Wittgenstein's Philosophy of Language and the Future of Artificial Intelligence

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ABSTRACT

Artificial Intelligence (AI), including Large Language Models, has raised awareness of issues related to language, meaning, comprehension, understanding, translation, and communication. This article explores the connection between future advances in artificial intelligence and Ludwig Wittgenstein's later theory of language. It concentrates on four key ideas in Wittgenstein's philosophy: forms of life, rule-following, language-games, and meaning as use. The study examines recent philosophical works on AI and language as well as Wittgenstein's Philosophical Investigations, using a qualitative and interpretive philosophical technique. The study first looks at Wittgenstein's transition from the *Tractatus Logico-Philosophicus* representational conception of language to his subsequent focus on language use and context. The ideas of rule-following, meaning as usage, language games, and forms of life are then applied to large language models and modern artificial intelligence. The conversation demonstrates AI's ability to produce and react to language, engage in continuous conversations with human users, and function in a variety of linguistic circumstances. Wittgenstein's philosophy, however, highlights the significance of the contextual, social, and practical circumstances in which language takes on meaning. The study also looks at the difficulties AI faces in maintaining contextual relationships, applying rules to novel circumstances, and relating linguistic patterns to human actions and living forms. It argues that future AI research should consider context, human activity, social interaction, and language-use patterns alongside linguistic performance and language generation. This study comes to the conclusion that Wittgenstein's theory of language offers a helpful philosophical framework for analyzing the potential and constraints of AI language use as well as its future advancement. Wittgenstein's philosophy of language emphasizes that meaning arises from the use of words within particular contexts and language games. Applied to artificial intelligence, it raises questions about whether machines genuinely understand language or merely process symbols. His philosophical ideas help critically examine AI's understanding, communication, meaning, and limitations in future human-machine interactions.

Keywords: Wittgenstein, Philosophy, Language, Communication, Artificial Intelligence

INTRODUCTION

Wittgenstein's philosophy of language explains that meaning depends on how words are used within specific contexts and social practices. In artificial intelligence, his ideas help examine whether machines genuinely understand language or merely manipulate symbols. His philosophy provides a framework for analysing AI communication, meaning, understanding, and the limitations of machine intelligence. Artificial intelligence (AI) emerged as a field of research in the 1950s with the aim of developing machines capable of thinking, learning, solving problems, and making decisions in ways that resemble human intelligence. Over the years, scientists and researchers have made significant progress in AI, transforming it from a specialized area of research into a technology used in everyday life. Today, AI is integrated into smartphones, Google Search, ChatGPT, Siri, self-driving cars, and many other applications. As AI increasingly influences communication, education, healthcare, business, and transportation, it has become not only a scientific and technological concern but also an important

subject of philosophical inquiry.[1] Philosophy of language is a branch of philosophy that examines the nature of language, meaning, communication, and understanding. Philosophy of Language is a branch of philosophy that studies the nature, meaning, structure, and use of language. It examines the relationship between words, thoughts, and reality, exploring how language communicates knowledge, expresses ideas, and shapes human understanding. Major philosophers include Ludwig Wittgenstein, Gottlob Frege, Bertrand Russell, and J. L. Austin.

It is difficult to define precisely because it encompasses a wide range of issues and overlaps with disciplines such as grammar, psychology, and anthropology. Rather than focusing only on the structure of language, philosophy of language investigates how language functions in different areas of philosophy, including logic, epistemology, ethics, and metaphysics. Through these investigations, philosophers seek to understand how language shapes thought, conveys meaning, and influences human knowledge and communication.[2] In his early work, *Tractatus Logico-Philosophicus*, Ludwig Wittgenstein presented the Picture Theory of Meaning to explain the relationship between language and reality. According to this theory, language represents the world through propositions, and a proposition functions as a picture of a possible state of affairs. For a proposition to represent reality, it must share the same logical form as the situation it describes. This logical structure allows language to express facts about the world. Wittgenstein further argued that the meaning of a proposition lies in what it represents, while its truth or falsity depends on whether it corresponds to reality. In this view, language, thought, and the world are closely connected because thought itself is a logical picture of facts. Thus, the primary purpose of language in Wittgenstein's early philosophy is to represent reality through logically structured propositions.[3]

