

A Reflection on the Linguistic Sense Towards a Wittgensteinian Inspired Pedagogy

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ABSTRACT – A Reflection on the Linguistic Sense Towards a Wittgensteinian Inspired Pedagogy. Based on Wittgenstein’s reflections about language, we seek to transpose some of his therapeutic affirmations into the field of education, in particular those about the relations between *knowing how to do* (practical knowledge), and *knowing about rules* (theoretical knowledge). His philosophical considerations, in my view, allow us to clarify, not only the concept of ‘following rules’ as the foundation of meaningful action and of thinking, but also the role played by the different techniques evolved within the procedures adopted by teachers so that the student learns the contents of their disciplines, thus pointing to a pedagogy that does not proclaim how the teacher should act, but, above all, what to avoid.

Keywords: Philosophical Therapy. Wittgenstein. Language-Game. Following rules. Meaning.

RESUMO – Uma Reflexão sobre o Sentido Linguístico Rumo a uma Pedagogia de Inspiração Wittgensteiniana. Com base nas reflexões de Wittgenstein sobre a linguagem, buscamos transpor algumas de suas afirmações terapêuticas para o campo da educação, em particular aquelas sobre as relações entre *saber fazer* (conhecimento prático) e *o aprendizado de regras* (conhecimento teórico). Suas considerações filosóficas, na minha opinião, permitem esclarecer não apenas o conceito de ‘seguir regras’ como fundamento da ação significativa e do pensamento, mas também o papel desempenhado pelas diferentes técnicas desenvolvidas nos procedimentos adotados pelos professores para que o aluno aprenda o conteúdo de suas disciplinas, apontando assim uma pedagogia que não proclama como o professor deve agir, mas, sobretudo, o que evitar.

Palavras-chave: Terapia Filosófica. Wittgenstein. Jogo de Linguagem. Regras. Significado.

Introduction

Since *Tractatus Logico-Philosophicus* (1994), Wittgenstein's great philosophical question was to explain how it is possible that domains as different as those of language, thinking and the world relate to each other, asking himself about the conditions of sense of our statements: How is it possible that through empirical sounds we are able to make sense of the facts of the world? Would there be an *a priori* order common to the world and to language, intermediating these relations? These questions remain in the second phase of his thinking, when trying to solve some problems identified in that first great work of his, problems that, when investigated, would lead him to a new conception of language.

In fact, from the 1930s onwards, a meaningful proposition would no longer be described by him as a structurally isomorphic image¹ to the facts it represents (Tr 4.032), but as a hypothesis that fits the circumstances in which it is used. Instead of postulating a logical form *a priori* common to language and the world as a condition for representation, Wittgenstein started to investigate the multiplicity of uses of our words and linguistic expressions in different situations, involving actions, interlocutors, sensations and empirical objects. These and other changes in his thinking, in my view, constitute a second linguistic turn², with impacts in different areas of knowledge, including in education. Among his later writings, we find a series of statements that sound like philosophical theses, and that transcend the domain of traditional philosophical questions, since they also deal with mathematics, psychology, anthropology, religion, architecture and, in several passages of his extensive work, we also find utterances about teaching and learning, directly addressing educators. In paragraph 419 of *Zettel*, for example, he warns them: "Any explanation has its foundation in training. (Educators ought to remember this)". And in the same work he even asks himself: "Am I doing child psychology? – I am making a connexion between the concept of teaching and the concept of meaning" (Wittgenstein, 1967, §412).

It is completely natural, then, that educators and, in particular, philosophers of education are tempted to convert certain *Wittgensteinian maxims* into educational theories, without paying attention to the fact that the philosopher never intended to proclaim any kind of thetical statement, much less elaborate a philosophical theory; quite the contrary, the purpose of philosophical investigation, in his view, should be only for conceptual clarification, undoing confusions arising from dogmatic theories in the field of philosophy. However, the limits and dangers of an improper transfer of results from one area to another can be avoided by being clear about the nature of these statements. As Moreno (2005) argues, these are not theses themselves, but results of Wittgensteinian therapy on several themes, among which, the question of the (im)possibility of a private language, his criticism of the ideal of exactness, and fundamentally, his criticism of the Augustinian conception of language. According to Wittgenstein, the assumptions of the pa-

tristic philosopher regarding the learning of the mother tongue are at the origin of most philosophical confusions, and following the path of our philosopher, I will argue that these also have repercussions in the field of education.

Two Conceptions of Language: Augustine *versus* Wittgenstein

Wittgenstein (2009) made a strong criticism of the Augustinian image of meaning in his work *Philosophical Investigations*, which begins with a quote by Augustine. In this passage, the patristic philosopher describes how he learned his mother tongue, assuming that the conditions of meaning would be given by the immediate connections of signs with the designated objects. This idea is explicit in another work of Augustine (2002), *De Magistro (The Teacher)*, where he investigates in more detail the purposes of language and its relationship with teaching, through a dialogue with Adeodato, his son, then 15 years old. In this treatise on language and education, Augustine (2002) presented the following statements: every word is a sign, and as a sign it must refer to something in the world. The meaning of a sign cannot be another sign, but the very thing designated by the word.

Based on these premises, Augustine (2002) argues that it would be possible to explain the meaning of a word just by *showing* what it refers to, without resorting to other words. As an example, he suggested to Adeodato that the meaning of the word *wall* could be shown to someone (who did not know this word yet), just by pointing to a wall (Agostinho, 2002, p. 37). Its meaning, therefore, would be the wall itself. In this and other examples, Augustine made his conception of language clearer: linguistic communication supposes the existence of an autonomy of meaning, to which everyone would have access; as if each word must correspond to something outside the language³. In the case of words, such as pain, happiness, or any other that cannot be shown in the external world, their meaning could be found in an inner world⁴, as if there were a kind of ostensive spiritual gesture, pointing inward. The meaning we attribute to our external or internal experience, in this Augustinian model of language, would therefore be prior to and independent of language.

As Wittgenstein (2009) observes at the beginning of PI, in this Augustinian image of language, meaning would be reducible to the process of denomination: it is the object that the word substitutes⁵. In other words, Wittgenstein calls our attention to Augustine's assumption that there would be an immediate link between language and the world, an assumption also present in his own treatise on language, *Tractatus*, written in his youth. This will be one of the great themes of his philosophical therapy, and also of self-therapy. Throughout this therapeutic process, our philosopher observed that there are different techniques that link the name to the object, depending on the context in which the

word is used; therefore, *there is no presumed immediate link between name and object*. The ostensible gesture itself was then seen by him as one of these techniques, employed as *part of* the process of constitution of meaning, since it results from a much more complex language work, which involves different actions and elements of the empirical world.

