

# ONTOLOGY AND LANGUAGE: TRUTH AND MEANING ON THE THRESHOLD OF THE TWO CULTURES

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## Ontología y lenguaje: verdad y sentido en el umbral de las dos culturas

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### Abstract

This article proposes an exploration of the implications between language and ontology in the light of two different traditions. On the one hand, the scope of the scientific statement and the relationships between meaning and truth: knowledge as the activity of describing a world that is made up of particular facts; on the other, the historical consideration whose objective is to understand a multiformed reality, where language does not only enunciate facts, but builds a meaning of the world in which human life finds the significant elements of its concrete reality. To put these two sites in perspective, it is assumed that in their development, philosophy and science were interconnected. However, as knowledge expanded, field differentiation became more and more necessary. But that strict parceling must be left behind; today a new critical reflection is required that goes beyond the dichotomy of Natural Sciences and Human or Spirit Sciences. At present, this schematism is the manifestation of an illusory understanding of nature as if it were an area of reality alien to man, and as if human beings were a 'subject' disconnected from the natural order. This classification evidences a rupture between nature and society, which obstructs the possibilities of an ontological gaze absent from prejudices. XXI century humanism must overcome such disjunction, as science is an essential activity for human beings to be present in multiple spheres of culture, from health services to food production, communications, recreation, politics, economics, education, etcetera. And, reciprocally, philosophical thought has provided a perspective of totality that allows to notice that the knowledge, in any of its branches, participates in the same objective, scope and value. Reflection on language can open up to understanding the differences and closeness of a shared reality.

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### Keywords

Language, ontology, logic, thinking.

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### Resumen

Este artículo propone una exploración de las implicaciones entre lenguaje y ontología a la luz de dos tradiciones distintas. Por un lado, los alcances del enunciado científico y las relaciones entre significado y verdad: el conocimiento como la actividad de describir un mundo formado de hechos particulares; por el otro, la consideración histórica cuyo objetivo es comprender una realidad multiforme, en donde el lenguaje no enuncia sólo hechos, sino que construye un sentido de mundo en el que la vida humana encuentra los elementos significativos de su realidad concreta. Para poner en perspectiva estos dos emplazamientos, se parte del supuesto de que en su desarrollo, filosofía y ciencia estuvieron interconectadas. Sin embargo, a medida que el conocimiento se fue expandiendo, la diferenciación de campos se hizo cada vez más necesaria. No obstante, esa parcelación estricta debe quedar atrás; hoy se requiere de una nueva reflexión crítica que rebase la dicotomía de Ciencias de la naturaleza y Ciencias humanas o del espíritu. En la actualidad, este esquematismo es la manifestación de una ilusoria comprensión de la naturaleza como si ésta constituyera un ámbito de realidad ajeno al hombre, y como si el ser humano fuese un 'sujeto' desvinculado del orden natural. Dicha clasificación evidencia una ruptura entre naturaleza y sociedad, que bloquea las posibilidades de una mirada ontológica ausente de prejuicios. El humanismo del siglo XXI debe superar tal disyunción, ya que la ciencia es una actividad esencial para el ser humano al estar presente en múltiples esferas de la cultura, desde los servicios de salud hasta la producción de alimentos, las comunicaciones, la recreación, la política, la economía, la educación, etcétera. Y, recíprocamente, el pensamiento filosófico ha aportado una perspectiva de totalidad que permite advertir que el saber, en cualesquiera de sus ramas, participa de un mismo objetivo, alcance y valor. La reflexión sobre el lenguaje puede abrirnos a la comprensión de las diferencias y proximidades de una realidad compartida.

### Palabras clave

Lenguaje, ontología, lógica, pensamiento.

## Introduction

*The limit of my world is the limit of my language.*

Ludwig Wittgenstein

In philosophical and scientific thought, the move to Modernity was marked by the enthusiasm for a new rationality, which would lead human beings to a state of freedom and justice, to the realization of all the potential contained in their faculties, which would make evident the "hidden plan of the nature", according to the sentence contained in the work of Kant. However, the first signs of the social crisis brought by XIX industrialism, the events of the 20th century and the rise of violence in the current era require a critical look at the past, in search of the causes that led not to the desired society, but to a growing bureaucratization of social reality according to productivist standards. Now it is pertinent to carry out a reflection on some of the issues that have shaped the fabric of the real in the societies of the moment, which has been called -for the scientific development and the rise of engineering, and not without a



dose of euphemism- 'knowledge societies'. But along with the undeniable success obtained by the initiatives of science and technology, certain characteristic features of the present still appear as shadows: psychosocial diseases, genocide in its increasingly refined forms, violence and cruelty, the spectacle industry that keeps individuals absorbed away from the most urgent problems, the monopoly of the media that uses new forms of censorship and the discretionary management of information, wars created to reactivate the economy, the widespread destruction of ecosystems, climate change attributed to the excessive exploitation of nature and, most seriously, knowledge converted into a commodity. Given this outlook, one could ask if the 'knowledge society' has an answer to an urgent question: what can be expected in the face of nuclear and biological domination of the planet?

At this crossroads, a large part of the scientific and intellectual sectors that integrate contemporary rationality are shown to be limited to the mere instrumentation of processes under the means-ends scheme and framed in the nonsense of a growing extraction, transformation and sale of natural wealth. With this outcome, the illustrated reason precipitated its own annihilation, since science itself, used as a fruitful means of production, was subjected by functionalism to a series of external factors and, far from contributing with its discoveries to the emancipation of the human being -due to a host of other interests that intervene in public policies- suffers deflation of its concept to utilitarian principles, omitting the emancipatory dimensions it had and giving way to the hegemony of instrumental rationality that has reduced everything that exists to fungible relationships. The cultural malaise of our era expressed in economic inequality, political irresponsibility, the commercialization of education, technocratic nihilism and the logic of destruction. Here is located one of the critical positions of this article, in the need to reflect on the conditions of existence that divide human beings by means of an open or concealed fragmentation of their intellectual capacities, biological conditions and cultural expectations.