Ludwig Wittgenstein makes the case that language is more than just a list of object names in his later book Philosophical Investigations. Rather, a word's meaning is determined by the context in which it is used. He illustrates this with the example of a builder and an assistant, in which terms like "block," "pillar," "slab," and "beam" serve as directives within a certain task. This demonstrates that usage, not rigid definitions, is how language acquires meaning. The word "train," which in one context refers to a railway vehicle used for transportation, can also be used to understand this concept. Another definition of "train" is "to develop a skill through practice," as in the case of training a student or a football team. The meaning of the same term varies depending on the context in which it is used. This validates Wittgenstein's theory that a word's meaning depends more on how it is used in a certain context than on the word itself.[4] There are now more opportunities to study language from a philosophical standpoint because of recent advancements in artificial intelligence, especially in natural language processing. The article makes the case that Ludwig Wittgenstein's writings, particularly his observations on language and meaning, contain many of the concepts that underpin contemporary AI research. The authors contend that Wittgenstein's theory still offers important insights for comprehending modern AI rather than viewing it as purely a historical contribution. They also stress that there is a reciprocal relationship between philosophy and artificial intelligence. While philosophical concepts aid in the explanation of AI's underlying principles, developments in AI also bring up significant philosophical issues pertaining to language, meaning, and comprehension. Because of this, it is both pertinent and essential to examine Wittgenstein's philosophy of language in light of artificial intelligence's future. It promotes a more in-depth discussion between philosophy and artificial intelligence and provides a philosophical framework for considering the potential and constraints of intelligent systems.[5] Whether the creation of appropriate language should be seen as proof of true comprehension is one of the main philosophical issues brought up by modern artificial intelligence. Although large language models can execute a range of linguistic tasks and provide fluent responses, this does not prove that they comprehend the meaning of the output.

According to Wittgenstein, appealing to an internal mental representation or a concealed state of mind is insufficient to describe comprehension. Instead, comprehension is demonstrated through the useful application

[1] Haroon Sheikh, Corien Prins, and Erik Schrijvers, "AI as a System Technology," in *Mission AI: The New System Technology* (Cham: Springer International Publishing, 2023), p.1
[2] Matthew Hinton, "The Philosophy of Language: Introduction to the Issue," *Forum Philosophicum* 29, no. 2 (October 2024), p.1.
[3] Tractatus Logico-Philosophicus, by Ludwig Wittgenstein (1975), p.30
[4] *An Analysis of Ludwig Wittgenstein's Philosophical Investigations*, by Michael O'Sullivan (Boca Raton, FL: CRC Press, 2017), p.5.
[5] Piero Molino and Jacopo Tagliabue, "*Wittgenstein's Influence on Artificial Intelligence," arXiv* preprint arXiv:2302.01570, February 6, 2023, p.1.

of language in specific contexts. Human language behavior is intimately linked to activities, social relationships, and involvement in a shared way of life. This poses a challenge for artificial intelligence since a system may react to linguistic inputs correctly without engaging in language in the same social and practical ways as people. Therefore, the crucial philosophical question is whether AI's verbal performance can be regarded as a form of knowing based on language usage and linguistic agency, rather than just whether it can generate right or meaningful-looking sentences.[6]

The connection between Wittgenstein's philosophy of language and Large Language Models has been the subject of recent research, with a focus on the question of whether such systems may take part in language games and be considered participants in linguistic practices. By contending that Large Language Models might be viewed as participants in the language game by their reactions to linguistic cues from humans, O'Connor's discussion offers a crucial viewpoint. But this viewpoint also poses another philosophical query about the nature of comprehension. Does a system's ability to produce meaningful phrases and engage in linguistic interactions prove that it truly understands language? Therefore, the distinction between linguistic participation and comprehension continues to be a crucial topic for philosophical analysis. In order to determine whether the linguistic performance of artificial intelligence can be considered true language use and understanding, this study aims to answer this question using Wittgenstein's philosophy of language, specifically his concepts of meaning as use, language-games, rule-following, and forms of life.[7]

Given these factors, the current study aims to investigate how Wittgenstein's philosophy of language can further our knowledge of artificial intelligence in the present and the future. Three main questions serve as the study's compass: How can we comprehend the linguistic capacities of modern artificial intelligence, especially Large Language Models, using Wittgenstein's philosophy of language? To what degree may Large Language Models' involvement in language games be considered authentic linguistic comprehension and meaningful language use? What can be learned about the potential and constraints of artificial intelligence from Wittgenstein's theories of meaning as use, language games, rule-following, and forms of life? Examining Wittgenstein's philosophy of language, analyzing the linguistic capabilities of modern AI from a Wittgenstein perspective, determining whether linguistic participation and coherent linguistic responses constitute true understanding, analyzing the connection between linguistic performance, meaning, and understanding in human–AI communication, and assessing the potential and constraints of Wittgenstein's philosophy for comprehending the future development of AI are the objectives of this study.[8]