In fact, if we return to Augustine's own example, when pointing to a wall with the purpose of explaining the meaning of the word *wall*, the ostensive gesture seems to point to something *outside* language, that would be the very meaning of the word that represents it. However, this gesture does not guarantee an understanding of the meaning. It is not evident to a child who is learning to speak, or to a foreigner who does not know our language that we are pointing to the wall, and not at its colour, at its rectangular shape, or even at a painting that hangs on it (Wittgenstein, 2009, § 32). In contrast to Augustine, Wittgenstein observes that meaning is not previously given in the experience itself, but is gradually being constituted from a work *of* language.

From this pragmatic point of view, systematized by Arley Ramos Moreno in his work *Introduction to an Epistemology of Use* (2005) and in other subsequent texts, the process of constitution of meaning involves two main levels. In the first, what we have are preparatory connections between sign and object, form and content, word and meaning of the word, rule and action, and more generally, between language and the world (Moreno, 2015). These connections are woven through techniques, which need to be learned by the native speaker. These techniques, in turn, are built within a *language-game*, an expression coined by Wittgenstein to refer to the activities permeated by language. Although Wittgenstein does not define at any time exactly what he means by *language-game*, this expression is used throughout his work to refer to regulated activities, involving not only words, but also sensations, empirical objects, interlocutors, actions etc., as we can see in the examples of language-games he provides us with, in particular, in §23 of the work *Philosophical Investigations*.

In learning the mother tongue, the designation of objects, for example, can also be seen as a language-game⁶. When naming an object as *wall*, the technique of pointing to the wall establishes a relationship between these two fragments of the empirical world (the sound of the word *wall* and the object *wall*), in the sense that the wall becomes a *sample* of what it is to be a wall; and not the very meaning of the word *wall*, accessible through mere sensitive perception (as suggested by Augustine). Other examples of walls will be given, and throughout this process, the child will see *family resemblances*⁷ among the different walls until the child, at one point, which is not previously predictable, will be able to see a different wall from the ones he or she already knew, and also call it a wall. It is as if the first wall samples performed a paradigmatic function, in the sense that they serve as references for what it is to be a wall, thus gradually constituting a set of rules for applying the word *wall*, which the child *learns* to follow⁸. In the second level, we can say, then, that the child acquires the *concept* of wall, that is, that he or

she has already mastered the Grammar⁹ of the concept of wall, being able to apply the word *wall* in new, and even unusual situations.

In short, throughout these two levels, connections of sense are established between the word and the different objects expressed by it, constituting one or more rules to be learned and, later, followed in new situations. These rules, in turn, constitute a Grammar within us, not in the Augustinian sense of something that houses absolute truths revealed by God (like an *inner temple*), but as an opened system of beliefs that plays the role of conditions for the attribution of meaning to what we observe, say and do.

Thus, when considering the *praxis* of language, there is no longer a need to postulate metaphysical entities or of any other order to explain this apparent gap between language and the world. The movement of pointing to something, as in the example above when explaining to a child the meaning of the word *wall*, is no longer empirical, but a *gesture*, an instrument of language. In addition, the wall that is shown to the child also ceases to be a mere empirical object, that is, we are not pointing to something *outside of language*, as interpreted by Augustine, but to something that is incorporated into language as a *sample* of what it is to be a wall. In other words, the empirical object wall is appropriated by language with a paradigmatic function, and the ostensible gesture has a transcendental function: it says what it is to be a wall. Thus, a rule is established, which is accepted as we accept an axiom in a system of propositions of Euclidean geometry.

Similarly, our beliefs expressed in propositions of language also play the role of rules that we learn to follow, starting from arbitrary connections of sense (as if they were axioms) that articulate with each other, resulting in other beliefs, thus forming a system of propositions that are anchored in each other. In Wittgenstein's words:

When we first begin to *believe* anything, what we believe is not a single proposition, it is a whole system of propositions. (Light dawns gradually over the whole) (Wittgenstein, 1998, §141).

It is not single axioms that strike me as obvious, it is a system in which consequences and premises give one another *mutual* support (Wittgenstein, 1998, §142).

Therefore, Wittgenstein's pragmatic conception of learning a language, as a complex process of learning an open system of propositions anchored in diverse techniques, is opposed to the Augustinian model of language learning, leading to very different conclusions about the relationship among language, thinking and world, in particular, regarding the possibility of a private language:

Someone coming into a foreign country will sometimes learn the language of the inhabitants from ostensive explanations that they give him; and he will often have to guess how to interpret these explanations; and sometimes he will guess right, sometimes wrong.

And now, I think, we can say: Augustine describes the learning of human language as if the child came into a foreign country and did not understand the language of the country; that is, as if he already had a language, only not this one. Or again, as if the child could already think, only not yet speak. And 'think' would here mean something like 'talk to himself' (Wittgenstein, 2009, §32).

In this passage, Wittgenstein begins his therapy of the possibility of a private language, present in the idea that the child would already be capable of thinking at birth, but not yet able to speak. In other words, as if the child already had a kind of private language at birth, which would need to be gradually *translated* into the language of the country in which he or she lives, which presupposes an autonomy of thought in relation to language. As we will see below, this Augustinian image (that thinking is prior to language) is one of the sources of philosophical confusions, with repercussions on our pedagogical practices until today.

Grammatical Propositions as Foundations of Meaning

At this point, we can resume Wittgenstein's quote at the beginning of this text, where he rhetorically asks himself if he is doing child psychology, and then answers that he is observing that *there is a connection between teaching and meaning* (Wittgenstein, 1967, § 412).

In fact, when we look at the *praxis* of our language, what at first seemed invisible to our eyes is embodied in the following therapeutic result: the way in which certain content is taught in specific contexts – that is, *the practices involved in this teaching* –, constitutes the sense of what is being taught. As we see, the statement above by Wittgenstein does not configure a thesis, but a description of the ways in which we build senses through language. Using different techniques, connections of a conventional nature are established between language and the world, constructing rules, which, once expressed linguistically in our forms of life, carry a necessity that is no longer questioned. We cannot imagine the opposite of certain statements, for example, *this is a wall, this is my hand, the Earth has been around for many years, every object is identical to itself, I have never been to the moon*, etc.¹⁰. These are certainties that we acquire as they gradually build up from the *uses* we make of our words and linguistic expressions:

I am told, for example, that someone climbed this mountain many years ago. Do I always enquire into the reliability of the teller of this story, and whether the mountain did exist years ago? A child learns there are reliable and unreliable informants much later than it learns facts which are told it. It doesn't learn *at all* that that mountain has existed for a long time: that is, the question whether it is so doesn't arise at all. It swallows this consequence down, so to speak, together with *what* it learns (Wittgenstein, 1998, §143).

