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## COMMUNICATION IN THE AGE OF AI – THREAT OR OPPORTUNITY?

Artificial intelligence is becoming increasingly popular. It is decisively and aggressively entering almost every area of life. It is changing the current world order before our eyes, and it is not known when or where it will stop. These issues also concern communication researchers. How much does AI interfere with communication processes? Does it improve them or rather deform them? Will the appearance of artificial intelligence in communication processes always mean the risk of disinformation? It will be very difficult to find answers to most of these questions now, because the process of AI penetrating this sphere of life has certainly not ended yet. But we can already attempt the first summaries and speculations – to what extent the current shape of communication symbiosis with AI constitutes a threat and to what extent an opportunity. In the following article, the author puts forward the thesis that while threats cannot be avoided, the skillful use of AI in communication can be creative and constructive. It can be a milestone in the development of communication processes on many levels.

**Keywords:** artificial intelligence, communication, progress, danger, disinformation.

### 1. THE ESSENCE AND IMPORTANCE OF COMMUNICATION

A fundamental question to be discussed at the outset is the nature of communication, its role in the modern world and the functions it performs.

The concept of communication itself appeared in literature at the end of the 19th century, and since then it has undergone many iterations and evolutions. As communication has been described by different authors, it has been treated and understood in different ways. Most often, however, it has been identified with a situation, a transmission, a mechanism, a tool or a response. In the simplest terms, communication is a process whose purpose is the exchange of ideas, but also the sharing of knowledge, information and ideas. It is also important to emphasize that the process in question produces specific effects that are related to the use of different means (Sypniewska, 2015).

The word “communication” is derived from the Latin verb “communicare”, meaning “to make common, to unite, to communicate”, but also from the noun “communio,

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emphasizing” “commonness, combination, sense of connection”, and the adjective “communis”, meaning “common, universal, general”. Later, 'communication', as used in Latin, was adopted by modern languages and, from the 14th century onwards, took on a different context, becoming a phrase meaning 'entering into community', 'having relations with someone'. With the development of highways and roads, i.e. in the 16th century, the meaning of the word 'communication' changed again. This time it came to mean 'transmission and conveyance'. It should be stressed that the term 'communication' can have very different meanings depending on the scientific discipline. It has a different philosophical meaning, a different sociological meaning, and a different psychological meaning ().

It should be added that, since the 19th century, the concept of communication has referred to two contexts. On the one hand, it refers to the movement from one place to another by means of specific means of transport; on the other hand, it refers to the communication of living beings (implicitly, therefore, not only human beings but also animals), stressing that the latter can be transmitted by various channels. It can be direct (verbal and non-verbal) or indirect through writing, television, radio, telephone or the Internet. Depending on the degree of media involvement, a distinction can also be made between interpersonal communication, which takes place between individuals, and mass communication, which refers to collective entities (Bartosik-Purgat, 2018).

The literature emphasizes that interpersonal communication itself can take place at three levels (Frączek, 2012):

1. phatic level – these are casual conversations, most often between people who do not know each other very well;
2. instrumental level – where it is essential to reach agreement on an issue, even if the views of the individuals differ;
3. affective level – refers to a situation in which the communication process itself forces a deeper familiarity between the participants. The people communicating then reveal their emotions, but also their values, in order to get to know each other better.

Earlier it was said that communication is a process whose purpose is to exchange ideas, to share knowledge, information and ideas. It has also been stressed that it can have different effects depending on the use of appropriate means. Indeed, it should be noted that there are a number of factors that can make communication either effective or ineffective, the most important of which are: code, message, channel, noise and feedback (Sypniewska, 2015). A message is a coded message and occupies a central, pivotal position in the communication process between sender and receiver.

The channel is the path of the message between the sender and the receiver. Noise is interpreted as interference in the communication process. It can be either external – in which case it would be noise or an unfavorable air temperature – or internal – when it is influenced by the feelings of the participants in the communication process, such as headaches, fatigue, perceived anger, discomfort. We should also not forget semantic interference, when the sender uses a specific meaning in an inappropriate way. Feedback is the receiver's reaction to the message after it has been decoded. There are several types of feedback: direct, i.e. immediate, and indirect (in the case of mass and media communication) – delayed (Frączek, 2012).