In this regard, in literature, the writer Franz Kafka has narrated such a situation. His work shows the disintegration of the human personality in industrial society, accounting for the labyrinthine spaces inhabited in the overcrowding of the masses, while providing a description of the way in which men are reduced to the unreality of ghosts forgotten in nothingness. But what is most remarkable in the story of Kafka (2004) is that this apparent unreality turns out to be the true background of existence, in which the inhabitant of factory cities wanders through a delete-



rious environment populated by individuals considered organic waste of the system, torn from all community bonds and radically alienated from nature, capable of committing the most atrocious crimes. This corollary reveals the conditions in which human life takes place and the social and civilizational crisis that societies of our time are going through.

The attempt to explain this wasteland caused a series of reactions, from those who saw in the scientific and technological development linked to industry, the cause of all evils, to the defense of knowledge as the only instance capable of getting us out of the quagmire. However, the simplification of such a schematic system does not allow much progress in the understanding of a phenomenon like this, which combines the deployment of knowledge and inventiveness with the most moral and political backwardness. Initially, it should be said that such a scenario cannot be explained unilaterally nor can responsibility be attributed to science as such - despite the fact that science is implicated in many of the great problems that afflict humanity today- but it is necessary to frame the phenomenon in the emergence of a type of society in which a representation of nature prevails as if it were an area that only provides raw material; as a sphere completely split off from the human condition and in which the individual and his or her history are conceived as if they were dimensions disconnected from that natural contour, thereby blocking the possibility of a holistic or, at least, broader understanding of existence. But this analytical or fragmentary view has its own formation juncture, which arises when experimental research had to specialize to reach the degree of deepening that it has achieved to date, but also this brought with it a breakdown and differentiation of planes of knowledge and, at the same time, the appearance that we live in a separate reality that demands different theoretical locations. Such a condition was not exempt from prejudices and restricted visions, which ultimately led to one-dimensional perspectives that confronted humanists and scientists in equally recalcitrant camps.

A clear expression of this polarity is found, on the one hand, in the rudimentary idea that some humanists were formed around Newtonian physics, which describes the universe as a deterministic machine provided with laws that can be explained by causal relationships expressed in formal language of mathematical science, but that has forgotten the free subjectivity incarnated in the human being; and, on the other hand, the counterpart of the scientists who disqualified Leibniz's effort to trace this causal explanation, without appreciating the philosopher's arguments in stating that, although nature has to be known through the causalist understanding, can only be understood from the principle of finality. Here



we could note the origin of the controversy that later German idealism directed against enlightened thought, pointing out that with the reduction of facts to formulas, nature, history and the human condition have been reduced to a mere relationship between things, ignoring that in addition to 'causes' there are 'ends', and that these are for human life the elements that give meaning to existence. And, similarly, on the part of the apologetics of science, any reflection on meaning was disqualified as an expression of metaphysics that would have to be fought on any of its fronts. In the midst of this fully recognized confrontation in the first half of the XIX century, the idea of what Charles Percy Snow (1959) called, a century later, *The two cultures and the scientific revolution*, unleashing a controversy that accounts for the prejudices that erected a barrier between science and humanities: a scientific culture that represents modernity and the future, and an ancient literary culture anchored in tradition.

With regard to the present research, the threshold of this bifurcation will be exposed, which occurred much earlier than the term used by Snow and much deeper, which was configured when considering, at one extreme, the Natural Sciences and, for the another, the Sciences of the spirit. Disjunctive that emerged as an attempt that, in its conjuncture, it could be relevant in the face of the disparity of methods and objects of study typical of modern research, which represents a year's long prolonged differentiation and even some mentalities prevail to this day.

Thus, while the first disciplines are conducted under the principle of simplicity and seek knowledge of natural phenomena; the second focus on the study of human phenomena through the recognition of complex events; they use as a method of knowing the 'explanation'; while the latter resort to 'understanding' as a suitable procedure. In order to study the Sciences of the spirit, Wilhelm Dilthey (1949) believes it necessary to make a foundation similar to the one that Kant (2013) gave to the physical-mathematical science of nature in the *Critique of Pure Reason*, and to carry out a Critique of historical reason in which a concept of science forged in the German classical philosophy is developed. In this direction, the certainty of the Sciences of the spirit is, in Dilthey's opinion, superior to that of the Sciences of nature, because in the humanities it is feasible to pose an identity between the subject that knows and the object that is known, for this reason, Dilthey calls the conception of the world, or philosophy, to this elaboration, because the spirit can integrate in a single unit the dispersed of being. The humanities give the opportunity to structure a systematic vision, since only in the spirit of man can the intensity of human existence be grasped.



But that schematism that proposes two realities and two different cultures no longer responds to the configuration of this globalized era, which demands an integral vision of the historical development of human beings, in whose daily life science has become a central factor, to such a scale that the scientific activity does not fall exclusively within the guild of scientists, but its impact forces non-specialized people, ordinary citizens, to reflect on the way in which life is traversed by the conceptual elements of science, by the diverse notions that constitute the sense of current reality and by the complexity of the technological devices now in use. The article proposed here presents a brief incursion in the relationships between ontology and language, emphasizing the claims of truth from a genealogical elucidation on the origin of the bifurcation experienced within the philosophical and scientific research that led to thematic fields, discursive practices and incompatible certainties that gave rise to the threshold of the two cultures.

