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Research article

Dialogue as Autocommunication - On Interactions with Large Language Models

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Abstract

In a dialog with large language models (LLM) there is a coincidence of the addressee and addressee of the message, so such a dialog can be called autocommunication. A neural network can only answer a question that has a formulation. The question is formulated by the one who asks it, i.e. a human being. Human activity in dialog with neural networks provokes thoughts about the nature of such dialog. Composing prompts is one of the most creative parts of dialog with neural networks. But it is worth noting that a neural network is often better at composing prompts than a human. Does this mean that humans need to develop their questioning skills? In LLM-based dialog systems, the main value to the user is the ability to clarify and structure their own thoughts. The structuring of thoughts happens through questioning, through formulating and clarifying questions. Asking the right question is practically answering that question. Thus, thanks to autocommunication, the development, transformation, and restructuring of the human "I" itself takes place. Dialogue with large linguistic models acts as a discursive practice that allows people to formulate their own thoughts and transform their self through autocommunication. It is worth noting that for this kind of dialog, a certain image of the audience is normative or determinative of the material that can be produced in response to a given question. This is because the data for model training is provided by people, even if they do not and have never thought about it. Thus, a dialogic relationship develops between the generated text and the questioning audience that develops all participants in the communication.

Keywords: Large Language Models, Autocommunication, Artificial intelligence, Authorship, Communication, Dialogue

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Научная статья

Диалог с LLM как аутокоммуникация

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Аннотация

В диалоге с большими языковыми моделями (LLM) происходит совпадение адресата и адресанта сообщения, поэтому такой диалог можно назвать аутокоммуникацией. Нейросеть может ответить только на вопрос, имеющий формулировку. Формулирует вопрос тот, кто спрашивает — то есть, человек. Активность человека в диалоге с нейросетями провоцирует на размышления о природе такого диалога. Составление промптов является одной из самых творческих частей общения с нейросетями. Но, стоит отметить, что нейросеть зачастую лучше справляется с составлением промптов, чем человек. Значит ли это, что человеку необходимо развивать свои навыки вопрошания? В диалоговых системах, построенных на LLM, основной ценностью для пользователя является возможность прояснить и структурировать собственные мысли. Структурирование мыслей происходит через вопрошание, через формулировку и уточнение вопросов. Задать правильный вопрос – это уже практически ответить на этот вопрос. Таким образом, благодаря аутокоммуникации происходит развитие, трансформация, перестройка самого “Я” человека. Диалог с большими лингвистическими моделями выступает дискурсивной практикой, позволяющей людям формулировать свои собственные мысли и трансформировать свое “Я” через аутокоммуникацию. Стоит отметить, что для такого диалога определенный образ аудитории является нормирующим или определяющим тот материал, который можно получить в ответ на заданный вопрос. Это происходит потому, что данные для обучения моделей предоставляют люди, даже если они не задумываются и никогда не задумывались об этом. Таким образом, между генерируемым текстом и вопрошающей аудиторией складываются диалогические отношения, которые развивают всех участников коммуникации.

Ключевые слова: LLM, Аутокоммуникация, Искусственный интеллект, Авторство, Коммуникация, Диалог

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INTRODUCTION

Communication with a neural network is a person's communication with oneself because a neural network can only answer a formulated question, a question that is asked to it in one form or another. It would be simplistic to say that we as humans lose something important from communicating with Large Linguistic Models (LLMs). Rather, we are entering into a dialogue of a different quality, of a different order. What are the specific features of this dialogue? What is the scope of this dialogue? There is no doubt that written or oral communication with neural networks raises reflections on the nature of communication, authorship, and identity.

A new way to ask questions to neural networks can be presented as autocommunication when the addressee and sender of the message coincide. At the same time, if earlier autocommunication was manifested in channels created according to the "I – I" model, today we see that in social networks, and even more so in dialogue systems created based on neural networks, channels that were initially created are used for autocommunication for communication according to the "I – He" model. For example, the interactive chatbot model itself initially assumes that the user communicates with some external authority, receives information, and answers queries. And in the case of dialogue systems created based on neural networks, the main value for the user is the opportunity to clarify their own thoughts and structure them.