It should not be forgotten that the communication process is also influenced by the context. The context refers to the conditions in which the process takes place. Naturally, a distinction should be made between the physical context, i.e. place, time, atmospheric

conditions; the cultural context, i.e. language, values, behavior, customs, religion; the historical context, i.e. past situations; and the psychological context, i.e. perceptions, attitudes, degree of formality between the participants in the communication (Bartosik-Purgat, 2018). Just as the context is important, so are the participants in the communication process. For this to happen, there must be both a sender and a receiver who play interchangeable roles. In the case of informal communication, the roles can be symmetrical (acquaintances, friends) or asymmetrical (e.g. parent and child). In formalized processes, on the other hand, the roles are not only explicitly defined but also asymmetrical (e.g. supervisor and subordinate). The people involved in the communication process usually differ in their attitudes towards others, gender and culture (Frączek, 2012).

For communication to take place, at least two entities must be involved: the sender and the receiver. The communication model itself is shown in Figure 1.

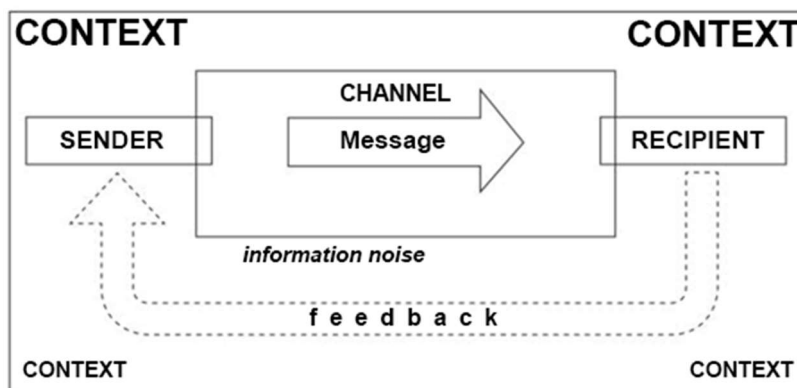


Figure 1: Communication process model

Source: [Bartosik-Purgat, M. (2020)].

As the figure shows, the communication process is complex and semantically structured. It cannot take place without at least two sides to the message, a formulated message and a channel through which it is articulated.

It is impossible not to agree that communication plays an extremely important role in virtually every area of life, both private and professional, but there seem to be some for which communication, the message sent, the reception, is particularly important because it influences the mass audience. One such field is journalism.

It should be emphasized that in socially responsible journalism it is information that is the basis of communication activities and has a significant impact on the formation of social bonds. It should be noted that the importance of information is also increased by the fact that it influences the formation of human personality, especially such areas as opinions and attitudes (Lepa, 2008). Therefore, if one considers that the provision of information, which is at the heart of communication, is so important for the formation of a society's worldview, it seems logical to conclude that reliability becomes crucial. This, in turn, raises the question: is reliability only possible if it is constituted by a human being? Is it only a human being who can be equipped with the tools of verification that make such research possible that can be considered credible? Is it only a human being who is able to maintain a valuable communication that is also convincing? Reflecting on these questions seems particularly

timely in the context of a reality in which artificial intelligence is increasingly influencing the way in which the rules of communication are formulated.

## 2. THE WORLD OF ARTIFICIAL INTELLIGENCE

Before examining the particular opportunities and risks of communicating and interacting in a world of artificial intelligence, it seems useful to consider what it is and why it is having such a major impact on the design of new media.

The literature emphasizes that artificial intelligence (AI) is computer programs that are capable of behaving in a way that could be called intelligent (in the sense in which it would be characteristic of humans). As early as the 1950s, the processes involved in the operation of artificial intelligence were described as “getting a machine to behave in a way that we would call intelligent if a human were to behave in that way”. In particular, the role of AI is to solve the problems that humans sometimes find troublesome. There are therefore a number of decision areas that AI will be responsible for. These include: automating capabilities attributed to human reasoning, especially decision making, problem solving and learning; reasoning, including perception, reasoning and action; taking actions that require human involvement and intelligence; solving problems that are effectively non-algorithmic, based on knowledge modelling ().

It is assumed that both human thinking and human behavior are characterized by a weakness in the form of a lack of rationality in various situations, with a tendency towards emotionality. Therefore, if human thinking is opposed to rational thinking, and human behavior is opposed to rational behavior, then the equivalent that characterizes rational thinking and behavior is machines. According to experts, it is machines that have the potential to mimic human thinking in the turbulent decision-making process typical of humans (Makowski, 2023).