However, beyond the diversity with which these theoretical positions assumed the definition of their objects of study, the appreciation for language makes them coincide in different moments of their history. It should be remembered that the reflection on language can be found from the very origin of philosophy, although it is true that only as an object of collateral study to the main speculative problems. However, in the first two decades of the XX century, it acquired a dimension so broad that it far exceeded the delimitation that had made it a means of communication or an instrument to access knowledge. Now, on the contrary, language is conceived not only as the path that makes knowledge possible, but also that truth, language and reality cannot be assumed as differentiated elements. For large specialized academic sectors, today more than any other aspect of cultural life, language has provided the ability of abstract reasoning to conceptualize and hatch a relationship with the world as has been done throughout civilizations. It is for this reason, that human beings owe to the acquisition of language the fact of becoming people. But language also plays a central role in the political sphere, in the domain and manipulation of the population, no less than in the possibilities of emancipation for individuals. Hence, knowledge or, even, thought itself is considered as language, so that since the beginning of the last century there has been an awareness that has made it a matter of vital importance for philosophy, to the degree of recognizing that it is a fundamental production both for humanity and for the particular existence, so today it is possible to identify a whole horizon of understanding and



study that has legitimately been called philosophy of language and that has far exceeded the issues that gave rise to it.

As a starting point it is feasible to say that, in its genesis, the main problems of the philosophy of language can be summarized, in broad strokes, in the following cardinal questions: How do words relate to objects? What is the relationship of language with the world? What is the nature of meaning? What is the truth? What is the relationship of language with thought? What is a speech act? Why the existence of language has to originate a philosophical problem? It is true that these questions can be seen from different perspectives and controversially contrast their possible answers, but it is also true that the language was taken for granted. That has changed. A first consequence that can be extracted is the conviction that concepts are part of human experience, and that this experience could not be judged without a domain, at least approximate, of the vocabulary that makes it comprehensible. By assuming that the experimentation of the world is accessible to us through objects, for philosophy it has been essential to discern that an object is a function of our faculty of representation. Therefore, it is important to point out the error of supposing that language is applied as a sort of template, or that it consists of a gradual process that leads to placing labels on things. Faced with this naive consideration, the philosophy of language has been responsible for indicating that, in any case, the conception of reality depends, to a large extent, on linguistic categories.

In this perspective, it is essential to refer to the *Tractatus Logico-Philosophicus* by Ludwig Wittgenstein, emblematic work published for the first time in 1921 and that now, almost a century after its publication, the influence it has exerted, among other things, seems fundamental to us for conceiving philosophy as clarifying praxis of language and, therefore, of thought, not as a doctrine that must transmit its postulates dogmatically, but as a critical exercise, an activity. Under this canon is located the first section of this article, entitled “Ontology and truth: the relationship of things with names” and it consists in exposing some general lines of this school in which the work of Wittgenstein cited above is written, which formulates a conception in which phrases and sentences have a clear function: to represent pictorially facts in the world that exist independently. The *Tractatus...* is a paradigmatic reference of a reflexive line that raises the problem of how language is possible and how its use is possible to describe the world, state facts and determine when what is said through it is true or false. This line of development can be traced initially with Gottlob Frege, Bertrand Russell and Ludwig Wittgenstein, but it reaches authors such as Willard Van Orman Quine, John Searle and Donald Davidson, in whom it mani-





fest and retains a common interest: to elucidate the relationships between meaning and truth. However, despite the fact that the *Tractatus...* was a text that led to the adoption of unilateral positions, the depth of Wittgenstein's work and its theoretical perspective also led to the recognition that, beyond the principles and categories of the science, is the scope of the unknown, of the inexpressible, life itself: that which language fails to apprehend. For now, there is no controversy here if there is a continuity or two stages in his thinking, but it is necessary to note that with this change of direction in the reflection on language, Wittgenstein himself gave an account of the breadth and complexity of what is at stake, so that it is not enough to understand language from an axiomatic point of view, but that it is mainly geared to its substantial use in life forms.

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The aforementioned idea allows introducing the second section of the article, "Ontology and meaning: the language of the spirit", where a succinct foray into another philosophical tradition is carried out in which language also has a wide-ranging reflexive line, which criticizes the conception that made it a mere instrument to designate independent entities and, declaring in favor of the constitutive role of language, underlines its importance in shaping a profile from which life becomes accessible and understandable. In this discursive orientation, the main allusion is the work of Wilhelm Dilthey and his idea of the historical world, the lived experience and the task of philosophy, not seeking to clarify but to understand, where language not only enunciates facts, but constructs a sense of the world in which human life finds the significant elements of our concrete being.

Finally, the conclusions frame a brief elucidation of the reasons why the irreconcilable dichotomy between theoretical sites and objects of study must be overcome, giving rise to a different humanism, to a new horizon of understanding and criticism in which the relations between meaning and expression that impregnate ontology and language can contribute to a broader discernment of the linguistic and cognitive processes involved in the sense of current reality and, eventually, face the challenges presented by research and learning in today's education.

