The Problem of Communicating with Generative AI

Larisa G. Tyutelova
Department of Russian and Foreign Literature and PR
Samara National Research University
Samara, Russia
largenn@mail.ru

Ekaterina S. Shevchenko
Department of Russian and Foreign Literature and PR
Samara National Research University
Samara, Russia
slash99@mail.ru

Valeria N. Lisovitskaya
Department of Russian and Foreign Literature and PR
Samara National Research University
Samara, Russia
lisovitskaya.v@yandex.ru

Viacheslav D. Shevchenko
English Department
Samara National Research University
Samara, Russia
vds@ssau.ru

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***Abstract* — The paper deals with the topical issues regarding interaction between a human being and generative AI. The authors analyze the modern communication process (including the language models), find a number of tendencies (hallucinating of AI, lower content expertness and evaluation, increasing number of deep fakes, etc.), assess the efficiency of communication with voice-activated digital assistants and argue that communication possessing proficient features of "human" interaction is the most efficient one.**

Keywords — generative AI, neural networks, communication efficiency, communication participants, interaction problems, digital communication

I. INTRODUCTION

Bill Gates argues that neural networks, along with PCs and the Internet, have produced a third revolution, affecting all areas of human life. In 2023, generative AI was named the main technological factor in the transformation of the labor market.

Goldman Sachs researchers predict that the development of AI systems will significantly transform the world economy [1]. This result in the automation of more than 300 million jobs. But this is not the only problem with using AI. Only 37% of customers believe that AI results will be as accurate as human results. Accordingly, 81% want a human being to be involved in the work process, checking and confirming these results [2]. Therefore, a problem of communication with AI arises.

Shatkin argues that generative AI arose as a reflection of human creativity in the digital environment, where "reflection" means repetition (generative AI is based on the knowledge accumulated by humanity and the statements of people accumulated by the Internet, including those that do not make sense), generalization (in its answers, the generative AI does not repeat individual statements on which it was trained, but produces its own ones, which it considers the most likely) and sublimation (despite its meaningfulness, the texts and content created by the generative AI do not reflect a specific material reality or life situation, but are the most relevant options) [3].

Already now, neural networks can create grammatically correct expressions, "capable of storing the context of communication with the user and basing their responses on the experience of previous interactions, translating texts into various languages, assessing the emotional connotation of expressions, and writing program code" [3]. But when creating something new, generative AI is unable to understand it.

At the same time, it cannot be denied that interaction with generative AI has signs of subjectivity both at the level of generating a message using industrial messages, and when using the results of generative AI in person-to-person or brand-to-person communication. It is reasonably noted that "for a human user, generative AI is represented as "You" whom the user has a dialogue with. Despite the possibility of creating avatar personalities, this "You" is vague, abstract and the same for all users" [3].

The Narrative Science company predicts that by the end of the 2020s, more than 90% of all news will be generated by automatic systems [4]. However, as Jeffrey T. Hancock et al. note, the use of "artificial intelligence is usually not disclosed, and the partner presumably assumes that the message was created by the sender" [5].

Modern human being finds himself/herself in a situation of partial loss of his/her own identity due to the processes of digitalization of communication, and generative AI aggravates these processes due to the inability to accurately determine who exactly a participant in the dialogue is and whether a participant in communication is a subject.

Considering AI as a participant of communication, it is necessary to distinguish between the understanding of human consciousness and the consciousness of a machine. The human mind comprehends reality through all the variety of forms of communication with outside world and is always subjective in nature. Generative AI is a set of algorithms and models capable of creating unique content (visual signs, texts, etc.) on the basis of machine learning algorithms. It only uses information embedded in the training data array. Long-term thinking and heuristic methods remain inaccessible to it. It is worth mentioning they are inaccessible so far.

All of the above, on the one hand, indicates that AI cannot be a subject of communication, at the same time, modern technologies have already demonstrated that Generative AI, voice assistants, etc. become senders of messages using symbols understandable to humans and are often perceived as subjective participants of communication.

This situation actualizes the "game of imitation" at the level of interaction of the audience with the final result of Generative AI's work [6]. There is a gap between a communicative act and understanding it, when the recipient of the message is not privy to who is actually interacting with him.

The present paper will focus on existing problems in human communication with generative AI, which arise both among the end consumer of content and among specialists using it to solve various communicative problems.

II. The Problem

Spreading fakes. The issuance of data in search engines and smart feeds on social networking sites is based on algorithms for analyzing the user behavior. Thus, at the OSCE meeting on media freedom, it was noted that the recommendation systems are focused primarily on increasing advertising revenue. This in turn "creates financial incentives for the development and promotion of tabloid, controversial or otherwise emotionally charged content, including misinformation and disinformation" [7]. The generative neural networks are capable of creating highly realistic content, which contributes to the spread of false information. Moreover, a study from the Massachusetts Institute of Technology showed that people are more willing to share fake news as they evoke more emotions [8].