Using generated text as your own is an inherently disastrous idea. First, any large linguistic model often produces very dense text as its answer. This is a kind of wall of text that you can't get close to. The wall of text is too correct, overly correct, annoyingly correct. A person does not write so precisely, does not thoroughly clarify every detail. A person writes unevenly – and the text is "living," "breathing." And the reader feels this, even if he cannot explain what exactly in the generated text confuses him. Accordingly, he weakens his attention and stops visiting those resources where a large amount of generated text is posted. Respecting and retaining their readers and users, many large companies place mentions that this text (or picture) was generated by artificial intelligence systems. And such a practice becomes a practice of good form for the entire society. We should note that a legal problem arises here: who is the owner of the generated texts. Ideas are being expressed and bills are being proposed regarding mandatory labeling of content created by a neural network.

Secondly, we know many examples where neural networks produced hallucinations. The picture of the world loaded through data into the model is not capable of being completely consistent, nor is it endowed with the ability to automatically adjust displacements and distortions. Thirdly, the texts of neural networks are full of words that are characteristic of those people who acted as instructors for neural networks and created the rules by which the neural network then began to produce answers.

Autocommunication in relation to neural networks is expressed in the fact that a person formulates a question, already assuming a certain answer. The answer may not be about the facts, but about the very structure of the answer: there is some expectation, otherwise it would be very difficult to formulate the question.



We can say that dialogue with larger linguistic patterns is a kind of discursive practice that allows people to formulate their own thoughts. Most often, this practice is used not to formulate finished texts, but, for example, to formulate some sketches or references that may change in the future.

LITERATURE REVIEW

In the 1960s Roman Jakobson proposed to give a key role in communication to language, as well as to understand communication as a speech event (Jakobson, 1985). Any message is created and interpreted using a code – language, while the transmission of messages takes place in the field of discourse, in the context of other received and transmitted messages. This model of communication by Jakobson was challenged by Yuri Lotman, pointing out that two people cannot have absolutely identical codes, and language should be understood as a code along with its history (Nazarchuk, 2009). Text by Lotman considers it as a substrate of communication, in which a meeting of many codes and communicants occurs.

The concept of sign is important for the semiotic approach. Ferdinand de Saussure (1977) considered a sign as a two – way mental formation that connects a concept (signified) and an acoustic image (signifier). For further research, Saussure's idea about the systemic nature of language and other communication systems turned out to be extremely important – the meaning is supported by the mutual connection of all elements of the system. Edward Sapir (1993) made a distinction between primary processes, communicative in nature: language, gestures, etc., and some secondary means that facilitate the communication process: linguistic transformations, the creation of physical conditions for the implementation of a communicative act.

Foreign researchers call autocommunication or internal dialogue the term “inner speech.” Thus, Hubert Hermans proposes the concept of the dialogical structure of the “I” (Hermans, 2014). The human “I” as a dialogue of various “I – positions” is formed in dialogue with significant others. Hermans rethinks Mikhail Bakhtin's concept of polyphonic consciousness through narratives. He notes that independent “I – positions,” which represent both participants in social relations and express various parts of personal consciousness, give rise to corresponding memories or stories (narratives).

Victoria Izmagurova (2015) defines internal dialogue as “a mechanism of interaction between semantic positions of consciousness. Semantic positions are the personal and (or) emotional relationships of the subject to significant events, circumstances, people, relationships, recorded in the form of relatively stable semantic formations.” Semantic positions can be defined and designated – they are important for the development of a person’s “I,” as well as for its transformation if necessary.

A paper by Lotman (1973/2000) “On two models of communication in the cultural system” describes the concept of “autocommunication.” Lotman distinguishes between “ordinary” communication that occurs in the “I – He” system and autocommunication that occurs in the “I – I” system. The “I – I” system works on the activity of the subject. Thanks to this system, development, transformation, restructuring of the “I” itself occurs.



In addition to the fact that thinking occurs within the framework of autocommunication, the message itself acquires a new meaning, as the conditions of its transmission change.

The text generates new meanings, and therefore needs heterogeneity, foreignness, an interlocutor, and dialogue. It is worth noting that we understand “text” here in the broadest sense.

The text even rearranges its immanent structure, adapting to the audience. The reverse process is also possible – the process of a qualitative change in human consciousness. The essence of the text is the emergence of new meanings in the reader’s mind. And also a change in the reader’s consciousness in the process of working with the text. Similarly, the child develops, receiving impulses from the world around him, processing information formatted in texts.

Lotman (1992) calls both the text and the person a “semiotic system.” The semiotic system develops through the absorption and processing of new and new texts. To produce texts, you need to constantly perceive other people’s texts. A question may arise about the very first text, and Lotman answers it by drawing an analogy with chemical science. As in chemistry, it is important to distinguish between genesis factors and “catalysts” that trigger the mechanism of text development.

