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HOW APPROPRIATE IS IT TO COMPARE AI WITH HUMAN INTELLIGENCE?

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ABSTRACT

This article examines the validity of comparing modern artificial intelligence systems, primarily those based on large language models, with human intelligence. It is shown that common comparisons rely on an insufficiently defined understanding of the concept of intelligence and fail to take into account its complex structure. Intelligence is conceptualized as an information processing system embedded in a hierarchy of information objects. This framework substantiates the thesis regarding the dual nature of human intelligence, which combines individual and collective components. It is shown that LLM systems, by their nature, are primarily oriented toward collective consciousness, as they are formed from an array of transpersonally produced knowledge, languages, theories, and communicative practices. Therefore, it is concluded that a direct comparison of such AI with the intelligence of an individual is methodologically incorrect. The practical significance of this conclusion lies in clarifying the natural function of modern AI systems: they should be viewed primarily as intermediaries between the collective consciousness and the individual researcher, rather than as full-fledged analogues of human individuality.

KEYWORDS: Artificial Intelligence; Large Language Models; Human Intelligence; Collective Consciousness; Individuality; Noosphere; Information Objects; Philosophy Of Artificial Intelligence.

1. INTRODUCTION

The authors of the short note (Chen et al, 2026) attempted to prove that existing AI is already approaching human intelligence.

In our opinion, the authors of this article adhere to a methodologically incorrect approach, which, in essence, is due to an inadequate understanding of the concept of "intelligence" itself.

More precisely, there is currently no understanding of what constitutes "intelligence" as such. All "definitions" of intelligence presented in the current literature (including the humanities (Brody, 1999; Sternberg, 2016)) are purely descriptive in nature, and they are based solely on the consideration of the only known form of intelligence—human intelligence. This fact also leads to numerous discussions on whether a given artificial system can be considered "intelligence" or not. In our view, reflected, in particular, in (Suleimenov et al, 2020), this question will remain irrelevant until an adequate, philosophically meaningful interpretation of intelligence as such is provided on an interdisciplinary basis. Nevertheless, the significant advances made by AI developers, including those based on large language models (LLM (Mundlamuri et al, 2025; Xie & Avila, 2025; Gantayat et al, 2025)), suggest that AI is, in a certain sense, gradually approaching the capabilities of its "biological prototype"—human intelligence. However, a non-trivial question arises: in what sense?

This paper demonstrates that this question is closely linked to the question of personality structure. The overwhelming majority of psychological schools recognize that personality structure is highly complex, although personality structure schemes proposed by various researchers are highly variable (Diamond, 2021; Guntrip, 2018; Siegfried, 2014). Intelligence, from this perspective, is also a component of personality. We emphasize that concepts such as "consciousness," "individuality," and "intelligence" are by no means synonymous, although a generally accepted distinction between them has not yet been developed.

Furthermore, there is reason to believe that intelligence itself is not something "homogeneous" (Suleimenov, 2025). More precisely, alongside the concept of the "collective unconscious," the existence of which was empirically proven by C.-G. Jung and his followers (Jung & Hull, 2023a; Jung & Hull, 2023b), there also exists a collective conscious (Vitulyova et al, 2024). Just as the behavior of an individual in many situations is determined by the complex interaction of the personal and collective unconscious, so too, human thought is typically a product of the interaction of "purely individual" intelligence and the collective conscious, the boundary between which, however, is diffuse.

This paper demonstrates that AI built on LLM is entirely oriented toward the collective conscious. At a minimum, this means that comparing it to individual intelligence is not entirely accurate. Moreover, many manifestations of intellectual activity are inherently linked to manifestations of individuality. Consequently, the further development of AI, which presupposes overcoming the difficulties currently encountered in refining LLM, also requires a more adequate understanding of the structure of intelligence than can be provided on a purely descriptive basis. We do not pretend to fully reveal the content of the concept of "intelligence," but the very proof of the existence of a collective consciousness, in our opinion, allows us to bring a certain methodological clarity to the question of what exactly an AI created on the basis of LLM is.