## Ontology and truth: the relationship of things with names

*[...] the current grammar and syntax are  
extraordinarily deceptive,  
they entail vagueness and inaccuracy  
when the logic is applied.*

(Russell, 1988, p.180)



The first radical question of the relation between things and their name was raised at the beginning of philosophy in the *Cratilo* dialogue, in which Plato reflects on the accuracy of the names and whether this conformity is given by nature or, otherwise, if what is behind them obeys to factors such as consensus, convention or habit. Although it is necessary to notice that the Platonic dialogue does not intend to carry out a study of language in its structure and functioning, its value does not cease to be relevant, since it is proposed to debate around its validity in order to reach knowledge. In Aristotle there is a common interest with his teacher in the acceptance that it is not possible to completely and arbitrarily separate the plane of reality from the plane of language, because words necessarily refer to things. In *Metaphysics* (2000) the Stagirite tells us emphatically:

[...] is false, while to say of what is that it is, and of what is not that it is not, is true; so that he who says of anything that it is, or that it is not, will say either what is true or what is false; but neither what is nor what is not is said to be or not to be. (p. 186)

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The problematic opened by the classic Greek philosophy around the nature of the language evidently had diverse implications. This trace touches the ontological, gnoseological, aesthetic, linguistic, logical and even ethical planes, generative domains of categories that are present since then and that are still used to conceptualize the lived reality that is intended to be known. Thus, from the questions related to the universals, which were profusely studied by the medieval logicians and that emerge in the abstruse scholastic treatises about meaning, to the sober expositions of the philosophical systems of the XVII century, with the meditation of René Descartes who exposes what knowledge is, going through the alternatives of explanation of a rational order proposed in the monadology of Gottfried Leibniz and in the theory of the substance of Baruch Spinoza or in the *Port-Royal Logic*, written by Antoine Arnauld and Pierre Nicole, in all these places there are determining intervals in which a gnoseology develops that makes of the ideas the objective to investigate in the elucidation of the source of knowledge. John Locke's empiricism deserves special mention, since in the *Essay on Human Understanding* (2002) there is a whole book entitled *Words* dedicated to the topic of language and to the agreement with rationalist positions on the object of study, which is not in things, but in the representation or idea of them. Throughout this journey it is possible to see how a first semiotic theory that interprets words as the signs of ideas is extracted. These problems about language show a general attitude that goes through different mo-

ments in the long tradition of philosophy and that began as an instrument and vehicle of communication, and then conceived as an indispensable factor for knowledge.

In this historical evolution, the problem of the existence and preaching of things was often linked to questions about being and language, as well as about the meaning of words, the scope that, in the plane of knowledge, could logic have and the punctual analysis of it as an instrument to elucidate this problem. How far can experience and thought be possible if they are not limited to the realm of language? What relationship do things have with words and what forms of linkage can they derive from their study? Is it feasible to affirm that in the thematization of language the central core has consisted in knowing what is the relation of it with reality and determining from it a place to interpret the world?

In this brief overview it is important to reiterate that it is not correct to think that, suddenly, in the XX century the philosophers came across language, in fact there are many reflections around it in a wide range that goes from the pre-Socratic schools, the Platonic dialogues, the Aristotelian *Organon* or even the Stoic logic, even the idealistic systems of the XIX century, so its thematization is not something recent. However, beyond the importance that undoubtedly reached the search for explanations in this thematic field, it is also true that logic and, therefore, language, for many centuries were not considered something that required a whole study or discipline on the part of philosophy, but were conceived as tools, as a natural instance linked to all philosophy, but not a properly indicated sphere of reflection. Even Kant sets the example of the constitution of logic as a science in comparison with what metaphysics has not yet achieved, by remaining lost and not having yet taken the safe path of science. Logic was implicitly an integral part of philosophical systems, but not a horizon of study that captured the attention of the most representative thinkers. However, this circumstance radically changed from the end of modernity with the new conception of logic proposed in the Hegel system and, almost a century later, in contemporary thought with the development of the logical foundation of science, occasion in which the existence of a philosophy of language can be fully identified. We must accept that there is a recognized tradition in the study of language, but also that something changed in the consideration of its status, and this change has to do with the abandonment of that assumption in which language was a transparent medium through which one could see the world directly.

But why in the XX century does language acquire this central place for philosophy? As a preamble, it should be said that there are, at



least, two determining moments for this condition. In the first instance it would suffice to assess the development of the mathematical logic of the beginning of the century, which began with the research undertaken by Frege and Russell framed in a cultural moment that gave rise to schools and currents that still remain in force. Both authors were interested in exploring the foundations of mathematics and the nature of mathematical knowledge; their research led them to an elucidation about logic and linguistic representation. No doubt there was a favorable context that put philosophers and mathematicians in the best opportunity to ground mathematics in logic and make philosophy an activity based on the capacity of definition and rational clarification, where the work *Principia Mathematica* (1910 -1913), written jointly by Alfred North Whitehead and Bertrand Russell, exerted a determining influence. On the other hand, the posthumous publication of Ferdinand de Saussure's *Course in General Linguistics* (1916), which will become the basis of the structural linguistics developed later by the so-called Prague School (1929) and by the Linguistic Circle of Copenhagen (1931).

With regard to the first aspect that relates philosophy, logic and mathematics -which this section deals with-, the investigations of Frege, Russell and Whitehead originated in a central interest around the role that language plays in knowledge and, from there, they vindicated the need to unravel their possibilities and limits, a task that was all the more urgent inasmuch as they were convinced that the language is ambiguous. For these authors mathematics was essentially an extension of logic and mathematical statements seemed true by definition, but it was necessary to develop a theory of truth and a theory of logic that point to the same path. This inquiry about language and philosophy from a logical-mathematical perspective will find in the *Tractatus Logico-Philosophicus* of Wittgenstein a horizon of understanding in which philosophy came to be conceived as an activity whose objective is to clarify language through the logic to arrive at the correct vision of the world. In the opinion of Wittgenstein (1963), this appropriate view is far from what philosophical systems have proposed at the time and, in specific terms, is to point out that: "The correct method in philosophy would really be the following: say nothing except what can be said, ie propositions of natural science -i.e. something that has nothing to do with philosophy- "(p.151). The correct method then consists in "not saying anything more than what can be said, that is, propositions of natural science - that is, something that has nothing to do with philosophy" (Wittgenstein, 1997, p.183).