The child learns to believe a host of things. I.e. it learns to act according to these beliefs. Bit by bit there forms a system of what is believed, and in that system some things stand unshakeably fast and some are more or less liable to shift. What stands fast does so, not because it is intrinsically obvious or convincing; it is rather held fast by what lies around it (Wittgenstein, 1998, §144).

In these passages, Wittgenstein emphasizes the process of constituting a belief system, which, although not explained by the teacher, is somehow *swallowed* as the child learns other things. In other words, our certainties are acquired tacitly and start to play the role of rules, guiding our thinking. Some of them, have a normative function, become our unquestionable certainties, and we cannot imagine their opposites: it *must* be so. I cannot imagine that this is not my hand, or that what I see in front of me is not a wall, that not every object is identical to itself and so on. These certainties are denominated by Wittgenstein as *grammatical propositions*, given its character of rules that, once acquired, we proceed to follow blindly, and there is no need to subject them to testing (Wittgenstein, 1998, §162).

A metaphor used by Wittgenstein, which even led some of his commentators to postulate a third phase of his thinking, compares these propositions with the hinges of a door¹¹:

That is to say, the questions that we raise and our doubts depend on the fact that some propositions are exempt from doubt, are as it were like hinges on which those turn (Wittgenstein, 1998, p. 341).

But it isn't that the situation is like this: We just can't investigate everything, and for that reason we are forced to rest content with assumption. If I want the door to turn, the hinges must stay put (Wittgenstein, 1998, p. 343).

Transposing the door metaphor to language, grammatical propositions result from the different uses of our words, taking the place of the hinges around which a door moves. This idea is taken up again in another passage, through a new metaphor, which clarifies another aspect of the nature of these statements, avoiding the dogmatic interpretation that they are truths anchored in extra linguistic ultimate foundations:

I do not explicitly learn the propositions that stand fast for me. I can *discover* them subsequently like the axis around which a body rotates. This axis is not fixed in the sense that anything holds it fast, but the movement around it determines its immobility (Wittgenstein, 1998, § 152).

Therefore, if we can speak of ultimate foundations in the sense of Wittgenstein, we can find them in the form of these propositions, which in turn are immersed in our forms of life¹²: "Once I have exhausted the justifications, I have reached bedrock, and my spade is turned. Then I am inclined to say: "This is simply what I do"" (Wittgenstein, 2009, § 217).

As mentioned before, these ways of acting are already part of language; they are practices incorporated by it. We *learn* to act in a certain

way. The ostensive gesture itself, which in our Western culture seems so natural, is in fact a technique of language. Depending on the context in which it is used, it may be performed to name something, but we can also use it to indicate a direction (Wittgenstein, 2009, §6). In a different culture than ours, it might be interpreted as a mere empirical gesture, without the meaning we attribute to it.

Similarly, grammatical propositions also rest on these practices, and nothing more: “Children do not learn that books exist, that armchairs exist, etc. etc., – they learn to fetch books, sit in armchairs, etc. etc. (Wittgenstein, 1998, §476). Once crystallized within us, grammatical propositions start to play a transcendental function (like the ostensive gesture): they say what it is to be something: “Grammar tells what kind of object anything is. (Theology as grammar)” (Wittgenstein, 2009, §373).

As we see, unlike Augustine, Wittgenstein observes that it is we, as linguistic beings, who attribute the need to certain statements, and not a metaphysical entity that would illuminate our minds through the divine spark that we would have within us. Our certainties are of a *conventional* nature, constituted within our various language-games. This does not mean that Wittgenstein’s position comes close to some kind of relativism, where the arbitrariness of the rules prevails as the foundation of meaning. Although Grammar is autonomous in relation to the empirical, it constitutes in us an image of the world [*Weltbild*], which becomes “[...] the substratum of all my enquiring and asserting” (Wittgenstein, 1998, §162). Hence, to question one of these certainties would be to question the entire system:

It is quite sure that motor cars don’t grow out of the earth. We feel that if someone could believe the contrary he could believe *everything* that we say is untrue, and could question everything that we hold to be true. But how does this *one* belief hang together with all the rest? We should like to say that someone who could believe that does not accept our whole system of verification. This system is something that a human being acquires by means of observations and instruction. I intentionally do not say ‘earns’ (Wittgenstein, 1998, §279).

Hence, a good part of our certainties is acquired without question (they are simply *swallowed*), because to question them would be to put the whole system in question. Doubt, in turn, as Wittgenstein also reminds us, presupposes certainty. In our philosopher’s own words: “For how can a child immediately doubt what it is taught? That could mean only that he was incapable of learning certain language-games” (Wittgenstein, 1998, §283) The implication of these ideas for a student’s learning is immediate. A pedagogy, for example, that disregards the conventional ground of our most fundamental certainties, can greatly hinder the effective learning possibilities¹³. To the extent that our certainties are of a conventional nature, as they are immersed in this bedrock where *my spade is turned*, they become *a condition* for thinking,

that is, they are the condition for the formation of a reason, or better, of different modes of reason¹⁴. From this new perspective of language, follows that, contrary to the ideas of Augustine, there is no thought without language, nor is there the possibility of a private language.

One Universal Reason *Versus* Different Modes of Reason

As exposed in other texts of mine¹⁵, the hegemonic conception of language over the centuries, up to the present day, is still guided by the Augustinian image of language, which attributes to the statements of a language a merely descriptive or communicative function of the facts of the world. This image of language is also present in the theories of knowledge (realism, idealism, empiricism, pragmatism, and so on) that guide our pedagogical practices, and, from my point of view, has led to several confusions in the teaching of school content as well as consequent difficulties in learning. In these texts, I argue that most of these confusions can be clarified from a Wittgensteinian perspective on the functioning of language, and that Wittgenstein's philosophical reflection on language could inspire educational guidelines that aim to prevent such confusions, thus constituting a kind of pedagogy that does not proclaim *how to act*, but what to *avoid*. A negative pedagogy along the lines of Rousseau?