2. RESULTS

It is impossible to give a consistent interpretation of the concept of "intelligence" today, but it is permissible to assert that it is an information processing system that occupies a very specific place in the hierarchy of information objects (Shaltykova et al, 2025), Fig. 1. This diagram is based on the following considerations

The nature of any real-life object is dual, combining the "material" and the "informational." In particular, any real object carries information about itself, as well as about similar objects. The study of any object corresponds to the alienation (or extraction) of the information it carries. In particular, information alienation occurs when studying any substance in a laboratory setting. Alienated (excluded) information is the simplest form of an information object and lies at the lowest level of the hierarchy (Shaltykova et al, 2025). Crucially, the alienation of information does not necessarily require intentionality or purposeful action, as demonstrated in (Kabdushev et al, 2025) using the example of tunable sorbents—that is, chemical compounds that in effect carry information about other chemical compounds.

At the next level of this hierarchy lie information objects that enable the acquisition of new information. The simplest form of such an object includes rules for adding decimal numbers, any mathematical formula, or an algorithm used to perform computations. The outcome of such computations—especially when applied in practice—constitutes information that did not

previously exist.

At a higher level lie information objects that enable the creation of the aforementioned types. Corresponding examples include programming languages and fundamental scientific theories, which, among other things, allow for the derivation of calculation formulas for solving specific applied problems. At the highest level of the hierarchy of known information-processing systems lies human intelligence—at least, if we limit our view to reliably established systems.

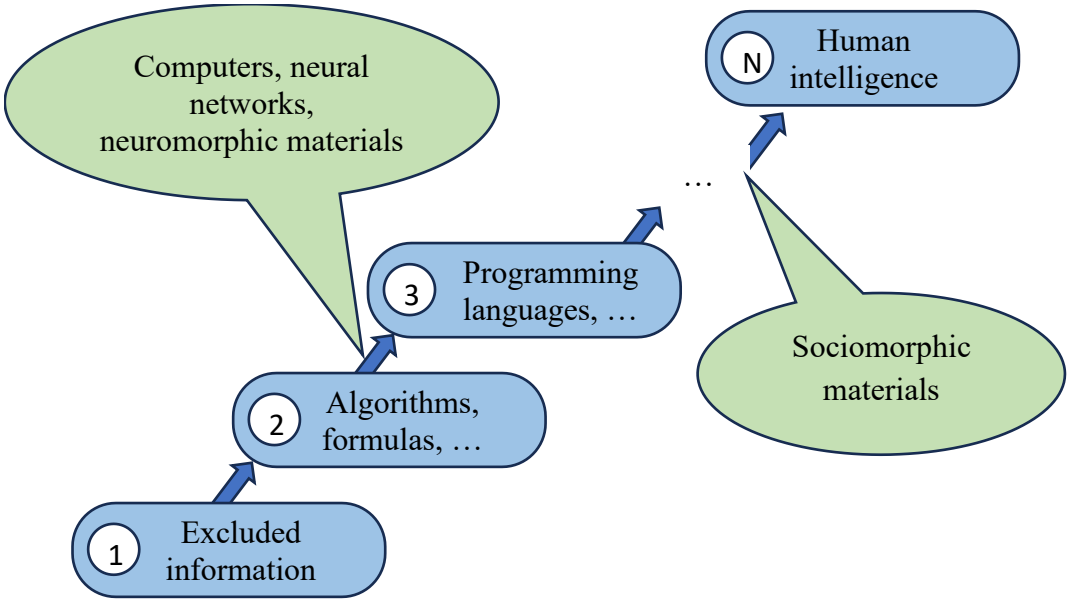

Figure 1: Scheme of hierarchy of information objects (Shaltykova et al, 2025).

We emphasize that technical means, including the elemental base of computing technology (computers, neural networks, neuromorphic materials, as well as promising sociomorphic materials (Shaltykova et al, 2025)), can be correlated with certain levels of this hierarchy, but they are not included within it, as they are not information objects in themselves.

The considered interpretation of intelligence—as an information processing system—is also methodologically limited, but it allows us, at least, to answer the question of what exactly existing varieties of AI should be compared to.