Methodology: A qualitative and interpretive philosophical approach is used in this study. In order to investigate the connection between language, meaning, and artificial intelligence, it mainly relies on Ludwig Wittgenstein's later philosophy, specifically his idea of language-games. The study examines how language works in specific situations and behaviors, adhering to Wittgenstein's methodological focus on characterizing language-games. This method is used to investigate whether Wittgenstein's explanation of meaning and language use can be applied to the linguistic activities of AI. As a result, the study is conceptual rather than empirical, depending on a careful reading of pertinent philosophical writings and current AI debates.[9] A useful viewpoint for comprehending artificial intelligence is offered by Wittgenstein's later philosophy of language, particularly his explanation of rule-following. It emphasizes the value of language, communication, comprehension, and the difference between rule-following by humans and machines. This implies that the future of AI should be evaluated not just in terms of its computational power but also in light of the linguistic and social environments in which it functions.[10]

Wittgenstein's Later Philosophy of Language

Language is mainly understood in terms of its representational relationship to reality, according to Wittgenstein's *Tractatus Logico-Philosophicus*. Logical form connects language, thought, and reality, and a proposition serves

[6] Mallory, "*Wittgenstein, the Other, and Large Language Models,"* pp.83-84.
[7] Marie Theresa O'Connor, "*AIs as Fellow Participants in the Language Game*," *AI & Society* 41 (2026), pp.2-
[8] Enzo Fenoglio, "Asymmetric Communication: Large Language Models and Language Games" (2026), arXiv, July 30, 2026, p.10.
[9] Doug Hardman, "Wittgenstein's Method Is Simple: 'Describe Language-Games!'" *Philosophical Investigations* 48, no. 2 (2025)
[10] José Antonio Pérez-Escobar and Deniz Sarikaya, "Philosophical Investigations into AI Alignment: A Wittgensteinian Framework," *Philosophy & Technology* 37, no. 3 (2024): Article 80.

as an illustration of a potential situation. However, Wittgenstein departs from this essentially representational understanding of language in his later philosophy. He highlights the several ways that language is employed in human actions and specific circumstances in Philosophical Investigations. He looks at how linguistic expressions gain meaning through usage rather than trying to identify a single fundamental purpose of language. His later philosophy of language, especially his idea of meaning as use, is largely based on this transition from representation to use.[11] A central development in Wittgenstein's later philosophy of language is his shift from understanding meaning primarily in terms of a relation between words and objects to understanding meaning in terms of use.

In the Tractatus *Logico-Philosophicus,* language is closely connected with a logical structure in which names are related to objects. In his later philosophy, however, Wittgenstein rejects the idea that language has one single underlying structure or essence shared by all linguistic practices. Instead, he highlighted the multiplicity of ways in which language is used in different human activities. Wittgenstein contends that comprehending the significance of a phrase cannot be achieved merely by recognizing the object it denotes. Instead, its meaning is defined by the manner in which the expression is employed inside a certain linguistic context. Hence, meaning is not solely a question of reference; it is intertwined with the actual contexts in which linguistic statements are utilized. Wittgenstein's explanation of illustrative definition also helps to explain this viewpoint. The meaning of a word is not determined solely by pointing to and naming an object. Pointing to a table, for instance, can entail naming the item, describing its purpose, indicating its colour or shape, or providing instructions. As a result, the expression's meaning is contingent upon the language practice and activity in which it is employed. According to Wittgenstein, meaning is therefore not anything that is apart from language. It takes the form of how language expressions are employed in specific situations and activities. As a result, human behaviors and forms of life are inextricably linked to language. Wittgenstein's explanation of ostensive definition also helps to explain this viewpoint. The meaning of a word is not determined solely by pointing to and naming an object. Pointing to a table, for instance, can entail naming the item, describing its purpose, indicating its colour or shape, or providing instructions. As a result, the expression's meaning is contingent upon the language practice and activity in which it is employed. According to Wittgenstein, meaning is therefore not anything that is apart from language. It takes the form of how language expressions are employed in specific situations and activities. As a result, human behaviors and forms of life are inextricably linked to language.[12]