Can LLMs that are popular today be called semiotic systems? Without a doubt. Can we call the human – machine systems that include us, these chatbots themselves, the research questions that arise between us, semiotic systems? Probably yes. And, moreover, a semiosphere is formed that encodes and decodes itself and the texts that touch it.

Semiosphere by Lotman (1996) is a special communication space, which includes not only the sum of languages, but also the sociocultural field of their functioning. The image of the audience contained in the text is a normalizing code for it. Let’s take instructions for a certain technical device and a literary text, a novel. Both texts are just text. But they cannot be compared in several other parameters. These are different texts, fundamentally different texts. And it’s not just a matter of different conceptual languages, but also a difference in audience expectations. The expectations of the audience shape the responsibility that we resolutely place on the LLM, entrusting her with our deepest secrets as if we were a random fellow traveler on a train.

We usually assign responsibility for the text to the author of this text. But, as mentioned above, the generated text does not have an author. In any case, now the legal doctrine does not have a clear opinion regarding the legal status of generated texts and images.

Michel Foucault’s idea of the author function can be projected onto what is happening today with neural networks. The problem of the “author” function and the “death of the subject” has received various names: “death of the author”, “depersonalization theory,” “decentration” of the subject. The concept of the “death of the author” was directed against the figure of the autonomous independent and authoritarian author. Foucault says that modern writing is indifferent to the author, the individual characteristics of the writing subject are erased: “the creation, whose task was to bring immortality, has now received the right to be the murderer of the author” (Foucault, 1996, p. 14). Roland Barthes (1994) speaks about the concept of “writing” this



way: “writing is that area of uncertainty, heterogeneity and evasiveness where traces of our subjectivity are lost.”

The concept of “author” as an individualizing force has changed historically. At a speech at a meeting of the French Philosophical Society on February 22, 1969, Foucault said: “The concept of the author constitutes an important moment of individualization in the history of ideas, knowledge, literature, as well as in the history of philosophy and sciences” (Foucault, 1996, p. 12). A new episteme emerges at the end of the 18th and beginning of the 19th centuries, when the first copyright laws were adopted. If before the invention of printing the author did not recognize himself as the creator of something new, and, moreover, felt himself in a cultural tradition, then after the invention of printing the author began to feel like an autonomous independent person, and perceive his work as a continuation of his personality. Dmitry Likhachev (1971) calls the coloring of the “I” the impersonal tones of the era – “literary etiquette.” Such literary etiquette is inevitable for any author of any era (regardless of whether this “literary etiquette” calls for the renunciation of one’s authorial position or, conversely, for the affirmation of such).

The author's name “provides a classification function; such a name makes it possible to group a number of texts, differentiate them, exclude some from their number and contrast them with others” (Foucault, 1996, p. 21). And the name of the author characterizes “a certain way of being of discourse”. Foucault understands the term “discourse” (“discursive practices”) as a way of speaking, as a stylistic specificity.

It is important to note that discourses that carry the author function are objects of appropriation. The author is a projection of the processing to which texts are subjected. The “author” function is the result of a complex operation that constitutes the author. But the “author” function is not just a reconstruction, because the text contains a certain number of signs referring to the author (verb conjugations, adverbs of time and place, personal pronouns. So modern LLMs are based on similar principles.

Simultaneously with the advent of the first copyright laws and the emergence of the romantic concept of a willful and authoritarian author protecting the fruits of his creativity legally through the concept of intellectual property, a concept was emerging that affirmed the importance of the public domain and the right to free access to knowledge. The theory of the common good does not aim to deny intellectual property rights as a phenomenon but finds other ontological roots of copyright – protecting the right of society to free access to knowledge (Kartasheva, 2023).

The ability to understand or assimilate new knowledge is as important an ability as the ability to create new things. “The modern episteme, which was formed at the end of the 18th century and still serves as a positive basis for our knowledge, that episteme in which a certain special way of human existence and the possibility of its empirical knowledge took shape – all of it assumed the disappearance of Discourse and its monotonous dominance, the shift of language towards objectivity and its new manifestation in all its diversity” (Foucault, 1977). One of the meanings of discourse is understanding it as the ability to dissect mental representations.