Specifically, information processing processes de facto involve far more than just the neural network formed in individual brains. Communication between individuals de facto boils down to the exchange of signals between neurons, but only those localized in different brains. No other process physically exists. "Information exchange between individuals" is the result of processing the information carried by the above signals.

Consequently, the neural network localized within individual brains is, in reality, no more than a fragment of a global neural network, which, with some reservations, can be identified with the noosphere (Fuchs-Kittowski & Krüger, 1997). The information processing system commonly understood as "human intelligence" is de facto included in a broader system.

Therefore, there is every reason to assert that human intelligence and consciousness—being information processing systems—are in fact dual in nature. They simultaneously contain both individual and collective "components." More precisely, what is called human intelligence simultaneously pertains to two different levels of information processing—individual (personal) and collective (suprapersonal).

Using the humanities, a similar conclusion was reached by representatives of many psychological schools, in particular, the school of L.S. Vygotsky (Verenikina, 2010). Representatives of these schools came to the following conclusion (in a simplified interpretation). What is called "human intelligence" largely lies outside the individual; it is a product of communication, exemplified by any natural language, which, strictly speaking, pertains to the transpersonal level of information processing (Gabrielyan et al, 2022). A clear illustration of this is Umberto Eco's famous expression, "We do not speak language; language speaks us."

To prove the existence of a transpersonal level of information processing as a distinct entity, it is important to emphasize that the ability of a neural network to store and process information is

nonlinearly dependent on the number of its elements, as demonstrated, in particular, in (Suleimenov et al, 2022). The transpersonal level of information processing truly represents a new quality (in the philosophical sense of the term), which is not reducible to the abilities of a simple collection of individuals.

The existence of this level also allows us to uncover the mechanism by which the collective unconscious develops. Its existence has long been beyond doubt; however, the actual mechanisms of its emergence have remained unexplained within analytical psychology. From this perspective, the collective unconscious is analogous to the individual unconscious, but pertaining to the transpersonal level of information processing. As noted above, its existence was established empirically in the works of Carl Jung and his many followers; however, analytical psychology interprets this concept rather metaphorically.

Furthermore, any highly developed scientific theory (more broadly, information objects such as geometry and logic in general) also belongs to the transpersonal level of information processing (Gabrielyan et al, 2022). Its bearer is not an individual, but the corresponding community as a whole. Individual scientists pass away, but they are replaced by younger colleagues, so theories function as a whole for an extended period.

Taken together, objects of this type (they also include political doctrines—more precisely, their rational component—etc.) form a collective consciousness, which is related to the individual's intellect in the same way that the collective unconscious is related to the individual unconscious (Fig. 2). Moreover, any natural language also belongs to the transpersonal level of information processing (Gabrielyan et al, 2022). Consequently, any abilities that allow a person to comprehend reality through articulate speech are also inherently linked to the collective consciousness.

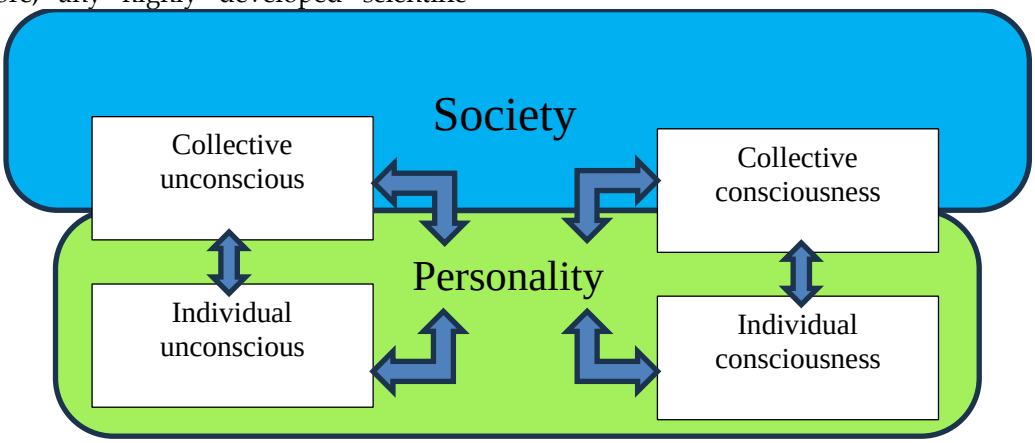

Figure 2: Towards the interpretation of the collective consciousness.