According to Rousseau (1999), in his work *Emilio*, the teacher should not convey precepts, but should postpone any formal education to the maximum. This is because from zero to twelve years of age the child would still not have a formed reason. Until around the age of two, a child is considered by him to be a pre-rational being. From then on, the development of a sensitive reason would begin, which would later give rise to what he would call an intellectual reason. Hence the name of *negative* education: to avoid teaching precepts while their incipient reason still has no way of differentiating right from wrong, and good from evil. Still according to the Genevan philosopher, the master should only teach the indispensable, and even so, only if the child has no way of discovering alone the content in question.

At the base of this pedagogy we have an empirical conception of knowledge: experience comes before language, and similarly to Augustine, the meaning of what is perceived through the sense organs is independent of language. In fact, we can hear echoes of Augustine in the following passages by Rousseau (1999) in *Emilio*:

I repeat, man's education begins at his birth; before speaking, before listening, he is already educating himself. Experience precedes lessons; by the time he knows his or her wet nurse, he or she has already acquired many things¹⁶ (p. 45).

In any study whatsoever, the representative signs are nothing without the idea of the things represented. However, we always limit the child to these signs, without ever

being able to make him understand any of the things they represent¹⁷ (p. 116).

In general, never substitute the thing for the sign except when it is impossible to show the thing itself; for the sign absorbs the child's attention and makes him or her forget the thing represented¹⁸ (p. 209)¹⁹.

However, unlike the author of *The Teacher*, the ultimate foundations of meaning would not be found within each one, as it would be through observing nature and experimenting with the things of the empirical world that the child attributes meaning to his or her surroundings, and only later would it be necessary to instruct him or her using linguistic signs. Therefore, although Rousseau maintained the Augustinian model of language, also assuming an autonomy of meaning in relation to language, from his epistemological perspective the ultimate foundations of knowledge would be located in the empirical world, resulting in a pedagogy based on the following guidelines: the child must discover the precepts by themselves, from the observation of nature and empirical experimentation, thus forming a universal reason, free from society's prejudices.

These ideas by Rousseau were widely disseminated in educational circles since the 18th century, with repercussions on various school practices, called pedagogies of action, assuming, until today, a universal and natural development of reason. According to some of these pedagogical strands, the child learns by doing²⁰, as if the meaningful action were prior to the thought, and this, in turn, would be independent of language. In short, we still assume an autonomy of meaning in relation to language, disregarding the importance of the work of language in the constitution of the meanings that we attribute to the facts of the world (whether external or internal). In contrast to these still hegemonic ideas in the educational environment, Wittgenstein's new conception of language, in my view, makes it possible to rethink certain pedagogical guidelines, which are still strongly linked to the referential model of language.

For our philosopher, for example, thinking is not possible without linguistic signs. Besides, thinking presupposes the mastery of rules belonging to different language-games, thus constituting different modes of reason. Hence, what we consider to be right and what we believe to be wrong is given by our linguistic conventions, constituted within a form of life – and not due to a universal reason. As he reminds us: “We are quite sure of it’ does not mean just that every single person is certain of it, but that we belong to a community which is bound together by science and education” (Wittgenstein, 1998, §298).

Our different language-games learned through formal and informal education are the ones that mediate these very different domains of language, thinking and the world, playing a transcendental role in the Kantian sense. Being a follower of Rousseau's ideas regarding child development²¹, Kant also saw reason as universal, but having a necessary and *a priori* structure that organizes reality according to the forms of

sensibility and the categories of understanding. From his philosophical perspective, the senses and reason would not have *a priori* content, they are empty forms, themselves, *a priori*. Let us say that the rules of language-games can be seen in Wittgenstein in a way analogous to Kant's *a priori* forms, but an *a priori a parte post* (Moreno, 2005), since they are not universal, but historical and conventional. They are being created within our *forms of life* as the games are being played:

Doesn't the analogy between language and games throw light here? We can easily imagine people amusing themselves in a field by playing with a ball like this: starting various existing games, but playing several without finishing them, and in between throwing the ball aimlessly into the air, chasing one another with the ball, throwing it at one another for a joke, and so on. And now someone says: The whole time they are playing a ball-game and therefore are following definite rules at every throw.

And is there not also the case where we play, and make up the rules as we go along? And even where we alter them – as we go along (Wittgenstein, 2009, §83).

As we see in the passage above, although Wittgenstein does not resort to transcendental structures like those of time and space in the Kantian sense, the idea of a transcendental function of the rules within our language-games remains. Now, if the foundation of knowledge is expressed by our certainties of a conventional nature (conveyed by science and education), thus constituting a worldview shared by a community, in which sense, then,

Thus, although Wittgenstein does not resort to transcendental structures such as those of time and space in the Kantian sense (universal and timeless), the idea of a transcendental function performed by the rules of our language games remains, even though these same rules may change over time, or that new rules are invented. Rules that expressed through verbal language convey our most fundamental certainties. Now, if the foundation of knowledge is expressed by certainties of a conventional nature, thus constituting a worldview shared by a community (through science and education), in what sense, then, can we speak of a pedagogy not exactly *negative*, but *preventive*? To answer this question, we will return to the question posed initially regarding the therapeutic nature of Wittgenstein's statements throughout his work, which, far from being constituted in philosophical theories about language, knowledge or any other theme, have another character, very close to affirmations of ethics and aesthetics, insofar as they ultimately serve the purpose for his incessant struggle against dogmatism in general²².

Towards a 'Preventive' Pedagogy

In his systematization of the therapeutic results of Wittgenstein's philosophy, Moreno highlighted the following *theses* by Wittgenstein, present in his writings, as of the 1930s:

These are affirmations about learning, that is, distinctions between a know how to do it (practical), and a knowledge regarding rules (theoretical), guiding our actions: distinctions that allow Wittgenstein to clarify the concept of 'following rules' as the basis for meaningful action and for *thinking*. They are affirmations about mental states (internal), and physical processes (external), in their interrelations, aiming to clarify mentalist or behaviourist conceptions about the foundations of meaningful action and of thought. Affirmations regarding *the relationships between action and understanding*, which clarify the concept of 'interpretation' of rules, by showing that it is an activity of symbolic manipulation exercised in social contexts permeated by language, *and not a solipsist mental act* (Moreno, 2005, p. 226, my italics).