With this emplacement contrary to metaphysics and rooted in the propositions of natural science and mathematical principles, the logic of language will be condensed in the tautologies, in the various repetitions of thought through different expressions. In this way, under the strict logical domain, language resides in a formal structure that is deployed in the use of valid alternatives to arrive at certain inferences. Something that matters to underline is that the logic proposed here is not the Aristotelian one that studies the syllogism through the relations between subject and predicate, nor the ontological logic of the Hegelian system. For this theoretical direction, the clarifying intent is to structure a language for pure thought that goes beyond grammatical relations and can be conceived through formulas, analogous to how arithmetic does.

Frege (1972) defines the concept of number as a fundamental notion for mathematical science that can be extensive as a model for language and thought as such. The purpose of the logic that Frege proposes to structure is to account for the conceptual content of thought, which is the support of all inference. This conceptual content allows access to the objective. For this Frege proposes a new logical-symbolic language which he calls “Conceptualism” (1972). The conceptualism can be described according to Frege as a tool that allows to show the logical foundation of arithmetic through the definition of number. The relations between logic, language and mathematics are approached until they touch, because the term ‘concept’, the basis of the conceptualism, is defined by Frege through an element taken from mathematical science. This rudiment is that of ‘function’.

Thus, the concept is a ‘function’ of an ‘argument’, whose significance is always determined by a truth value (V/F). The conceptual content is declared as ‘the objective’: that which exists independently of a subject being made a representation of it. Under this reasoning, human language could access knowledge if it is organized similarly to how mathematics does it: each concept is a quantifier, and what matters is the connection between the concepts. The premise of this equation is that language has in common with the world the logical form. In the proper realism of such a conception of knowledge, the concept is the objective, and the objective is thought: here is an analytical judgment. This means that only within a formal logical language it is possible to refer to the structure of thought from its laws of truth, which do not change. If the series  $f(x)$  is taken as an example,  $f$  expresses a function and  $x$  a variable; in the Frege exposition the function can assume a truth value when an object (argument) appears in the place of the variable ( $x$ ). Frege (1972) then argues that the number is not reduced to a property of things, since it is not abstracted



from them, but neither is a subjective entity derived from the subject who thinks it. The number is a concept, a function, a logical relation with objective content. In the number a fundamental relation is made that consists in that an object falls under the name of a concept. What happens is that a function has assumed a truth value. Frege then introduces a couple of other words: the 'relation' and the 'simplicity', both belong to the analytical logic, which is pure or formal logic. The definition of number is proposed by Frege with the following sentence:  $n$  is a number designating a concept (function), where  $n$  is the number that corresponds to it. Frege establishes the equivalence between the concepts, that is why conceptualism is analytical. Its aim is to establish a series of correspondences so that arithmetic is considered a part of logic, without the need to resort to experience or intuition to obtain the basis of its demonstrations. For Frege the simplest laws of numbering would be obtained by purely logical means. Simultaneously, Frege's conceptual exposition consists of a rigorous deduction covered with the maximum logical accuracy, which is clear and brief, and which advances as if it were a calculation, in which an algorithm in general is always present: a set of rules that rigorously determine, from one or two propositions, the step towards a new proposition. This is how he describes it in his work:

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The knowledge of a scientific truth passes, as a rule, by various degrees of certainty. Perhaps conjectured at the beginning on the basis of an insufficient number of particular cases, a general proposition consolidates itself more and more surely by charging connection with other truths through chains of inferences, whether it results in consequences that find confirmation of another way, whether, conversely, it is recognized as a consequence of already established propositions. According to this, on the one hand one can ask about the way in which a proposition is gradually won and, on the other, about the way in which it is ultimately based with maximum certainty. (Frege, 1972, p.7).

For his part, Russell will develop his reasoning in relation to the horizon opened by Frege, in which the objects of mathematics-namely: numbers, classes, relationships, etc.-have an existence independent of the subject and of experience, with which both subscribe a kind of Platonic realism. Russell defines the problems addressed by the philosophy of mathematics in the following terms: instead of doing what is commonly done by asking what can be defined and deduced from initial postulates, he introduces a variable and questions from what ideas and more general principles could be defined or deduced the postulates of which it is part. This proposition inquiries into the form of thought and, like Frege, it is

now the Cartesian tradition that is assumed. Indeed, Russell defines the principles of reasoning as simple units and, to reach them, it is necessary to use an instrument: logic. This is the logicist ideal, in the attempt to reduce mathematics to logic. But in Russell (1988) logic is also related to the establishment of a criterion of truth, therefore can only be founded on a sense of reality. Despite all the attempts of formalism, the reference to the sense of reality shows that it has not been possible to disappear definitively from ontology and that it has not been so easy to break the domination of the word over the minds of men.

However, in the rejection of idealism and the eagerness to overcome metaphysics, in Russell's work the statements are necessarily played in the double truth/reality, since when it comes to beings considered imaginary, there is no way to speak of values of truth, that is, their names are not logical concepts. For example, a sentence that contains the name of some imaginary being has no truth value, because with that name there is no designated thing; in other words: it is an indefinite description. Russell says that, if it is pointed out that these entities exist in literature or imagination, this is no more than a simple evasion. But those imaginary beings are not strictly unreal either. The unreal for Russell makes sense only when (x) is in a description; when for example I say 'x is unreal' or 'x does not exist', in that case it is not an absurdity, but in this scheme even said imaginary being becomes significant and, sometimes, the proposition in which it can be judged according to the true/false criterion, because it is referred to a proposition susceptible of evaluation. This reflection, which leads to the analysis of the descriptions, constitutes an attempt to reveal what the indefinite descriptions are and reject them. The theory of descriptions aims to arrive at the simple, the work of clarification proper to philosophy is manifested in this way.