Clearly, human intelligence is largely formed through the assimilation of elements within the collective consciousness, particularly through learning. More precisely, it is reasonable to assume that human intelligence represents a projection—albeit significantly transformed—of the collective consciousness onto a relatively independent fragment of the global neural network, formed by the individual brain.

There is a significant nuance here. An individual's intelligence is, albeit relatively, independent, which determines its individuality. The components of the collective consciousness assimilated by a specific individual do not exist independently of one another; they form a specific system that generates the intelligence of that specific individual. More precisely, the relative independence of an individual's intelligence is determined by the fact that the density of connections between neurons within an individual brain significantly exceeds the similar indicator characterizing interpersonal communication. This is yet another argument in favor of the dual nature of human intelligence: it does not exist outside of communication; it is largely generated by processes occurring within the collective consciousness, yet it is nonetheless capable of possessing a distinct individuality.

A clear illustration of the existence of a suprapersonal level of information processing (and, consequently, a collective consciousness) is the set of points of view called mathematical Platonism. In a seminal monograph on the history of mathematics (Kline, 1980), numerous examples illustrate that many eminent mathematicians of the past believed in the existence of a "world of mathematical ideas" which exists objectively, independent of humanity's

comprehension of it.

As is well known (Linnebo, 2025), such an interpretation of the "world of mathematical ideas" has been and remains closely associated with the ideas of Platonism. It is difficult to disagree with the mathematician, logician, and philosopher A. N. Whitehead and his broad vision of Plato's influence (Whitehead, 1978): The safest general characterization of the European philosophical tradition is that it consists of a series of footnotes to Plato. I do not mean the systematic scheme of thought which scholars have doubtfully extracted from his writings. I allude to the wealth of general ideas scattered through them. His personal endowments, his wide opportunities for experience at a great period of civilization, his inheritance of an intellectual tradition not yet stiffened by excessive systematization, have made his writings an inexhaustible mine of suggestion».

P. Bernays explicitly used the term "mathematical Platonism" (Bernays, 1983), making it clear that he referred to the philosophy of mathematics itself, not to mathematical practice, where mathematicians often manage without it. He illustrates the problem of the ontological status of mathematical objects by comparing the approaches of Euclid and D. Hilbert. For Euclid, geometric figures are constructed within his axiomatic system; for Hilbert, they exist a priori (Ibid., pp. 258–259). Bernays concludes that mathematical objects exist independently of the thinking subject—a notion traditionally linked to Plato's philosophy. In this sense, the philosophy of mathematics is its ontology (Beth, 1965).

M. Balaguer identifies two main projects in the philosophy of mathematics: the hermeneutic and the metaphysical. The first is oriented toward theory and practice, while the second focuses on philosophical traditions—primarily those of Plato and Platonism (Balaguer, 1998).

The latter was profoundly explored by G. Frege, who distinguished between ontological, epistemological, and methodological Platonism. These nuances, however, are not essential for the purposes of the present report. Instead, we attempt to move beyond debates concerning the ontological status of mathematical objects by treating them as a product of the collective conscious, formed within the information-communicative environment of the professional mathematical community.

From this perspective, one may assert that mathematical objects exist ontologically in communication and in the emergent transpersonal structure, which we "connect to" in the course of such communication—for example, through education (as part of professional formation) or by participating in a shared research context (such as brainstorming).

This interpretation closely aligns with the view expressed by the French mathematician Émile Borel, who noted that many people have a vague sense that mathematics exists "out there" somewhere, although upon reflection, they cannot avoid the conclusion that mathematics is purely a human creation (quoted in (Barrow, 1992)). He emphasized our tendency to postulate the existence of certain cultural or civilizational entities in the sense that we share them with others and can exchange thoughts about these concepts. According to Borel, a thing becomes "objective" (as opposed to "subjective") when we are convinced that it exists in the minds of others in the same form as in our own, and that we can think and communicate about it. Since the language of mathematics is highly precise, it is especially well-suited for defining concepts for which such consensus exists. In Borel's view, this is sufficient to explain the emergence of the sense of objectivity—regardless of the true origin of the concept.