Reduced content expertise. The use of neural networks to generate content can significantly reduce its expertise and quality, since neural networks are trained on a limited amount of data that may contain errors and inaccuracies. Such materials do not meet the criteria set for them. And created content is not an expert one because it is less deep and informative than human-created content.

Inability to identify subjects of communication. The Internet, with its possibilities of anonymity and multiple identification, is becoming a common cause of communication failure. The emergence of content created by neural networks reinforces negative trends.

AI hallucination. At the end of 2023, the Cambridge Dictionary chose the verb *hallucinate* in relation to AI technologies as word of the year [9]. AI hallucination is the process of neural networks generating false or erroneous ideas about the real world. The answer of a neural network to a question may look plausible, but it needs to be verified. In a situation with obvious and well-known facts, checking data for truthfulness is not difficult for an ordinary user; in the case of highly specialized data, or when the user is not immersed in the context, there is a risk of spreading false information.

III. Methods of Research

Currently, generative AI is actively used in various fields including marketing, brand communications, etc. The branch research conducted by Yakov and Partners in collaboration with Yandex enumerates the following corporate functions in which AI is being implemented:

- generation and localization of creative activities for promotion (banners, SEO titles, posts, etc.) in a single format and tone-of-voice;
- personalization of content (newsletter texts);
- a hint for support staff: generating options for responding to a client in a chat, taking into account the context and style of the request;
- dialogue assistant in customer support [10].

In the domestic academic environment, a positive view of communication with generative AI prevails. But the present paper questions the correctness of an exclusively positive assessment of works related to the use of generative AI. The task is to find out how efficient communication with generative AI is and to identify the prospects and weaknesses of its application. The in-depth interviews, surveys and experimental methods have been used to solve this problem.

IV. Research Progress

The participants in the in-depth interview were 15 heads of creative departments, marketing and PR departments of Russian companies from various fields of activity which use neural networks in corporate communications. The in-depth interview method does not involve a pre-formed script, so the focus was on the personal experiences of the interviewees. First of all, they were asked to describe the experience of using neural networks in their work activities. It is noteworthy that 12 people (80%) noted that they were motivated to use neural networks by their interest: "At the beginning of last year everyone was talking about ChatGPT, it became interesting what it could actually do"; "Everyone was in ecstasy, shouting that neural networks would replace marketers. So we went to see if they would replace it?".

The respondents named the following tasks for which neural networks are used: generating images, rewriting existing materials, creating SEO texts, writing posts on social networking sites, processing and structuring big data sets, writing scripts for support services, etc.

When asked about the efficiency of using generative AI, the majority of respondents (87%) answered that using it "increased labor productivity", "allowed us to spend less time on monotonous tasks"; "we began to turn to designers and copywriters less often". Therefore, it was surprising that by the beginning of 2024, 60% of respondents either completely abandoned the use of generative AI or reduced it to a minimum. Among the reasons for refusal the following were named: loss of one's own skills, the need to remake the neural network, the stereotyped responses of the neural network, boredom.

The participants were also asked about the advantages and disadvantages of using generative AI in professional sphere. The respondents named the following advantages: speed, low cost, and the ability to customize the result through a cycle of iterations. While describing the shortcomings, experts focused mainly on interface problems, the need to refine the result, and limited data sets, which results in either overly standardized results or AI hallucinations. One of the interviewees noted that the main disadvantage of using generative AI is lack of understanding: "it takes me longer to explain to the neural network what I want from it than to do it myself from scratch".

The most common answer to a question "What do you think neural networks do best?" was "Writing SEO texts". Experts explained that such content is written not for users, but for robots in search engines: "Robots have a better understanding of what robots need, and consumers may never get to those pages on websites".

The next set of interview questions was related to the prospects for using generative AI, the perception of the generated content and the prospect of replacing a person. All experts emphasized the need for those "who want to remain in the market" to have skills in working with neural networks, but emphasized that generative AI "can only replace low-skilled specialists", "an expert author (whether he is a designer or a journalist) is better than a neural network. He is more immersed in the topic".

Answering the question "Which content is better perceived by the consumer, generated or written by a person?", respondents also showed unanimity. In their opinion, human content is more effective due to personalization, it is of higher quality and creates the "feeling that someone made an effort for me".

Shifting the interview to the second level of perception (from the consumer's perspective), the respondents were asked to describe their experience of interacting with neural network content. Thus, 13 people (85%) responded that such content causes negative emotions: "I feel that I am not respected, as if the consumer were being taken for a fool". As an example, one publication was presented in which the quality of content decreased significantly over the past year. And regular readers associate this with the use of neural networks.