Now, when Russell affirms that logic must be based on a certain sense of reality, with this ontological background it does not necessarily affirm that it is a study of empirical facts. Russell proposes a pure logic that is valid in any possible world, objective that is feasible to raise due to the reading and assessment that makes of the *Tractatus...* of Wittgenstein, where it is established that to reach the pure logic is necessary the careful study of the 'tautology'. The *Tractatus...* is a work written in the form of aphorisms ordered according to the decimal classification system. It contains seven cardinal propositions: the first two are ontological propositions that refer to the world and reality; the next four are the development of his logic and his theory of language; and the number seven, the last proposition, paradoxically has become the most significant, because



it contains the well-known and enigmatic phrase “Whereof one cannot speak, thereof one must be silent.” (Wittgenstein, 1997, p.183), with which it closes the book marking the limit of what one can think and say. In effect, what can be thought is that which is feasible, and what can be said is that which has its proof in the proposition. Language represents the world by making a painting of it; the propositions are paintings of the facts, but, in addition, the propositions are expressions of the thought, they are what the human being thinks, the statements that do not appear facts will not have coherence. Beyond the states of things is ‘the beautiful’, ‘the valuable’, the appreciation of human existence, God, the mystical, the inapprehensible, what language cannot do, that which cannot be spoken of.

Although most of the *Tractatus...* speaks of logic and language (of the proposition), the initial paragraphs contain ontological expressions, they deal with the world and the metaphysical vision, and they do so in terms very close to what Russell calls the sense of reality that underlies all logic or theoretical elaboration, which consists of what he calls logical atomism. While there are agreements between them, Wittgenstein, on the other hand, prefers to talk about states of affairs.. In the *Tractatus...*, ‘world’ is a concept that refers to the totality of the facts. On the other hand, ‘language’ refers to the totality of propositions. The idea that in this work is formulated is that world and language share the same structure and, in this composition, Wittgenstein assembles in an intrinsic relationship reality, logic and language through three fundamental concepts: atomic fact, logical figure and proposition. In order for this painting of the world that makes language through propositions to have meaning, the utterances must be able to be analyzed until they are decomposed into final elementary sentences, consisting of names correlated directly with the objects spoken of. For Wittgenstein (1997) “The elementary proposition consists of names. For Wittgenstein (1997) “The elementary proposition consists of names”. “The elementary proposition consists of names. It is a weft, a concatenation of names”(p.77). But, unlike Russell, for whom the ultimate component lies in objects or things, the entities that we perceive with sensitivity, in the course of Wittgenstein (1997) “The world is the totality of facts, not of things” (p.15). Although he agrees with Russell that the objects are simple, Wittgenstein points out that these are part of the atomic facts. In the *Tractatus...* the atomic fact is the combination or relation of objects or things; the atomic facts are the substance of which the world is formed, its basic constituent. In this direction, what can be known about the things of the world is only ‘what happens’, ‘the states of things’, that is, the combinations or relations of things and objects: the





atomic facts or simple facts. But it is also possible to know the composite facts that are formed from simple facts, all of which together constitute the foundation of reality.

Having laid the foundations on which the investigation stands, Russell assumes that logic has to deal with the purely formal and, consequently, no particular object or relation can intervene here; this gives rise to the existence of the pure forms that contain the propositions, opening with it the possibility that there is a language in which all the formal aspects are included in a logical syntax and not in the vocabulary, which is always conventional. Hence, the main characteristic of this language is to be symbolic, because with it is possible to designate variables that can be ordered in different ways, but there are also logical constants that account for the common among the propositions; this common fund is its 'form'. The propositions of this logic could be known a priori, without a study of the real world, without having to resort to all those propositions whose knowledge is empirically obtained; therefore, its peculiar characteristic is tautology. Tautology is structured and maintains a close relationship with other concepts used by Wittgenstein as: 'object', 'fact', 'name', 'proposition', 'language', 'figurative theory', 'logical form'.

Form and content are essential in language and allude to logical organization, to the possibilities in which states of things can occur. Logic is not a theory, but a specular figure of the world; for this reason, logic is transcendental, because its function is to show all possibilities of occurrence in states of things. Tautology, on the other hand, is not a simple repetition, but is the universal condition of possibility insofar as it shows the structure of language and is at the limit where all possibilities are. In this field certainty, the truth and universal unity gravitate, the object as Wittgenstein conceives it. When knowing the object, all the possibilities of its occurrence in states of things are also known. According to this assessment, all the possible relationships that may be the case, that is, the shape of the objects, are given in the logical space. In the logical space the total reality is given: the world. This is ultimately based on the possible. It should be noted that it is not asserting that language 'makes' reality, but that knowledge of what happens as reality depends on the categories that are imposed on the world, and these categories are linguistic.

Expanding the theoretical line of his predecessors, Wittgenstein (1997) then defines thought as the logical figure of events. The objective set out in the *Tractatus...* is to set limits to philosophy by means of a method: the logical analysis of language. This logical analysis will be called 'clarification', a necessary elucidation, since, according to the au-



thor, most philosophers ask questions that they cannot solve due to the logical incomprehension of language. Like Russell, when the language is thematized, Wittgenstein (1997) starts from an ontology that has the following formulation: “The world is all that is the case” (p.15). This means that the real, the facts or ‘all that is the case’ are the diverse connections between the objects, that which happens. From the analysis of what is given (the occurrence of things) and their possible combinations, it is feasible to extract the form of objects, which lies in its structure: the form of reality is the possibility of all states of things. Objects have a structure that enables such states. If this possibility exists, then the structure of the objects is logical, and it is feasible that the language can figure out the reality, because the root of the sense of reality in which the conception of the world is configured lies in this arrangement and combination of the objects. Therefore, it is said that a statement is true if it harmonizes with the facts or if the things are as the statement represents them.