Within the scope of a single article, we cannot trace the entire historical evolution of the Platonic interpretation of mathematical objects within the mathematical community. Instead, we shall limit ourselves to a few additional examples demonstrating that this interpretation remains relevant today. It should be noted, however, that the term "Platonism" is often replaced by "mathematical realism," though the latter is broader and more ambiguous, which may lead to distortions of the intended meaning (Field, 1988).

As noted in (Montero, 2022) "Many mathematicians are platonists: they believe that the axioms of mathematics are true because they express the structure of a nonspatiotemporal, mind independent, realm. But platonism is plagued by a philosophical worry: it is unclear how we could have knowledge of an abstract, realm, unclear how nonspatiotemporal objects could causally affect our spatiotemporal cognitive faculties"

According to Godfrey Harold Hardy, mathematical theorems are either true or false, and their truth or falsity is entirely independent of whether or not we are aware of them. He maintained that, in a certain sense, mathematical truth is part of an objective reality that exists independently of us. The theorems mathematicians prove and grandiloquently refer to as their "creations" are, in fact, nothing more than records of observation (Hardy, 1981).

Morris Kline also notes (Kline, 1980) that belief in

the existence of an objectively real mathematical world was shared by one of the most accomplished analysts of the 19th century, Charles Hermite (1822–1901). Hermite argued that numbers and functions in analysis are not arbitrary products of the human mind. He believed that they exist outside us with the same necessity as the objects of physical reality, and that mathematicians discover and investigate them in much the same way as physicists, chemists, or zoologists do. Such examples could be multiplied, and many of them are also reflected in the aforementioned monograph (Kline, 1980).

In summary, it can be argued that the thesis of a collective consciousness is, in essence, nothing fundamentally new. It largely corresponds to the ideas shared by many prominent mathematicians of the past, with the difference that our perspective allows for a purely rational interpretation of the world of mathematical ideas—it objectively exists as a significant component of the collective consciousness.

Therefore, existing varieties of AI should be attributed to some projection of the "collective component of intelligence," or more precisely, the collective consciousness, onto the artificial environment. This does not require extensive proof—AI draws information from the entire information space (at least this applies to AI based on LLM).

At the same time, "human intelligence" is generally understood to refer to its individual component. The question "can a machine think," which arose back in the 1960s, was clearly related specifically to individual thinking. Therefore, the comparison made in (Chen et al, 2026) cannot be considered entirely accurate. At a minimum, it is necessary to specify which component of intelligence is being discussed.

We emphasize that this conclusion is by no means fruitless theorizing.

Many authors emphasize that existing forms of AI can make false inferences: generative AI (such as large language models) frequently produces text that is fluent but nonsensical, fabricated, or factually incorrect, including bogus citations and dangerous advice in medicine (Monteith et al, 2024). In clinical decision-support tests with adversarial prompts, major LLMs elaborated on false clinical details in 50–82% of cases; even with mitigation prompts, the best model still hallucinated 23% of the time (Omar et al, 2025).

Furthermore, when models learn from AI data and begin to "deteriorate" due to declining data quality amid the exponential growth of AI content, synthetic degradation occurs. More and more text, code, images, and "training" corpora are becoming generative in origin. This creates the risk of recursive contamination of training data: new-generation models are trained on the outputs of previous-generation models.

In 2024, Nature published a paper on model collapse—the degradation of models when trained on recursively generated data: under certain "self-copying" regimes, the data distribution "collapses," diversity decreases, and rare but important patterns begin to disappear (Zhumailov et al, 2024). Built-in limitations ("artificial stupidity") also occur: AI relies on pattern recognition without common-sense or causal understanding, so in novel or complex contexts, it can produce biased, illogical, or "stupid" results despite sounding confident (Agudo et al, 2024).

Moreover, focusing AI on the entire corpus of accessible texts is inherently incapable of generating innovative solutions. As the saying goes, "there is no greater error than one shared by all."