However, despite the thetical appearance of these affirmations, Moreno warns us that, in fact, they only express results of Wittgenstein's philosophical therapy, which aims to dissolve conceptual confusions. Therefore, they acquire a preventive function, thus avoiding other confusions. In principle, all words can lead us to create philosophical problems, and this therapy targets the concepts that become problematic in the philosophical field, using different methods to *dissolve* the confusions resulting from dogmatic applications of these concepts²³. The following is an example given by Wittgenstein of an imaginary classroom situation, used by him, among other examples, to clarify the concept of following rules, a precious topic for investigating the enigmatic relations between *knowing that* and *knowing how* in the school context.

An elementary school student is being introduced to a new content, the sequence of even numbers. The teacher begins the sequence, giving some examples of how one must continue it, asking his student to continue, giving him the order²⁴: *Add 2!* (Wittgenstein, 2009, §185). Suppose that the student says that he or she has understood the order, or says that he or she knows how to proceed, and continues to write the next even numbers. Would the student then have somehow grasped the whole sequence at once? Did he or she apprehend something that would be common to all cases of its application? At each step, would there be an intuition (an inner voice) that guides the student? Intuition or decision?

The rhetorical questions above raised by Wittgenstein aim to make the therapy of the Augustinian image of language, present in mentalist conceptions of knowledge. In the case above, the belief that the meaning of the order, *Add 2!*, *must* correspond to a certain mental state in the child (an intuition or the like), which would be independent and autonomous in relation to the effective application of this sum, as if the understanding were a private experience (a solipsist act), which would cover all cases of application of this order. Or, as if the child had learned something common to all applications of the order, the essential meaning of the order. Or even, as if the understanding of this expression, *Add 2!*, *determined* all its effective applications. Thus, linked

to the referential model of language, the belief arises that once the rule is understood, our action would be determined causally by the meaning of the rule, forcing us to follow the rule at each step, as if we had no other choice.

In view of the relativization of the mentalist assumptions above, Wittgenstein imagined the following situation: from the number 1000, the child suddenly starts to write 1004, 1008, 1012 ... Is the child still following the rule? The mentalist interlocutor could explain this child's behaviour by saying that from that moment on, he or she started to *interpret* the rule in another way. But then another question arises: would following the rule be the same as interpreting the rule? Our philosopher answers it, observing that if interpreting the rule in another way is the same as following the rule, we come to a paradox: "[...] if every course of action can be brought into accord with the rule, then it can also be brought into conflict with it. And so there would be neither accord nor conflict here" (Wittgenstein, 2009, §201). Hence, in the same paragraph he concludes that

[...] there is a way of grasping a rule which is not an interpretation, but which, from case to case of application, is exhibited in what we call 'following the rule' and 'going against it'. That's why there is an inclination to say: every action according to a rule is an interpretation. But one should speak of interpretation only when one expression of a rule is substituted for another (Wittgenstein, 2009, §201).

In other words, Wittgenstein proposes a conception of rule that differs from what we call *following the rule*, considering the interpretation of the rule only as a new symbolic form of expression of the rule. According to him, the criterion for whether the rule is actually being followed should be applied *in each case*. Hence, doubt is always possible; it can arise at each new stage of application of the rule. As we see, from this pragmatic perspective of knowledge, the future is not contained, or prefigured in the mind of the child who claims to have understood the above order.

To counteract the mentalist position, Wittgenstein resorts to a behaviourist's position: there would not be something in the student's mind that determines all the steps for applying the rule, but only *training*, a mastery of mathematical techniques, as a condition for continuing the sequence correctly. He reminds us how we in fact use (in our daily life) the expression "The steps are determined by the formula":

[...] We may perhaps mention that people are brought by their education (training) so to use [...] [Add 2!], that they all work out the same number [when they add 2 to the previous number] [...]. Or, we may say: "These people are so trained that they all take the same step at the same point when they receive the order [...] ['+2']". We might express this by saying "For these people the order [...] ['+2'] completely determines every step from one number to the

next". (By contrast with other people who do not know what they are to do on receiving this order, or who react to it with perfect certainty, but each one in a different way.) (cf. Wittgenstein, 2009, §189 – adapted to the example above, with the addition of the bold brackets of my own).

However, the above statements do not mean that Wittgenstein assumed a behaviourist position. In the next paragraphs of this same work, he will notice that the link between rule and action is not just due to habit or specific training, reducing it to a causal, empirical relationship. Rather, following a rule is an institutional habit, involving different techniques. There must be a custom, a continuous use of the rule. Believing that you are following the rule *is not* following the rule (Wittgenstein, 2009, §202). Therefore, a child who continues the sequence of even numbers, after the number 1000, writing 1004, 1008, 1012 ... will no longer be acting according to the rule as expected within the institution of so-called mathematical knowledge (in which other results are expected when continuing the sequence of even numbers). In this sense, Wittgenstein moves away from a mentalist position, as well as a behaviourist position: on the one hand, understanding is not a mental process; on the other hand, it cannot be reduced to mere training. From the therapeutic point of view, the meaning of a rule is manifested *in each case* of its application, within a given language game. It is not, therefore, a mechanical (external) relationship between the rule and its application, as if the rule caused a certain action; but of a relationship of sense (internal), which establishes a field of possibilities for action, anchored in forms of life.

From this polyphonic dialogue between Wittgenstein and his mentalist and behaviourist interlocutors on the subject of "following rules", we can draw some important consequences regarding our teaching practices. If we see our techniques as the bedrock of our cultural heritage, constituting rules, which guide (and not determine) our action and thinking, much of our educational philosophical problems disappear. I think that his philosophical observations along the therapy of such concepts as comprehension and "following rules", as well as his statements about the relationship between intellectual and practical knowledge, the different processes of constitution of meaning and so on, all these ideas prevent us, as educators, from being trapped by dogmatic images originated from a referential conception of language.