For this theoretical direction the key is in the idea of object. The object is simple, but this is where the research encounters a great difficulty, since it does not go beyond this statement, it is not possible to have a broader explanation or to conform an example of what an object is, what is real only can be shown, painted or figuratively alluded, philosophy necessarily reaches a limit and the tacit acceptance that there is something in the background that cannot be said, the world remains ineffable, only its logical form is available.

The *Tractatus...* exposes a figurative or pictorial theory that consists of the following: language portrays or figures the facts through the logical form. The logical form is the limit of what can be said, it represents the possibilities in which the signs have meaning. This set of possibilities constitutes the ‘logical syntax’, the elementary or primitive logical figure. The world unfolds in this totality of facts that occurs in the logical space, and it is the elementary propositions that portray or appear the effective giving of possible states of things. The elementary propositions (which are ‘the simple’) consist of names; Following the thesis of Frege (1972), elementary propositions are a function of names. If an elementary proposition is true, the state of things is given effectively; if it is false, the state of things is not given. The limit of language lies in this possibility, therefore it is not feasible to fully define the object, the most that can be pointed out -in the purest Cartesian procedure- is that objects are related to other objects as links in a chain and, in this concatenation, objects are structured as such and the states of affairs of which the world is formed are formed.





For Wittgenstein (1997) the essential thing in the states of things is their form, that is, the object. The objects are the fixed substance, the form, what does not change, everything that must remain for the world to be. For this reason, the totality of possible states of things that can occur constitutes the world. It should be remembered that for this philosophical tendency the common between world and language is the logical form, hence the facts can be 'said' in the propositions. Therefore, what is essential in language is the symbol, which is expression (form and content) and represents the general form that unifies constants and variables in a proposition. The form is the structure that allows to signify the language, which makes it possible for the language to figure reality. The form is shown in the logical propositions that are the tautologies, which say nothing. The logical propositions are the frame of the world, they are its specular figure, they represent it and at the same time they admit that names have meaning and that propositions have meaning. In a valuable interview with Anthony Quinton called *The Two Philosophies of Wittgenstein*, which along with other Bryan Magee (1982) later published as a book, reads the following:

All this theory of meaning presupposes a certain ontology; It presupposes that what exists must have a certain character. According to it, the world, independently of us and of language, must consist, ultimately, in simple objects that can be related to each other in certain particular ways. (p.101)

For a sentence to reflect the world, there must be an internal structure of the sentence so that its names correspond to the internal structure of the states of things. This equivalence of scaffolding shapes meaning, which allows language and world to be linked. This structure is the logical 'form' and in turn reflects a possible disposition of the real. Consequently, through a study on logic, one is in a position to show the support that is found in the language as a thought that constitutes the logical figure of the facts.

This structure or figure of the facts can only be shown; nevertheless, from the point where the connection between language and reality is established nothing can be said. The logical form of the expression accounts for a configuration that makes it possible for the proposition to have meaning, but it is impossible for the language to enunciate the meaning of the structure. What 'is' can be shown, but cannot be expressed, for this reason Wittgenstein (1997) says that, whoever understands it, recognizes its propositions as absurd; however, they are still necessary to have a correct view of the world. The thematic line followed in this section

shows the interest in establishing the truth of the statements, the correct view of the world and, therefore, the relationship with the philosophy of science is completely evident, because the main issue between ontology and Language consists in determining the link between meaning and truth. Due to this inquiry it is fair to recognize that the scientific method makes it possible, to some degree, to give a voice to the description of reality with certain signs of truth, that is the greatest achievement of the analytical tendency in philosophy; but, in another direction, it is also imperative to note that its limit and inconsistency lies in the logistic reductionism in which it incurs. In addition, in its claim to objectivity we go on to say that 'the world has a logical structure', a statement that becomes a *sine qua non* condition for the agreement between facts and propositions. Consequently, if the analytical current sought to overcome any speculation that was deemed inadequate to that objectivity assumed in the logical canon, with such a postulate it falls at the very center of metaphysics, even though its defenders are reluctant to accept it. Next, a different conception between ontology and language is developed, one that does not shy away from metaphysics and reflects on the constitutive historicity of the human being.



## Ontology and meaning: the language of the spirit

In a philosophical tradition parallel to that of scientific knowledge, emerged in the modern project of the XVIII and XIX centuries, there is an approach that seeks to overcome the instrumental concept of language and sees in it a wider source for understanding reality and the being of mankind.. This conception is based on research related to language but inspired by the idea of expressivity, which finds in German Romanticism and the works of Johann Gottfried Herder and Karl Wilhem von Humboldt, some of its channels. For this initiative, language is not a mere product or human work, but an energy of the spirit, which embodies the worldview of a nation, and models and dominates the subjectivity of the individual. In this plot occurs not only the beginning of the studies of historical and comparative linguistics, but, from the philosophical point of view, the leap of perspective according to which language stops being a simple means and becomes a structuring element and, at the same time, the primary reality in which the human being is immersed, a dimension that is prior to him, consequently, the understanding that man reaches of the universe and himself cannot be achieved except through language.

But just as analytic philosophy tried to differentiate its interests from that terminology that it disqualified as metaphysics, at the same time, there is in the tradition of classical philosophy a critical position towards the schematic view of the conceptual analysis that made the differentiation between 'Natural sciences' and 'Sciences of the spirit', which implies the separation between the explanatory method and the comprehensive method.

With the controversy between 'explanation' and 'comprehension' noted above, the debate arises between different traditions in research. On the one hand, the naturalist current proposes a methodological monism in which only one method of research is recognized, which postulates that all science must be adapted to the nomological principle of the natural sciences, which is based on experimentation and its results entail the formulation or access to general laws. On the other hand, the hermeneutic tradition, based on an interpretative methodology, among its characteristics supports a methodological dualism in which natural sciences and human sciences have objects of study, methods of interpretation and ways of being different.