In Studies of Philosophy, in order to highlight that speaking a language is an activity and a way of life, Wittgenstein creates the idea of the language-game. It is impossible to properly comprehend language without considering the context and action in which it is employed. Thus, language-games highlight the various roles that linguistic terms play in specific contexts. Giving and following instructions, describing objects and their dimensions, creating an item from a description, reporting an event, and speculating about an event are only a few of the examples Wittgenstein provides. These illustrations show that language has a variety of purposes depending on the activity in which it is used. Wittgenstein's discussion also shows that the same linguistic expression can perform different functions depending on its context. For example, an expression such as "Water!" may function as a request, an order, an exclamation, or a response to a question. Its significance therefore cannot be determined simply by examining the word in isolation. Rather, its role is understood through the particular language-game in which it is used.

The concept of language-games consequently reinforces Wittgenstein's broader view that the meaning of linguistic expressions is inseparable from their use within particular activities and contexts.[13] Wittgenstein employs the phrase "form of life" (*Lebensform)* in relation to his later conception of language, according to M. S. Hacker. Hacker claims that this concept is a component of Wittgenstein's shift away from viewing language as a meaning calculus, or as a formal system in which language is made up of sentences that are constructed in accordance with predetermined rules and whose meanings are established by their truth-conditions. Rather, Wittgenstein views language as an unrestricted set of interconnected language games. According to Hacker, these language-games represent a way of life or a cultural aspect of language. Therefore, language is more than just an abstract system that exists apart from human existence. It has to do with how people live and interact. As

[11] https://plato.stanford.edu/entries/wittgenstein/ 27/08/2026 11:41 AM.
[12] A. C. Grayling, *Wittgenstein: A Very Short Introduction* (Oxford: Oxford University Press, 2001), p.79.
[13] https://en.wikipedia.org/wiki/Philosophical_Investigations 29/09/2026 11:42.

a result, the idea of form of life demonstrates that language should be interpreted in light of the activities and lifestyles that give rise to language-games. Language's importance stems from its role in a human way of life as well as from a formal system.[14]

Rule-Following and Artificial Intelligence

Wittgenstein's later theory of language heavily relies on his analysis of rule-following. Wittgenstein explores the relationship between norms, meaning, and language use in everyday situations. In Philosophical Investigations, in particular, he addresses rule-following in sections. This conversation raises a crucial question: what does it mean to correctly follow a rule? To obey a rule, it is not enough to just read a formula or carry out an instruction mechanically. Instead, acquiring, utilizing, and modifying language phrases within established procedures is linked to the capacity to adhere to rules. To illustrate this point, Wittgenstein gives the example of a student who has been told to add two to a series of numbers. After finishing activities up to 1000 satisfactorily, the student is asked to continue the series. Instead of writing 1000, 1002, 1004, 1006, and so on, he writes 1000, 1004, 1008, and 1012. The student claims to have resumed the series "in the same way" after being corrected. Thus, the case poses a philosophical query regarding what it means to comprehend and appropriately adhere to a rule.[15]

Artificial intelligence can be included in this rule-following discussion. Drawing on Shanker, Pérez-Escobar and Sarikaya explain that computers lack the flexibility of human rule-followers and can "mechanically follow a rule." They contend that whereas robots follow rules in a mechanical or deterministic way because they operate according to rigid formalisms, human rule-following is influenced by psychological, social, and cultural aspects. When thinking about AI, this distinction is crucial because an artificial system may successfully execute a rule without adhering to it in the adaptable manner that characterizes human rule-following. Therefore, the question is not just whether a computer can generate an output in accordance with a rule, but also how rule-following occurs and what circumstances make it relevant. Escobar and Sarikaya go on to say that later Wittgenstein's method focuses on performance, such as language use and adherence to rules, rather than concealed interior states.