For example, the image that comprehension *must be* a mental process, independent of language; or that all knowledge can be discovered directly from observation and experimentation, as there would be a direct correspondence between word and object; that following a rule would be the same of interpreting it; etc.. His philosophical therapy allows us to relativize all these dogmatic assumptions, and suggests, among other results, the following preventive educational guidelines:

1- Understanding a content (*to know that*) does not imply apprehending the totality of its possible uses (*to know how*). Although the examples given by the teacher are limited in number, these are sufficient

(Wittgenstein, 2009, §209). In other words, understanding does not go beyond the examples given by the teacher, as if they were only part of the understanding: the meaning of our grammatical propositions (which play the role of rules) manifests itself *in each of its applications*. To follow the rule *Add 2!*, for instance, does not presuppose a solipsist act. What we learn, in the case of the sequence of even numbers, is just an expansion technique, where new elements are integrated into the sequence, regardless of ongoing mental processes. Similarly, understanding the propositions that guide our action and thinking is simply being able to act according to an institution, within a system of actions, where the student is *trained* to act in a certain way, that is, he or she learns to act *publicly*; it is not about a private interpretation of the concept in question, or of the rule that is being followed. Consequently, the domain of techniques is *a condition* to understand any content (Wittgenstein, 2009, §150). Not considering these different levels of constitution of meaning can lead to several confusions in our pedagogical practices, especially when students are expected to discover certain content on their own.

2- The foundations of knowledge do not reside in an *a priori* (mental or ideal) world, nor in the empirical world. The therapist philosopher shows us that there is no autonomy of the meaning regardless of language; on the contrary, the senses we attribute to the external or internal world are the result of an unceasing work of language, constituting a set of rules (belonging to one or more different language-games) based on diverse techniques. These therapeutic results lead to a new conception of meaning, synthesized by Wittgenstein in the following statement: “For a *large* class of cases – though not for *all* – in which we employ the word ‘meaning’ it can be defined thus: the meaning of a word is its use in the language” (Wittgenstein, 2009, §43). From his new conception of language and meaning, Wittgenstein observes that there are two main uses of a proposition: the empirical use (descriptive) and the grammatical use (normative). The proposition itself is not empirical or grammatical; it is the context of its use that makes it descriptive or normative. For example, if we consider, once again, the proposition, *this is a wall*, one can use it normatively to answer the question, *what’s a wall?*, as well as to describe what one is seeing in a certain moment. According to Wittgenstein, one of our main sources of confusion occurs when one applies a grammatical proposition as if it were descriptive, still linked to a referential model of language, which obliges us to look for something to which the statement supposedly refers, postulating metaphysical entities, which in turn create new confusions. This misconception has an impact on our educational practices, in particular, in the field of mathematical education²⁵, by not paying attention to the multiplicity of functions of our language.

3- The uses we make of our words are not limited to describing or communicating facts of the world, but mainly *constitute* the meaning of what we observe, say and do. This work of language presupposes the mastery of techniques, within one or more language-games, belonging

to an institution, habits and customs. In this way, Wittgenstein refutes the assumption originated from a referential conception of language, that the meaning of a concept is apprehended *in one stroke* (the totality is apprehended) and independently from the actual application of the concept. The meaning of a concept is given by its Grammar, that is, the set of rules we learn to follow in order to use it. How I apply the word that expresses the concept shows, which rule I am following. In other words, *how* precedes *what*, not the other way around! Grammar says *what* the object *is*. In Wittgenstein's words: "Tell me *how* you look and I will tell you *what* you are looking for" (Wittgenstein, 1989, III, 27)²⁶. In this sense, the creation of *essences* (our truths) occurs through the *practice* of language, and not from empirical observation or experimentation, or even from an intuition or any other solipsist act. Hence the importance of the teacher - not as a mere mediator or facilitator of learning - but above all as having the responsibility to convey, not only the rules of new language games (to know that), but also to present *sufficient* (and not exhaustive) examples of *how* to follow them.

4- Finally, another therapeutic result that I find particularly relevant to consider in our pedagogical practices: there is not a natural and universal reason to be formed in the child. What we have are different *modes of reason*, based on our different language-games. The rules of these games are intrinsically vague, which allows us to move from one game to another, while using the same concept²⁷. For some purposes certain rules are defined more precisely. For example, the word "equal" can be applied in the language-game of colours, when comparing the colour of two objects and then saying that they are of the *same* colour (the two objects are red, for example, even if reds of different shades); as well as saying $2 + 2 = 4$ in the field of arithmetic. As we see, in the language-game of colours, we apply the word "equal" with a certain vagueness, while in arithmetic it is used as an exact concept. Thus, the limits of the meaning of the same concept can vary from one game to the next, depending on their purposes. In the first case, we are *describing* the color of two objects with a certain degree of vagueness, while in the second case; it is being applied as a norm: two plus two *must* equal four. Consequently, applying a concept to a given language-game using the rules of another game can also lead to confusion. A child who has already been introduced to a certain language-game in his daily practices will tend to follow the same rules, even if the word is being used in a new language game, which is being learned at school. This epistemological difficulty sometimes goes unnoticed by the teacher. It is not at all a question of denying the primitive use of the concept in question, but it is up to the teacher to clarify the new use of the word that expresses the concept²⁸, or in a Wittgensteinian terminology, the new sense of the concept, thus expanding the grammar of its uses.

Final considerations

Wittgenstein's reflection on the concept of *following rules* and their relations with the processes of constitution of meanings challeng-

es the educator to rethink his pedagogical practices. If we consider that each discipline comprises a wide variety of language games, regulated activities that involve not only *knowing that* (rules), but also *knowing how* (following rules), some transpositions, with due care, can be made. For example, rethinking the relationship between rules and activities in the different subjects of the school curriculum. As these relationships involve techniques of a conventional nature and specific to each area of knowledge, they need to be taught (when not tacitly learned), and not expect the student to discover them during the development of a supposed natural and universal reason. Thus, when teaching a new concept (or a new use of an already known concept), the teacher can avoid several confusions by presenting not only some definitions, but also providing examples of how to apply them in different situations. Examples, as well as certain exercises (training), are fundamental for students to be able to insert themselves in the new institutional habits and start to act as expected in that specific institution – regardless of a supposed immediate understanding of what would be common to all possible cases of application of the concept, or the existence of private mental processes that would determine the right action.

Thus, instead of looking for the ultimate foundations of knowledge in the empirical world or in supposed cognitive structures of children, from the results of Wittgenstein's philosophical therapy on the enigmatic relations between language, thought and the world, a new field of possibilities opens up to face, not only learning problems, but also the challenges of human formation. However, the pedagogical tributary tendencies of Rousseau's ideas still presuppose ultimate foundations of knowledge located, sometimes in the student's mind (echoes of Augustine), sometimes extracted from observation and empirical manipulation (as proposed by Rousseau in his negative education)²⁹.