The literature shows that artificial intelligence technologies are seen as an essential part of the digital transformation. At the same time, they are becoming present in and increasingly influencing almost every profession. In the case of journalism, this is happening at two levels. On the one hand, there is the "mechanization of the journalist", which is also linked to very different practices that undoubtedly facilitate his or her work, but also fall under transhumanism. On the other hand, there is the creation of the 'machine journalist'. Artificial intelligence is responsible for the creation of journalistic content, opinions, graphics, which is undoubtedly beginning to arouse more and more fears linked to the possibility of overstepping the boundary: the autonomy and subjectivity of objects endowed with intelligence (humans) (Raś, 2023).

It seems worth emphasizing that AI is essentially based on methods known since ancient times, namely knowledge extraction, top-down deduction and bottom-up induction. While the top-down approach in particular played an important role in the first artificial intelligences and experienced a resurgence in the early 21st century in the form of probabilistic generative models, the bottom-up method is based on techniques involving the detection of statistical patterns in large data sets. It involves giving the program access to data from which meaningful patterns can be extracted (Osika, 2023).

## 3. DISINFORMATION EPIDEMIC

Artificial intelligence is currently being explored in various communication processes. Undoubtedly, one aspect worth highlighting is that one of the main purposes (in terms of

journalism) for which it should be used is to combat disinformation, which should certainly be seen as a benefit.

In an era of widespread disinformation and misinformation, which was particularly exacerbated during the COVID-19 pandemic, but also in the context of the Russian Federation's aggression against Ukraine or the constant predictions of China's attack on Taiwan, it is a major challenge to target audiences with verified, truthful information without spreading social unrest.

There is no denying that all kinds of crisis situations, natural disasters, social tensions, political events of an international nature, important changes of a macro-economic nature, are fertile ground for disinformation, which means that they can become a tool for conducting information operations as part of a broader military strategy. Of course, it is important to be aware that this type of activity is not new, but it has recently become more intense. In this context, with the growing importance and reach of electronic media, the spread of conspiracy theories and the waging of hybrid wars (mainly on digital platforms), the use of artificial intelligence is expected to help detect disinformation content. The techniques of so-called Generative Co-operative Networks and Large Language Models have a particular role to play here. The former are machine learning models that consist of two competing neural networks - a generator and a discriminator. They are used to generate new data samples: images, sounds, text. The generator is responsible for generating data samples, while the discriminator is responsible for classifying whether they are real or artificial. The two neural networks learn from each other, aiming to reach an equilibrium where the generator produces reliable data samples that the discriminator cannot distinguish from the real thing. Although Generative Neural Networks can be used to create false content, they can also be used to detect misinformation, and it is in this context that they are said to be useful. This is because neural networks can learn to recognize false content that has been generated by other generative collaborative networks. This means that it becomes possible to identify, remove, flag and unmask false information (Gradoń, 2023).

Large Language Models, on the other hand, are a class of machine learning algorithms that have the ability to generate natural-sounding texts. These algorithms are trained on large linguistic (textual) corpora, which means they can generate the kind of text that seems natural to the recipient. This helps them to understand the context and meaning of words, but also to draw on existing knowledge and experience. Large Language Models are used in machine translation, image description generation, article and review writing, and chatbot creation. This means that the content they produce is similar to that produced by a human. Of course, these algorithms can also pose a threat in the context of spreading disinformation, and consequently the nature of the messages generated and sent to the recipient can be misleading, falsifying information, deliberately altering the narrative (especially if the information has been drawn from the training data available to them) (Gradoń, 2023), but as in the case of Generative Co-operative Networks, the process should still (at least for now) be supervised by a human, so that the content produced and the messages generated are verified and subjected to critical analysis.

In the context of the use of AI for disinformation, sources highlight a certain complexity of the issue. On the one hand, as already mentioned, artificial intelligence offers the possibility of creating realistic content, which may, however, be false, leading to the manipulation of public opinion on an unprecedented scale. It is worth noting that the development of the Internet, which has made it possible to simultaneously develop communication on a hitherto unimaginable scale, has also contributed to accelerating the

spread of disinformation. However, artificial intelligence also offers the possibility of using tools to effectively combat false and misleading information, which is linked to the ability to identify and neutralize this type of content by analyzing characteristic patterns (Wróblewski, 2024).

The fight against disinformation, which disrupts the process of communication, especially in journalism, should undoubtedly be considered a benefit of the use of artificial intelligence. However, this is not the only situation that can be considered in terms of communication opportunities in the AI era. Another is undoubtedly the speed and efficiency with which huge amounts of data can be processed and analyzed in a short period of time, which will certainly speed up communication and, in the long term, decision-making. Artificial intelligence can be used by government systems, not only to support information security, to help detect terrorism and crime, to support police operations, but also, thanks to its ability to process huge amounts of data and the speed of its analysis, it fundamentally affects the support of communication between the state and citizens processes. The monitoring of content by artificial intelligence, which of course goes hand in hand with efforts to combat disinformation, makes it possible to detect possible threats to public security, potential crimes or terrorist acts at an early stage, and is even invaluable for the nature of communication between the state and citizens. The key to this seems to be the ability of artificial intelligence to analyze different data sources simultaneously, which directly implies a revolutionary approach to data collection (Hermann, 2021).