According to this viewpoint, understanding can be investigated by looking at an agent's actions during language practice as opposed to relying solely on presumptions about an internal mental state. Because AI systems can generate linguistic outputs that seem acceptable in a certain scenario, this point is crucial to artificial intelligence. The philosophical dilemma of whether such performance should be viewed similarly to human rule-following still stands, though. Therefore, a key foundation for analyzing AI's use of language is the difference between mechanical rule-following and the adaptable, socially and culturally conditioned rule-following of humans.[16]

Meaning as Use and Artificial Intelligence

The relationship between meaning and use is one of the main concepts in Wittgenstein's later philosophy of language. "For a large class of cases of the employment of the word 'meaning', though not for all, this word can be explained in this way: the meaning of a word is its use in the language," according to Wittgenstein's Philosophical Investigations. This demonstrates a departure from his previous method in the Tractatus, where language was intimately associated with logical form and representation. Instead of looking for a single thing or mental image that gives a word its meaning, Wittgenstein invites us to consider how words are actually used in certain contexts in his later philosophy. Therefore, meaning is comprehended by the application of language in various linguistic contexts.[17] Wittgenstein's theory of language highlights the intimate relationship between a word's meaning and its usage. A word's meaning can change depending on the context in which it is used rather than having a single, unchanging meaning. As a result, Wittgenstein links language to a variety of human endeavors, including issuing commands, recounting incidents, and engaging in other sorts of communication.

[14] Hacker, P. M. S. "*Forms of Life*." *Nordic Wittgenstein Review*, Special Issue (2015): p.1.
[15] *Ludwig Wittgenstein,* Philosophical Investigations, trans. G. E. M. Anscombe, P. M. S. Hacker, and Joachim Schulte, 4th ed. (Malden, MA: Wiley-Blackwell, 2009), p.185.
[16] José Antonio Pérez-Escobar and Deniz Sarikaya, "*Philosophical Investigations into AI Alignment: A Wittgensteinian Framework,"* Philosophy & Technology 37 (2024), p.80. .https://doi.org/10.1007/s13347-024-00761-9.
[17] https://plato.stanford.edu/entries/wittgenstein/ 22/09/2026 2:25 PM.

As a result, one can determine an expression's meaning by looking at its context. Language is intimately linked to the activities in which people engage rather than existing as a distinct system of signs.

The idea of the language-game, which relates to language and the actions in which it is utilized, is how Wittgenstein articulates this connection. Therefore, the specific activity and language-game in which a word is used determines its usage. This is also linked to the more general concept of a form of life, demonstrating the connection between language and human behavior.[18] Another method to comprehend the relationship between meaning and language is through Capone's description of language and Large Language Models. He contends that language derives its meaning from more than just specific things or experiences. Instead, language aids in structuring and organizing experience. Drawing on Wittgenstein, Capone emphasizes that the language system we use to express and comprehend experience is already linked to what we see as an object, a colour, or a pain. In this way, one cannot comprehend meaning by focusing only on a single word or phrase. It is dependent upon a language's broader system of relations. Knowledge: Large Language Models require knowledge of this topic.

According to Capone, language models' vectors are unable to accurately convey meanings on their own. A model must be taken into account in respect to the larger system of signals that organizes meanings in order for it to have access to linguistic meanings. Therefore, the relationships formed within the language system determine an expression's meaning rather than just a straight relationship between a word and an object. A sentence like "this suitcase is heavy," for instance, depends on how language differentiates between things, attributes, and other ways of communicating experience. According to this viewpoint, the study of AI language should take into account both specific linguistic representations and the broader system of relationships that give those representations their importance.[19]

Language-Games and Artificial Intelligence

In order to describe the various ways that language is used in human activity, Wittgenstein creates the idea of the language-game. He notes that there are "countless different kinds of use" for words, symbols, and sentences, and that although certain language games become outdated, others may emerge. According to him, the phrase "language-game" is meant to highlight the fact that speaking a language is an activity or a way of life. As a result, Wittgenstein does not view language as a static system with a single purpose. Giving and receiving instructions, describing things, reporting events, posing queries, and carrying out a variety of other tasks are all possible with language. Therefore, a language expression's meaning and purpose must be taken into account in light of the activity in which it is employed.[20] By highlighting the relationship between language and action, Barrett and VanDrunen provide further context for Wittgenstein's language-game. One person utilizes a word or signal in their conversation about the builder and assistant, and the other responds by acting appropriately. They demonstrate how participants' frequent interactions shape the meaning of a language statement.