Wittgenstein's conception of language, in turn, leads to a new way of seeing the relationships between our diverse knowledges and their teaching, insofar as it considers the multiplicity of uses of our linguistic concepts and expressions, in addition to its role descriptive and communicative. Language also produces meanings, constituting grammatical propositions that we learn to follow, and that could be different, in other forms of life. This linguistic shift gives way, therefore, to a pedagogy that we could call preventive, when trying to avoid philosophical confusions that reverberate in pedagogical practices, arising, in part, from the belief in ultimate foundations of meaning in extralinguistic domains. As Wittgenstein reminds us: "The essence is expressed in grammar" (Wittgenstein, 2009, §371).

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Notes

- 1 Although the term *image* was used in *Tractatus* with a pictorial sense, in the second phase of Wittgenstein's thought this same word is used in another

sense, namely, as a dogmatic application of a concept or linguistic expression (Cf. Moreno, 1995).

- 2 The linguistic turn movement has as its precursors the philosophers Gottlob Frege, Bertrand Russell and Wittgenstein himself, in the first phase of his thinking. However, although the initial philosophical questions of *Tractatus* have been maintained throughout his extensive work, the philosophical treatment he gave them in the second phase of his thoughts, from my point of view, was revolutionary to the point of justifying a *second linguistic turn*.
- 3 Although Augustine did not have direct contact with Plato's ideas (but through texts by the Neoplatonic philosopher Plotinus), Platonic essentialism is present in his conception of language; as we see, for example, in the following passage by *De Magister*, when Augustine asks Adeodato to show him the meaning of the word *de* [from], also expressed by the Latin word *ex*: "[...] But I am looking for the one thing itself, whatever it is, which is signified by these two signs". (Chapter 2) It is as if Plato's *world of ideas* was internalized by Augustine in everyone's mind, or in what he called, the *inner temple*.
- 4 According to Augustine's doctrine of illumination, the human mind has a spark of divine intellect, since man was created in the image and likeness of God. Hence, in order to access the truths revealed by Him, it would be enough to go through a process of contemplation turning to the interior of our soul, where words would only serve to evoke these certainties, remembering them.
- 5 In Wittgenstein's own words: "In this picture of language we find the roots of the following idea: Every word has a meaning. This meaning is correlated with the word. It is the object for which the word stands" (Wittgenstein, 2009, §1).
- 6 We can characterize this language-game as referential, analogously to other games described by Wittgenstein in § 23 of *Philosophical Investigations*: "[...] describing an object by its appearance, or by its measurements; constructing an object from a description (a drawing); reporting an event; speculating about the event; forming and testing a hypothesis; presenting the results of an experiment in tables and diagrams; [...]", whereas the other language-games presented in this same paragraph *are not* referential, thus describing the variety of language instruments.
- 7 The expression, *family resemblances*, is another fundamental concept in the mature Wittgenstein's work, spelled out in paragraphs 66 and 67 of *Philosophical Investigations*. According to him, when describing the multiple uses of a word, we see a complicated network of similarities overlapping and criss-crossing, similarities in the large and in the small: "I can think of no better expression to characterize these similarities than 'family resemblances'; for the various resemblances between members of a family – build, features, colour of eyes, gait, temperament, and so on and so forth – as overlap and criss-cross in the same way" (Wittgenstein, 2009, §69). In this way, Wittgenstein opposes Platonic essentialism, which presupposes an essential meaning that permeates all applications of the same word, inasmuch as, what is observed, in fact, are just family resemblances among these diverse applications, to a greater or lesser degree.
- 8 It is important to highlight that the use of objects as samples or paradigms is also one of the techniques of our language. This is a crucial point, as it clarifies the arbitrary and conventional nature of the connection between language and the world, since it is established fundamentally through these techniques, without the need to postulate any extra linguistic metaphysical entities as the ultimate foundation of meaning.

- 9 Grammar in the sense of Wittgenstein, which is distinct from the syntax of a language. It is a grammar of *uses* of a word, a set of rules that we have learned to follow to apply it in different contexts. In order to distinguish it from the grammar of a specific language, I will keep this word capitalized.
- 10 Some of these are examples given by Wittgenstein (1998) himself in his last writings, when dialoguing with the philosopher George Edward Moore, his friend and colleague. Moore intended to prove the existence of the outside world from common sense beliefs. According to him, there are empirical truths that we can know for sure. Although Wittgenstein admitted the necessity of these statements, he denied that it was knowledge, because knowing something presupposes the possibility of error; while, when stating such certainties, there would be no doubt (Cf. Wittgenstein, 1998, §§1-21).
- 11 Grammatical propositions also came to be called by some commentators on Wittgenstein's work of *hinge propositions*; among them, Moyal-Sharrock (2005) and Coliva, (2013). In particular, I find such terminology problematic, as it may imply that these propositions are fixed like the hinges of a door, whereas for Wittgenstein, it is only a metaphor to highlight the process of its constitution. They do not constitute *absolute* truths, nor do they result from natural and instinctive behaviours of man, they just carry a necessity that depends on the *use* being made of them. If this is not clear, it can lead to misunderstandings as to the nature of these propositions, also causing confusions in pedagogical practices (Gottschalk, 2018).
- 12 Although Wittgenstein also does not define what he means by *form of life*, this expression sometimes appears in his work, as the ultimate foundation of language: "It is easy to imagine a language consisting only of orders and reports in battle – Or a language consisting only of questions and expressions for answering Yes and No – and countless other things. – And to imagine a language means to imagine a form of life" (Wittgenstein, 2009, 19). In particular, the term *language-game* is used by him "[...] to emphasize the fact that the *speaking* of language is part of an activity, or of a form of life" (Wittgenstein, 2009, §23).
- 13 I think that this observation by Wittgenstein helps us to understand the rise of creationism and flat earth beliefs today, as well as the different types of negationism, such as that of the Holocaust and, in particular in Brazil, the denial of torture during the military dictatorship. To an extent, an education that places certain facts or value judgments in doubt helps to drag a whole system of beliefs together, and leads people towards believing in anything, which ends up in total relativism, *anything goes*.
- 14 Cf. Veca (1971).
- 15 Cf. Gottschalk (2013, 2014, 2018).
- 16 Je le répète, l'éducation de l'homme commence à sa naissance ; avant de parler, avant que d'entendre, il s'instruit déjà. L'expérience prévient les leçons ; au moment qu'il connaît sa nourrice, il a déjà beaucoup acquis.
- 17 En quelque étude que ce puisse être, sans l'idée des choses représentées, les signes représentants ne sont rien. On borne pourtant toujours l'enfant à ces signes, sans jamais pouvoir lui faire comprendre aucune des choses qu'ils représentent.
- 18 En général, ne substituez jamais le signe à la chose que quand il vous est impossible de la montrer ; car le signe absorbe l'attention de l'enfant et lui fait oublier la chose représentée.