Foucault speaks about the objectivity of language, and this observation is especially true regarding scientific language, where the existing rules of reasoning and theory construction lead the researcher’s thought along with them. It is worth noting that the idea



of intellectual property is perceived differently in the scientific community (as well as among inventors) and among writers who professionally work with words. If the latter create with the help of inspiration and the greatest advantage of a literary work is its uniqueness, originality, and dissimilarity from others, then in the scientific community it is important to rely on predecessors, make accurate references to other authors and carefully collect and process extensive factual material.

THE METHODS

Autocommunication is associated with any act of authorship since every text carries a message. This message may be a message to oneself, and the transmission of the message may cause a restructuring of one's personality structure. Within the framework of the semiotic approach to communication, Lotman (1992) distinguishes two types of speech activity. If the first is addressed to an abstract interlocutor and has the largest possible amount of memory, then the second is addressed to a specific interlocutor and has a type of memory peculiar to him. “A language for everyone” is contrasted with “a language for oneself.”

When we correspond with a person, we are inside the “language for everyone”. But now of correspondence with a chatbot, we find ourselves inside the “language for ourselves” system. The fact that we do not perceive LLM as equal to ourselves, not having a physical form and not working without initiation from a person – all this leads us into the field of autocommunication, dialogism in the form of “I – I.”

In the case of popular chatbots, the dialogical nature of these relationships develops in time and in the space of the necessary tasks that need to be solved by one or another person. As higher education teachers, we may criticize students for turning to chatbots and neural networks when writing their dissertations, but we do not show them the important action where this type of dialogue can be useful. We could explain to students that leaving text writing to neural networks is equivalent to them voluntarily throwing out the most interesting things from their lives. But at the same time, entering dialogues with the neural network, experimenting, and partly even provoking your own thoughts with such dialogues is permissible and quite encouraged. To train your skills, to find weak points in the argument, for “references.” For these purposes, chatbots with neural networks are very useful. This type of communication can be called autocommunication.

It should be noted that standard answers to standard questions cannot lead to any breakthrough solutions. A neural network can only output what was or is. And this undoubtedly determines (or will determine) perception. We can say that the text shapes the audience in its own image; “a dialogical relationship develops between the text and its audience” (Lotman, 1992). The dialogical relationship between text and audience is characterized by shared memory. What is shared memory? The audience has knowledge, memory of past events, a special language – all this is common memory, common discourse, common background. This shared memory is asserted in the neural network's responses. Even distortions and biases in responses occur due to reliance on distorted training data. Not only do we inevitably learn and develop through dialogue with chatbots,



but we also participated and are participating in the training of these neural networks themselves.

A person who is just starting to ask questions to a neural network often encounters a situation where it is very difficult for him to find the right word order to get the final result. There are guides on prompting (Best practices for prompt engineering with the OpenAI API, n.d.; Prompt Library, n. d), which help formulate the request so that the neural network can give the desired answer.

There are several techniques that help improve the output of neural networks. For example, there is such a technology as chaining, when the response from the LLM is fed to its input, but with a different prompt command in the style of “find the problems of this approach.” On the one hand, this strategy greatly slows down the achievement of results, on the other hand, it allows you to solve problems of a very high level. And there are many techniques that hack the defenses of neural networks and try to force them to give the wrong answer. In addition, there are sites that help you write prompts. For example, ChatGPT cannot yet read Google Docs even in browser mode. Or it is very inconvenient to send content that does not fit in one message (more than the proposed context window, although the latter is constantly increasing). Various services (Chatgpt – prompt – splitter, n.d.) help in solving such difficult problems, helping to better formulate the question to get the desired result. Even though composing prompts is one of the most creative parts of communicating with neural networks, it is also worth noting that a neural network can do a better job of composing prompts than a person, since it can try out more possible options.

This article does not contain even single sentence generated by a neural network. But during the work on the article, there was constant testing and verification of the problems raised in dialogue with the chatbot, which helped to better formulate the hypotheses discussed in this article. It should be noted that this kind of dialogue is especially useful at the initial stage when hypotheses are just being formulated.

Prompting as a technology of dialogue with neural networks is based not only on the art of asking questions. The image of the audience contained in the text is a normalizing code for it. And the context clarifies the field in which you need to look for answers. This is the basis of the technology of role models, which is very often used when formulating queries to a neural network. An example of this use: “Imagine that you are a social researcher working at a university. Your task is to create a series of questions that could be asked to respondents on such and such a topic. Below, describe the criteria for selecting questions and rank the questions according to these criteria in the table.” Thus, the acquired role sets the normalizing code and determines the response received. But to define a role, a person needs to understand the specifics of this role, which is impossible without complete immersion in a certain field of activity. Thus, a dialogic relationship develops between the generated text and the questioning audience, which develops all participants in communication.