According to their idea, when participants engage and learn how to reply to one another, originally meaningless signals can eventually become questions and answers. This demonstrates how language is linked to patterns of interaction and useful activity rather than just being a collection of signs. Thus, the activity in which linguistic terms are employed establishes their meaning and purpose.[21] According to O'Connor, building systems that engage in language is a necessary step in developing large language models. She points out that Wittgenstein's philosophy is pertinent to this question because it allows us to investigate whether AI systems may be comprehended by their language usage rather than just by what occurs within the system. O'Connor goes on to say that using ChatGPT can result in an ongoing conversation between the AI system and the human user. In this kind of conversation, the AI's reaction can influence the human's subsequent words, allowing the interaction to shape the activity itself. This enables O'Connor to relate Wittgenstein's concept of playing a language game

[18] Mark Coeckelbergh, "Technology Games: Using Wittgenstein for Understanding and Evaluating Technology," *Science and Engineering Ethics* 24, no. 5 (2018), p.1505.
[19] Luca Capone, "Osservazioni sulla Filosofia della Linguistica Computazionale. Chiarificazione dei presupposti teorici del Natural Language Processing," *RIFL – Rivista Italiana di Filosofia del Linguaggio* (2024).
[20] *Ludwig Wittgenstein,* Philosophical Investigations, trans. G. E. M. Anscombe, 3rd ed. (New York: Macmillan Publishing Co., Inc., 1958), p.8.
[21] Jeffrey A. Barrett and Jacob VanDrunen, "*Language Games and the Emergence of Discourse*," *Synthese* 200 (2022): p.159.

to human-AI interaction.[22] Lastly, O'Connor makes the case that LLMs might be thought of as linguistic movements. Their reactions to human cues may trigger more verbal actions from human users, resulting in a continuous dialog. In this way, the AI participates in a conversation where language is constantly employed rather than just generating a single response.[23]

Forms of Life and Artificial Intelligence

Wittgenstein links the concept of a "form of life" to language. "To imagine a language means to imagine a form of life," he writes in §19 of Philosophical Investigations. This implies that the way individuals live and use language is essential to understanding language. Asking inquiries, reporting occurrences, and issuing commands are just a few of the actions that might be associated with different types of language. Thus, according to Wittgenstein, comprehending a language also entails taking into account the type of life in which it is employed.[24] In §23 of Philosophical Investigations, Wittgenstein expands on this relationship. He clarifies that there are numerous varieties of language games and that some may become extinct while others may arise. He highlights that speaking a language is an activity or a way of life. Giving commands, describing things, reporting incidents, posing queries, expressing gratitude, extending greetings, and praying are some of his examples. Therefore, language is used in specific human actions and is more than just a system of words and sentences.[25]

Additionally, Wittgenstein links agreement in a form of life to language. He clarifies in §241 that although people agree on the language they use, this agreement is a "form of life" rather than just a consensus. This suggests that sharing language usage patterns and engaging in linguistic activities are essential for effective communication. As a result, language functions within a context of common behaviors that facilitate interpersonal understanding. Diverse forms of existence can involve diverse perspectives on the world, according to Tonner. As a result, members of one form of life can have a different understanding of the customs and beliefs of another. According to Wittgenstein, rational argument alone is not always sufficient to gain comprehension between various forms of existence. This highlights the value of communication and persuasion among many conceptual groups. People may reevaluate and change their viewpoints and learn about a different kind of living through such discourse. This demonstrates how forms of existence are linked not only to certain worldviews but also to the potential for interaction and communication between various human viewpoints.[26] Grias expands on Wittgenstein's notion of "form of life" by relating it to the patterns and activities of human existence and language usage. He clarifies that patterns of activity can be used to understand Wittgenstein's concept of a form of life, which is connected to both biological and social facets of human existence. As a result, an action's meaning is influenced by both the activity itself and the context in which it occurs.[27] Grías then expands this conversation to include machines and asks whether they might engage in human-like behavior patterns. He contends that there would be grounds to regard computers as sharing the human form of existence if they were able to engage in similar patterns of behavior and could not be separated from humans based on their observable actions. This option is crucial for artificial intelligence because it moves the focus from a machine's internal construction to its involvement in human activities and behaviors. In this approach, the idea of form of life offers a means of investigating whether AI systems are capable of taking part in the processes that develop and comprehend human linguistic practices.[28]

The Future of Artificial Intelligence

Penco's explanation of context is a helpful place to start when thinking about artificial intelligence's future. He clarifies that Wittgenstein employs the concept of context in a variety of contexts, including interpersonal interactions. As a result, comprehending a sentence necessitates paying attention to its context. Penco makes a connection between artificial intelligence and this concept of context, contending that Wittgenstein's analysis