Only an AI system with certain "personality traits," i.e., a kind of "personal opinion," can notice—and appreciate—an opinion that runs counter to generally accepted views. This brings us back to the question of the validity of comparing existing forms of AI with human intelligence in the traditional sense of the term (with its predominant focus on the individual component).

The practical significance of this very formulation of the question is, in essence, fully reflected in the Socratic thesis, "in debate truth is born." A system entirely oriented toward "collective intelligence" and utilizing the entire corpus of texts, computer programs, etc., is inherently incapable of arguing with itself. At least, no corresponding algorithmic solutions are currently in sight.

In a context where the question of the vector of AI's further development is not only becoming a subject of debate but also acquiring a pronounced philosophical dimension (including in terms of the hardware components used (Shaltykova et al, 2025)), the factor of "individuality" may become decisive. In our view, this issue should be addressed not through the creation of "pure" AI, but through the targeted use of an already ongoing objective process—the conversion of the noosphere into a human-machine system, which is occurring, in part, as a result of the integration of AI with telecommunications technologies.

From our perspective, the concept of AI requires significant clarification. It is possible that it makes sense to consider an intelligence that approaches human intelligence as closely as possible, in the

narrow sense of the term. However, if we speak of the importance of individuality, the question arises: which individual? If it is a previously living or currently living individual, then this clearly brings us back to the question of "digital immortality," i.e., the full or partial (Vitulyova et al, 2024) transfer of individuality to a non-biological information carrier. As is well known, this idea is closely linked to the concept of transhumanism (Mebarek, 2025), and remains, to put it mildly, controversial (especially considering its philosophical aspect).

Consequently, AI as an "individual" can be excluded from consideration at this stage. Existing AIs are a reflection (in the philosophical sense of the term) of the collective consciousness, and it is as such that they should be considered.

This conclusion also has direct practical significance. There is no point in trying to assign AI, especially one built on LLM—or their promising analogs, for example, those discussed in (Shaltykova et al, 2025)—tasks that are clearly inappropriate for them. In our opinion, AI is pointless to compare with human intelligence. It should occupy its natural "ecological niche"—as an effective mediator between the collective consciousness and an individual scientist or thinker. There is no doubt that generative AI already performs this function to a large extent. It enables text editing, scientific information retrieval, etc.

From our perspective, the methodological basis for the further development of AI should be somewhat adjusted, viewing it primarily as a kind of intermediary between individuals and the collective consciousness.

In other words, we are talking about putting into practice an idea intuitively grasped by the distinguished mathematician and physicist Roger Penrose (Penrose, 2016). He posited that whenever the mind grasps a mathematical idea, it establishes contact with Plato's realm of mathematical concepts. When a person "sees" a mathematical truth, their consciousness penetrates this realm of ideas, establishing brief, direct contact with it. According to Penrose, human thought is, as it were, guided toward an external truth—a truth that is real within itself and only partially revealed to each of us.

In the most succinct terms, AI, whose operating principle is based on "monitoring" digital space as a whole, should in no way copy or imitate the intelligence of an individual. The type of AI described above is an information entity of a completely different nature, and its further development should be precisely as such. To substantiate this thesis, we considered it important, among other things, to point out the authors' methodological errors (Chen et al, 2026): comparing existing AI with human intelligence is methodologically incorrect.

3. CONCLUSIONS

The analysis shows that the question of "human-level" AI intelligence cannot be addressed without clarifying the precise form of intelligence being considered. If intelligence is understood primarily as an individual-personal form of information processing, then modern LLM systems are not a direct analogue. Their strengths stem from their inclusion in the transpersonal layer of knowledge and communication, that is, in the area that the paper proposes to interpret as collective consciousness. Therefore, the main prospect for AI development lies not in simulating individuality per se, but in more precisely defining its functions within the "individual-collective consciousness-digital environment" system. This approach simultaneously resolves some of the methodological misunderstandings in discussions of AI and more realistically defines the range of tasks it can solve. In this sense, modern AI systems should be understood primarily as a special tool for accessing, selecting, structuring, and transmitting transpersonal knowledge.

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