EXPECTED OUTCOMES

A person formulates a question for a neural network, already assuming a certain answer. During autocommunication with LLM, a person must have an expectation of the desired answer, otherwise it is difficult to formulate a question. And this assumption and expectation is fixed in the structure of the prompt, so prompting as the art of asking questions acquires particular importance.

But people are not used to asking questions, already assuming answers to their questions. People ask differently: if they don't know something but want to find out in a conversation with a knowledgeable expert or by searching through a huge database, which is essentially the Internet as such. So, while writing prompts is quite a creative job, sometimes another neural network can do the job better, creating ensembles of models.

If search engines offer a variety of options, then the neural network's answers are verified, presumably error – free... and have no alternative. The peremptory nature of the neural network's responses is corrected by chaining technology, when we further clarify the criteria for the received answer and ask the neural network to evaluate the answer given to us.

The search mechanism is changing. The idea of searching and the idea of questioning is undergoing changes. And, therefore, the idea of dialogue. The subject of this article is not to restore the significance of the technology of Socratic dialogue but mention of this type of dialogue will be an important addition to what is said above.

Thanks to autocommunication, development, transformation, restructuring of a person's "I" occurs, which is an enriching practice. It is important to pose and consistently solve the problem of developing human thinking abilities.

The semiosphere, made up of human – machine systems including humans, chatbots, research questions, and more, encodes texts in a specific way. Humanity looks into the mirror of neural networks and sees reflection of humanity there.

Dialogue with larger linguistic patterns, as a discursive practice that allows people to formulate their own thoughts, can be used as a practice for formulating outlines or references for further work. The practice of autocommunication can be very effective for both social research and general audiences. But while people look at dialogue with neural networks as a standard dialogue in which there is a question and there is a correct answer, then these opportunities are not used.

REFERENCES

- Barth, R. (1994). Death of the Author. In *Selected works: Semiotics. Poetics* (pp. 384-392). Progress.
- Foucault, M. (1977). *The Order of Things: An Archaeology of the Human Sciences*. Progress.
- Foucault, M. (1996). What is an Author. In M. Foucault, *The Will to Truth: Beyond Knowledge, Power and Sexuality* (pp. 7-47). *Works from different years*. Kastal.
- Best practices for prompt engineering with the OpenAI API (n. d.) URL: <https://help.openai.com/en/articles/6654000-best-practices-for-prompt-engineering-with-the-openai-api>



- Hermans, H. J. M. (2014). Self as a Society of I-Positions: A Dialogical Approach to Counseling. *Journal of Humanistic Counseling*, 53, 134–159. <https://doi.org/10.1002/j.2161-1939.2014.00054.x>
- Izmagurova, V. L. (2015). The Phenomenon of Autocommunication as a Factor in the Development of Consciousness [The Phenomenon of Autocommunication as a Factor in the Development of Consciousness]. *Communicology*, 4, 31-42.
- Jacobson, R.O. (1985). Speech Communication; Language in Relation to other Communication Systems. In *Selected works* (pp. 306 – 330). Progress.
- Chatgpt – prompt – splitter (n.d.) URL: <https://chatgpt-prompt-splitter.jjdiaz.dev>
- Kartasheva, A. A. (2023). *Philosophical Foundations of Copyright*. Business book.
- Likhachev, D. S. (1971). *Poetics of Old Russian Literature*. Hood.
- Lotman, Y. M. (1996). *Inside Thinking Worlds*. Yazyki russoj kul'tury.
- Lotman, Y. M. (1992). *Selected articles in three volumes, vol. 1*. Alexandra.
- Lotman, Y. M. (2000). Autocommunication: “I” and “Another” as addressees (About two models of communication in system of culture). In *Semiosfera* (p. 159 – 165). Iskusstvo—SPB. (Original work published 1973)
- Nazarchuk, A.V. (2009). *Theory of communication in modern philosophy*. Progress – Tradition.
- Prompt Library (n. d.). *Anthropic*. <https://docs.anthropic.com/claude/prompt-library>
- Sapir, E. (1993). Communication. In *Selected Works in Linguistics and Cultural studies* (pp. 210 – 215). Progress.
- Saussure, F. de. (1977). *Works on Linguistics*. Progress.

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