[22] Marie Theresa O'Connor, "*AIs as Fellow Participants in the Language Game*," *AI & SOCIETY* 41 (2026), pp.3225-3226.
[23] *Ibid.*, p.3228.
[24] Ludwig Wittgenstein, *Philosophical Investigations*, trans. G. E. M. Anscombe, P. M. S. Hacker, and Joachim Schulte, 4th ed. (Malden, MA: Wiley-Blackwell, 2009), p.19.
[25] *Ibid.,* p.23.
[26] Philip Tonner, "*Wittgenstein on Forms of Life: A Short Introduction*," E-LOGOS 24, no. 1 (2017): p.17.
[27] Sebastian Sunday Grève, "*Artificial Forms of Life*," *Philosophies* 8, no. 5 (2023): p.7
[28] *Ibid.*, pp.15-16.

can aid in our comprehension of the evolution of AI. He goes on to say that various learning styles might result in various methods of thinking and comprehending, which are linked to various situations and language games.[29] Penco asserts that there is room for interaction between human and artificial intelligence in various scenarios, including linguistic games. He also stresses that since human talents are linked to many types of learning and expertise, we should continue to be conscious of the distinctions between AI reasoning and human reasoning. According to this viewpoint, the future of AI can be examined in terms of how it functions in various human interaction scenarios as well as in terms of generating language responses.[30]

By analyzing human-large language model communication, Bottazzi Grifoni and Ferrario offer yet another crucial factor for the future of artificial intelligence. They contend that effective communication needs more than merely repeating verbal patterns on a regular basis, drawing on Wittgenstein. During an engagement, it also necessitates upholding consistency and common reference points. They claim that an AI system may generate responses that seem suitable because they adhere to well-known linguistic patterns, but it may not be able to sustain the essential links throughout a dialog.[31] As a result, they make a distinction between the constancy needed for communication and statistical regularity. This implies that improving AI's language should not be the exclusive goal of future development. The ability of AI systems to keep pertinent reference points and react consistently during a discussion should also receive more consideration.[32] Escobar and Sarikaya point out that applying a rule in a novel or unexpected scenario presents another significant challenge for artificial intelligence. They contend that when a scenario differs from those previously seen, rules may not always dictate how they should be applied.

The writers clarify that the application of rules is influenced by psychological, social, cultural, and environmental elements in addition to the rules themselves. Consequently, both natural and formal languages are unable to fully identify every application of a rule, particularly when a new context emerges. They also emphasize that setting an example is crucial for creating a practice because regulations by themselves could leave options open. This is especially pertinent to artificial intelligence since, even if an AI system is trained using pre-existing rules and examples, it may still encounter scenarios that were not covered in its prior training. According to this viewpoint, the advancement of AI in the future necessitates paying attention to both rules and their application in many and unexpected settings.[33] Wittgenstein's theory that "meaning is use" still has significant ramifications for modern natural language processing, according to Molino and Tagliabue. They note that Wittgenstein's theory does not see language as entirely apart from reality, even if models like word2vec and BERT gain meaning through linguistic context.

Linguistic signs are linked to extra-linguistic activities, including the relationship between a builder and an assistant, as demonstrated by their discussion of the language-game. Because of this, they propose that the development of artificial intelligence should take into account not only linguistic patterns but also the external environment and human actions that use language. They also point out that a variety of linguistic expressions, including greetings, jokes, and promises, are used in communication and cannot be comprehended just through descriptive language. This implies that more consideration of the relationship between language, human behavior, and communication contexts is necessary for the future development of AI language systems.[34] By demonstrating how Wittgenstein's philosophy has impacted AI research, Lydia H. Liu offers an additional significant viewpoint on the direction of AI. Liu talks about the work of AI researcher John F. Sowa, who links Wittgenstein's philosophy to the issue of linguistic ambiguity. Liu claims that Sowa views linguistic ambiguity as emerging from the use of language in unfamiliar contexts and from the many ways in which words are associated with things. Liu goes on to say that this viewpoint links ambiguity to the richness and diversity of the