- 19 My translation, based on the original: <http://classiques.uqac.ca/classiques/Rousseau_jj/emile/emile.html>.
- 20 Particularly in Brazil, our education system was greatly influenced by the ideas of Dewey, John (Cf. *A criança e o programa escolar*. In: *Vida e Educação*. São Paulo: Melhoramentos, 1978); and, more recently, it has been guided by the ideas of Perrenoud (1999); privileging, in both pedagogical proposals, *knowing how over knowing that*.
- 21 Cf. Kant (2012), *Lectures on Pedagogy*, written in 1803.
- 22 Cf. Gottschalk (2018).
- 23 In general, Wittgenstein initiates therapy verifying how we use the word in question in the most varied situations, whether within theoretical systems, or even in a situation of everyday application of the word. In particular, to look at how words were taught and learned, and how they were initially learned. It also makes use of fictitious situations, inventing new uses for the word, testing the limits of its application, to the extent that the interlocutor (real or fictitious) admits that there is still meaning in its employment. Recalling that Wittgenstein's writings are polyphonic, as he engages in a dialogue with a multiplicity of voices, which represent the most diverse philosophical strands. The therapist's voice enters this polyphony of voices in order to clarify the problematic concept in question.
- 24 An order is seen by Wittgenstein as analogous to a rule, which we learn to follow. Ordering, and acting according to orders, not for nothing, is the first example of a language game presented by Wittgenstein when characterizing the expression, *language game*, which will become a fundamental conceptual tool to undertake his philosophical therapy (Wittgenstein, 2009, §23).
- 25 This confusion is frequent in mathematics classes, when the teacher assumes an ideal mathematical world to be *discovered* by the student, disregarding the grammatical nature of its statements, or even when the teacher assumes that the student must be able to develop mathematical concepts from observation and experimentation with objects from the empirical world (Gottschalk, 2014).
- 26 In the original: "Sage mir, *wie* du suchst, und ich werde dir sagen, *was* du suchst".
- 27 According to Wittgenstein, our concepts are, in general, vague, thus opposing the ideal of exactness presupposed in the Neoplatonic understandings of conceptual meaning (Wittgenstein, 2009, §§ 68-71).
- 28 This is a recurring difficulty in the teaching of mathematics, particularly when teaching fractions. The concept of *dividing*, for example, does not presuppose an exact division on a daily basis.
- 29 Particularly in Brazil, the "pedagogy of competences" has been in use since the 1990s, which supposes the existence of cognitive structures (an inner world) that would potentially house the core competences to be developed in students. It would be a matter of time for the cognitive sciences to unveil how competencies are formed, in order to, through education, adapt them to the demands of each society. Therefore, again, we are facing a pedagogical theory anchored in a mentalistic conception of knowledge, deserving, therefore, of a Wittgensteinian therapy. Cf. Perrenoud (1999).

References

- AGOSTINHO, O Mestre. São Paulo: Landy, 2002.
- COLIVA, Annalisa. Hinges and Certainty. *Philosophia*, v. 41, 2013.
- GOTTSCHALK, Cristiane Maria Cornelia. O Paradoxo do Ensino da Perspectiva de Uma Epistemologia do Uso. *Revista Educação e Filosofia*, Uberlândia, v. 27, n. 54, p. 659-674, 2013.
- GOTTSCHALK, Cristiane Maria Cornelia. A Compreensão de Significados Matemáticos: entre o transcendental e o empírico. In: MORENO, Arley Ramos (Org.). *Coleção CLE – Compreensão: adestramento, treinamento, definição*. v. 68. Campinas: UNICAMP, Centro de Lógica, Epistemologia e História da Ciência, 2014. P. 55-76.
- GOTTSCHALK, Cristiane Maria Cornelia. O Papel do Método no Ensino: da Maiêutica socrática à terapia wittgensteiniana. In: CARVALHO, Alexandre Filordi de; AZEREDO, Vânia Dutra de (Org.). *Filosofia e Educação no Mundo Contemporâneo*. São Paulo: Humanitas, 2016. P. 123-137.
- GOTTSCHALK, Cristiane Maria Cornelia. Teaching Critical Thinking: the struggle against dogmatism. *Educational Philosophy and Theory*, v. 50, n. 5, p. 469-477, 2018.
- KANT, Immanuel. *Sobre a pedagogia*. Lisboa: Edições 70, 2012.
- MORENO, Arley Ramos. *Wittgenstein – através das imagens*. Campinas: Editora da UNICAMP, 1995.
- MORENO, Arley Ramos. *Introdução a uma Pragmática Filosófica*. Campinas: Editora da Unicamp, 2005.
- MORENO, Arley Ramos. Por uma Epistemologia do Uso – um aspecto do conceito wittgensteiniano de uso: construção do signo e constituição do sentido. In: MORENO, Arley Ramos (Org.). *Coleção CLE – Wittgenstein e seus aspectos*. v. 72. Campinas: UNICAMP, Centro de Lógica, Epistemologia e História da Ciência, 2015.
- MOYAL-SHARROCK, Danièle. *Understanding Wittgenstein's On Certainty*. London: Palgrave, 2005.
- PERRENOUD, Philippe. *Construir as Competências desde a Escola*. Porto Alegre: Artmed, 1999.
- ROUSSEAU, Jean-Jacques. *Emílio*. São Paulo: Martins Fontes, 1999.
- VECA, Salvatore. *Modos de la Razón*. El uso colectivo y la evolución de los conceptos. Madrid: Alianza, 1971.
- WITTGENSTEIN, Ludwig. *Zettel*. Oxford: Basil Blackwell, 1967.
- WITTGENSTEIN, Ludwig. *Philosophische Bemerkungen*. Frankfurt am Main: Suhrkamp, 1989.
- WITTGENSTEIN, Ludwig. *Tractatus Logico-Philosophicus*. Editora da Universidade de São Paulo: São Paulo, 1994.
- WITTGENSTEIN, Ludwig. *On Certainty*. Oxford: Blackwell Publishers Ltd, 1998.
- WITTGENSTEIN, Ludwig. *Philosophical Investigations*. Tradução: G.E.M. Anscombe; P.M.S. Hacker e Joachim Schulte. Oxford: Blackwell Publishing Ltd, 2009.

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