Personalization can also be seen as another type of benefit. It should be stressed that with the help of AI algorithms, it is possible to analyze users' preferences and then tailor communications to their own needs, which in turn leads to increased benefits in terms of the effectiveness of specific actions or interactions (Hermann, 2021).

In journalism, for example, personalizing content for the user allows the user to be reached with the news and content they are most interested in, need and do not have to waste time searching for. On the other hand, from a marketing perspective, personalization has an economic value because it increases the effectiveness of marketing activities by reaching users who are looking for specific goods and opportunities.

It is hard to argue with the statement that communication in the age of artificial intelligence also means that interesting content is essentially available twenty-four hours a day, seven days a week. This means that both chatbots and virtual assistants can be at the user's disposal at any time, whenever the user feels like it or is in need. On the one hand, the literature emphasizes that virtual assistants are evolving rapidly and learning human-like behavior just as quickly, meaning that the skills they acquire will enable them to reduce the workload of human employees while still providing a seamless level of service. On the other hand, there are a number of barriers that are not conducive to this type of solution, the most important of which is required.

#### **4. ARTIFICIAL HOPE**

Another interesting aspect worth discussing seems to be that, although many sources point to the problem of the risks of using artificial intelligence at the level of communication with the retail customer, it is impossible to ignore the good points of such an approach. Above all, both people and technology have their strengths and weaknesses. Not everyone will like the way they communicate with a bot or a virtual assistant. On the other hand, it is reasonable to assume that the vast majority will be satisfied with the increased level of service, attentiveness, patience, consistency of service, operational

efficiency or multi-tasking capabilities. And this, in turn, can lead to an increase in the quality of service provided by the human agent, thus significantly improving communication (Pappas, Fumagalli, Rouziou, Bolander, 2023).

Research also shows that as the technology evolves, customer confidence in chatbot-assisted communication increases, as they are not characterized by the behaviors that are characteristic of humans: fatigue, distraction and, in general, reduced productivity. However, unlike humans, chatbots also do not exhibit the behaviors that consumers view positively, such as being more understanding, empathetic and flexible (Benmansour, Hdouch, 2023).

Another benefit that AI offers in terms of communication is the possibility of using real-time translation, which can facilitate communication between people around the world who speak completely different languages (Dillu, 2024).

Of course, communication in the age of AI also brings with it a number of risks, the most important of which are: the spread of disinformation (it has already been suggested that AI can both stop it and facilitate its spread); ethical challenges, especially in relation to the rather controversial issue of AI decision-making; and dependence on technology, which can consequently lead (in its extreme form) to a loss of interpersonal and human communication skills. This last aspect in particular seems to require further comment.

It is not uncommon in the literature to raise the question of how reliance on artificial intelligence, virtual assistants, chatbots, Siri (and the like), by providing efficient but emotionless interactions that essentially require minimal social effort, deprives people of all the nuances associated with conversation, especially tone, mood and emotional overtones (Dillu, 2024). Many people do not trust communication dictated by the rules of artificial intelligence, often without being aware that it is being used. It is therefore reasonable to assume that they are primarily driven by prejudice. However, an experiment has shown that the use of AI can have a certain effect on the shaping of linguistic production and related interpersonal perception (Hohenstein, Kizilcec, DiFranzo, Aghajari, Mieczkowski, Levy, Naaman, Hancock, Jung, 2023), so that the level of trust increases or decreases depending on this shaping.

## 5. SUMMARY

Although many sources raise concerns about the use of artificial intelligence (not only in the context of communication, but in a much broader sense), it must be acknowledged that, with the participation of the human factor, it is possible to collaborate in a way that brings benefits, opportunities and not only threats.

Thanks to artificial intelligence, it is possible to use chatbots and virtual assistants to improve the quality of communication; the analysis of user data can improve the personalization of communication; and automatic translation has the potential to improve the nature of intercultural relations. In addition, the use of artificial intelligence can have an impact on team support and therefore on internal communication within an organization, as well as on communication security itself.

The author has read and agreed to the published version of the manuscript.

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