[29] Carlo Penco, "*Wittgenstein, Contexts, and Artificial Intelligence*: An Engineer Among Philosophers, a Philosopher Among Engineers," *JoLMA* 5, no. 3 (2024): pp.280-281.
[30] Carlo Penco, "Wittgenstein, Contexts, and Artificial Intelligence: An Engineer Among Philosophers, a Philosopher Among Engineers," *JoLMA* 5, no. 3 (2024), pp. 289-290.
[31] Emanuele Bottazzi Grifoni and Roberta Ferrario, "*The Bewitching AI: The Illusion of Communication with Large Language Models,"* Philosophy & Technology 38 (2025), pp.8-9.
[32] Ibid., p.10.
[33] José Antonio Pérez-Escobar and Deniz Sarikaya, "*Philosophical Investigations into AI Alignment: A Wittgensteinian Framework," Philosophy & Technology* 37 (2024), pp.19-20.
[34] Piero Molino and Jacopo Tagliabue, "*Witgenstein's Influence on Artificial Intelligence," arXiv*, February 3, 2023, p.3.

world as well as the structure of language. Artificial intelligence systems may come into several scenarios where the same words can have diverse meanings or applications, which makes this crucial. Therefore, Liu's theory implies that future AI language systems should take into account not just the structure of language but also the evolving contexts and human applications in which language develops meaning.[35]

CONCLUSION

Wittgenstein's philosophy of language and the issue of artificial intelligence can be brought together in a significant way through the concept of form of life. According to Grün, Wittgenstein believed that language was inextricably linked to the practices and activities in which it was employed. According to Wittgenstein, speaking a language is a part of an activity or a form of life, and "to imagine a language means to imagine a form of life. Grías goes on to say that a form of life can be thought of as a pattern of action, where the significance of an activity is linked to the broader context and customs in which it takes place. According to this viewpoint, language is related to the manner in which beings engage in activities and practices rather than just being a system of words or rules. This offers a crucial philosophical foundation for thinking about artificial intelligence since future advancements in AI language systems can be assessed not only by their capacity to generate linguistic responses but also by their involvement in language-related activities and contexts.[36]

The application of Wittgenstein's idea of the language-game to artificial intelligence is further demonstrated by O'Connor's study of huge language models. Because their responses become a part of a continuous conversation with human users, she contends that LLMs might be viewed as language players. In these kinds of interactions, meaning can emerge from the interaction between the person and the AI as well as from the original suggestion. O'Connor uses a chat between Floridi and ChatGPT to demonstrate this point. As the conversation progresses and the human reacts to the AI's output, the task's meaning shifts.[37] As a result, she contends that LLMs' linguistic actions can inspire human users to take further, occasionally surprising actions of their own. This implies that the future of artificial intelligence should be viewed not simply in terms of what AI systems are capable of producing, but also in terms of how they engage in continuing linguistic relationships with humans.[38]

Molino and Tagliabue's analysis of Wittgenstein's "meaning is use" offers an additional perspective on how artificial intelligence will advance in the future. They contend that since language is linked to both the environment in which it is employed and the activities in which people engage, meaning cannot be simply regarded as a direct relationship between words and things. Therefore, they propose that AI should take into account not only linguistic patterns but also human behaviors and the external environment in which communication occurs. Their conversation also highlights the significance of social interaction and pragmatics, since meaning can vary depending on the context and expectations of the communicators. According to this view, more focus on the social, contextual, and practical aspects of language is necessary for the future of artificial intelligence. As a result, Wittgenstein's theory still offers a helpful philosophical foundation for analyzing how AI systems use language and how that language use connects to human forms of communication and behavior.

Wittgenstein’s philosophy of language provides valuable insights into understanding the possibilities and limitations of artificial intelligence. His emphasis on language-games, meaning, and social practices suggests that language cannot be understood merely through the manipulation of words or symbols. Although AI models can generate meaningful responses by identifying linguistic patterns and contextual relationships, their ability to understand meaning in the human sense remains philosophically debatable. Wittgenstein’s ideas encourage researchers to examine the relationship between language, human experience, and practical activities. Therefore, his philosophy offers an important framework for critically evaluating AI’s linguistic capabilities and guiding the responsible development of future intelligent systems.

[35] Lydia H. Liu, “*Wittgenstein in the Machine,”* Critical Inquiry *47,* no. 3 (2021), p.427.
[36] Sebastian Sunday Grève, “*Artificial Forms of Life,” Philosophies* 8, no. 5 (2023), pp.7-8.
[37] Marie Theresa O’Connor, “*AIs as Fellow Participants in the Language Game,”* AI & Society 41, no. 4 (2026): pp.3225-3226.
[38] *Ibid.*, p.3228.

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