One of the experts, who admitted that most of the content on their company's social networking sites is generated by AI, confirmed that posts created by humans receive greater response from users.

The interview conducted at this stage allows to draw a number of intermediate conclusions:

- generative AI can make it easier to perform routine tasks that do not require highly specialized knowledge. Specialists tend to delegate those tasks to neural networks which, in their opinion, it can perform faster and in some cases better (this is due to those skills that are not professional for a specialist);
- users perceive human-created content better. It seems to them to be of higher quality and "personal".

A survey about the experience of using neural networks was also conducted. The survey participants included 324 people – young people aged 19 to 28, whose professional tasks do not include the regular use of generative AI. According to the survey, 100% have heard of neural networks, of which 93% have used neural networks. Most often, respondents used GhatGPT, Yandex GPT 2, Kandinsky, GigaChat, Midjourney. The main reasons for use were: curiosity, help with university assignments and running errands at work.

Most often, the survey participants use generative AI to produce images and write texts. Only 10% of respondents noted that they use generative AI to find new ideas and inspiration.

Answering the question "How successful was your interaction with generative AI?", in 72% of cases respondents noted that they "were able to solve the problem"; 13% had to "change the process several times"; 15% were dissatisfied with the use of neural networks.

Among the reasons why the use of generative AI was unsuccessful were:

- refusal to complete a task;
- the answer was too general;
- generating text or images with errors;
- the answer seemed plausible, but the assignment was returned with the note "written by AI".

It is also noteworthy that the majority of survey participants (89%) believe that people cope more effectively with the tasks for which generative AI was used. They also said that domestic neural networks are better at processing commands in Russian and, if they do not have the data, refuse to fulfill the request. 93% would like real people to interact with them on behalf of their companies, not robots.

The last question concerned the assessment of their own ability to distinguish the work of a neural network from a human one. 75% responded that they were confident in their abilities and could easily distinguish content generated by neural network. It is curious that answering the penultimate question "Do you think you can generate a result that is indistinguishable from what a person has created?", 81% responded positively.

Those who answered positively to the last two questions were invited to participate in the experiment. Consent from 96 people was obtained. Participants in the experiment were asked to read 6 texts: half were generated by neural networks, half were written by a human being. All texts were used for publication on social networking sites and were written and generated by one person. There were no obvious factual errors or hallucinations in the texts. The assessment materials were alternated sequentially. In half of the cases, the "human text" was offered first, and then the second one generated by the neural network was offered. The results of the experiment did not reveal any dependence of responses on the sequence of texts. Also, the participants in the experiment were not aware that texts written by human beings and those generated by neural networks were presented to them for evaluation.

The respondents were asked to read the texts and answer one question: "Who do you think wrote this text?". For 3 out of 6 texts, approximately the same results were obtained: respondents equally classified the texts as both human-written and generated. In two cases, the experiment participants were able to identify the author of the text correctly (65.5% and 73.8% of correct answers respectively). One of the neural network texts was mistakenly classified as human; the error was made by 80 people (≈83%).

The experiment participants were also asked to determine the criteria by which they classified the text as generated by neural networks. Respondents noted the dryness and formulaic nature of the structure, a large number of listings and terms as well as excessive specificity.

V. Conclusion

The analysis of the experiment results demonstrated that users tend to overestimate their own strength in identifying neural network content, but at the same time believe that human content will be the most efficient one.

Based on the results of the conducted research, a number of conclusions can be drawn. Thus, heads of design and communications departments note that despite the active discussion of the possibility of replacing human labor with neural networks, the main reason for users turning to generative AI is mere curiosity. The specialists using neural networks in their work note that their use is limited to certain tasks. But at the same time, generative neural networks have the ability to significantly facilitate the execution of tasks that do not require deep professional knowledge and can be solved using well-defined templates and algorithms.

Consumers are generally more positive about the prospects for using generative AI. However, they often have an extremely negative perception of the fact that communication with a particular brand is carried out using AI, since they believe that such communications deprive them of the opportunity to interact with real people and receive answers to their questions and solutions to their problems from them. Consumers believe that AI cannot completely replace human communication, and therefore its use in many cases can lead to dissatisfaction and negative reviews.

Another challenge in communication using generative AI is that users often tend to have a biased assessment of their strengths and capabilities, both in terms of using neural networks to create various content, and in terms of determining whether this content was generated by neural networks or created by a human being. This is due to the fact that neural networks are becoming more advanced and are capable of creating content that can be very similar to that created by a person. As a result, users may make mistakes in their assessments and assumptions about the origin of certain content.

It is worth assuming that the most effective communication will be one in which signs of a "human" presence are clearly visible. This can be achieved through the emotional coloring of messages, taking into account individual preferences and interests. This approach will create stronger relationships between the brand and the consumer, increase the level of trust and loyalty to the brand, and improve the quality of service and satisfaction.

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