, p. 51).

This reality produces consequences, such as the deficiency in the communicational scope of adolescents, as they have drastically reduced social interaction and physical contact with other people and have isolated themselves in the virtual world (PATRIOTA, 2015). In love relationships, many couples have kept in touch frequently from cell phones, however, face-to-face coexistence has become less and less frequent, generating the act called *telecocooning*, which comes from English *cocooning* and refers to a coco*on* formed from telecommunication (JENKINS, 2009).

Human beings, social by nature, have changed the way they communicate through technology and artificial intelligence. Currently, physical interaction has occurred less and less, prioritizing the use of text messages, which shapes the human brain to adapt to this reality. However, the non-use of a part of the brain can mean loss of information and social practice, producing social anxiety in situations of exposure due to difficulties in understanding the facial expressions that accompany communication. However, the disuse of some part of the brain reflects a possible loss of information (ANDERSON; RAINIE, 2012).

Likewise, "automated decisions, referring to a specific individual, which are based on a statistical method for analyzing a large volume of data and information, can have a major impact on individual rights, especially with regard to autonomy, equality and personality" (DONEDA *et al*., 2018, p. 4). In the face of distance relationships, personal data is the representation of the individual for organizations, whether public or private. However, the classification carried out by algorithms can incite different results for individuals with similar situations, which will restrict their autonomy and their freedom of action and personal, economic and existential choices (LYON, 2003).

It is not the clash between technophilia (appreciation and excessive appreciation for technology) and technophobia (consider technology as a danger and assume a position of rejection) (SANCHO, 1998), but the reflection on the possible failures of AI, which can be due to the randomness of the system, information overload, or erroneous human programming. Unlike the human brain, automation from AI technology will present an uncritical stance towards reality (CANDIOTTO; KARASINSKI, 2022) which can lead to problems in decision making.

In addition, the high-speed exchange of information and the desire for instant gratification has produced impatient individuals, with a tendency to immediacy and low tolerance (ANDERSON; RAINIE, 2012). Tavares (2014) reports that we live in a divided society, where it pays and asks for more love, but at the same time, accepts to acquire

alternatives that represent affection. In this same line of reasoning, Santos, Zimmermann and Guimarães (2022) state that AI as a personal virtual assistant involves human feelings, care and responsibilities, running the risk of creating new future social problems, the effects of which cannot yet be measured, but are already beginning to be evident and worrying.

5 FINAL CONSIDERATIONS

The development of artificial intelligence has brought numerous benefits to society, allowing communication across geographical boundaries and the monitoring of situations in real time, even at a distance. However, unbridled use has produced greater social isolation, greater difficulties in interpersonal communication and affective deprivation, since the intermediary of technological means of communication does not allow touch and affectation by the needs and particularities of the other. Thus, it is necessary to think of strategies to maintain human contact as an intermediary of communication, so that technological devices serve as a facilitation in the face of distance, but do not become distancers by themselves.

In addition, as human beings become dependent on artificial intelligence to make even simple decisions, such as choosing a movie or a book, they become less autonomous and more alienated, giving up part of their capacity for reflection, which may have consequences in other life contexts where decision-making is necessary, but AI will not be there to assist. It is also necessary to consider the people excluded from global technologization, as a huge portion of the population lives below or on the poverty line, not having sufficient resources to access all available AI technology resources, which reproduces segregation and social inequality.

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