The nature sciences, whose object of study is the material and organic domain, namely: physics, chemistry, biology, botany, zoology, etc., resort to the experimental method, observation and quantification and, although modern science has its origin in the XVII century with the scientific revolution, the full awareness of an independent method, distinct from any other type of knowledge and applied to the investigation of nature, dates from the XIX century, in the context of emergence of utilitarian positivism and, from the work *A System of Logic* (1843) by John Stuart Mill. The thesis that is proposed here is that the whole reality has to be explained beginning with the law of causality obtained by induction; even human life, which is studied by a positive science such as morality, must be based on facts and laws to use them as instruments of action on the social space, in the same tone in which the natural sciences to act on the natural environment. According to Stuart Mill (in Abbagnano, 1978), if a person is thoroughly known and the reasons that act on him, then his behavior can be predicted with the same certainty as any physical event.

On the other hand, the Sciences of the spirit constitute an expression that has gained ground due to the influence of Wilhelm Dilthey who, with some nuances, uses it to give an account of that differentiation that, in his time, has been introduced between the research that has for object the knowledge of nature, and those other disciplines such as psychology, history, law or aesthetics, which study the historical and social horizon in



which the human being develops. The method required by both is different, given that in the former what is observed are regularities external to man, governed by the principle of causality; while in the latter, what is examined is the human spirit itself or its concrete manifestations, governed not by mechanical causality, but by the principle of finality or intentionality. Therefore, the proper method of the sciences of the spirit is understanding. However, beyond the clarification that distinguishes methods and objects of study, Dilthey criticizes the relative and partial nature of this division, as will be discussed later.

However, if such a demarcation was important at the time, it would be pertinent to review the terms in which it was formulated to establish whether there is still room to speak about two cultures and different ways of knowing. In this path, Dilthey points out that everything that man is, he experiences only through history. This assertion is based on the conviction that the Sciences of the spirit are knowledge about culture, society, man, religion and especially history, which try to be defined from a fundamental presupposition: men put in their own creations an end, that to be grasped, demands a proper method of understanding. The ability to decipher the creations of man, to understand their literary texts and their historical documents, was given from ancient times the name of hermeneutics.

In fact, Maurizio Ferraris in *Hermeneutics* (2003) makes a panoramic account of the Greek term *hermeneutike techné*, which comes from *hermeneia*, translation, explanation, expression or interpretation that, in general, means the art of interpreting a text, that is, the possibility of referring a sign to your designee to acquire the understanding. With the passing of time the concept was identified with exegesis, but nowadays 'hermeneutics' refers to a general philosophical theory of interpretation and, for some, a whole horizon of understanding of reality. However, in its early stages hermeneutics designated the action of carrying the messages of the gods to men, in Plato *hermeneutiké*, refers to the technique of interpretation of the oracles or of the hidden divine signs, hence the etymology indicates the relationship of the hermeneutics with Hermes, the messenger of the gods. Later, with Aristotle, that approach to the interpretation of the sacred is lost. In *Peri hermeneias* (On the interpretation, second text of the Organon), Aristotle analyzes the existing relations between the linguistic signs and the thoughts, and between the thoughts and the things. For him, as for the later Aristotelian tradition, hermeneutics deals with the enunciative propositions and the principles of discursive expression in relation to the ontological structure of the





real. In Hellenism, the Stoics inaugurated a peculiar form of allegorical hermeneutics that makes it possible to interpret the rational contents hidden in myths. During the Middle Ages, due to religious influence, especially Jewish and Christian, hermeneutics was associated with the techniques and methods of interpretation of biblical texts, but without eliminating relationships with logic and knowledge. Thus, in medieval speculation the Aristotelian guide is maintained and, in authors like Boethius, hermeneutics designates the reference of the sign to its alluded to, in an action of knowledge that occurs in the soul, a postulate that will later hatch in the philosophy of subjectivity. But while the relationship between the linguistic sign and the concept is arbitrary, the relationship between the concept and the object is necessary and universal; the influence of Aristotelian logic is patent here. In general, this has been the field of significance of the term hermeneutics: as an interpretation of sacred writing that includes literal exegesis referring to the linguistic analysis of a text in question; as the study of the adequacy between language and reality; or according to the symbolic exegesis that observes meanings and evidences beyond the literality of the text. However, in the XVI and XVII centuries, when the system of Aristotle has succumbed to the experimental method and the new theory of knowledge, in addition to theological hermeneutics that interprets sacred texts, different hermeneutics appear: a profane one oriented to the interpretation of Latin and Greek classic texts, a legal and a historical one. The horizon in which both the knowledge about the natural world and those that interrogate the historical world have both a millenary tradition.

In this direction, although the problematic field of hermeneutics was linked to approaches typical of mythology, religion and theology -since it was in Christianity that reason had to deal with the interpretation of the texts in which they codified their beliefs- this required setting criteria of interpretation and understanding; Catholic Christianity then unified such criteria under the principle of tradition, which is appealed as the final instance that decides on the veracity of one's own history. However, the advent of the Modern Age and the progressive development of subjectivity, determined a radical shift in the approaches and principles set by tradition. Thus, contrary to the theologians, the humanists undertook the philological criticism applied to the classical texts and, with this, they broke the rigid schemas of medieval scholasticism, opening the discussion to broader interpretation problems and not closed exclusively in the precinct of religiosity. The Protestant Reformation opposed the principles of the tradition and authority of Catholicism, the foundations



of the self-sufficiency of the Sacred Scriptures and the acceptance of them as the Word of God, which is accessed through a personal reading of the Bible. But it is the emergence of historical consciousness at the very center of the Enlightenment in the XVIII century, with thinkers such as Giambattista Vico and Herder, and its subsequent development throughout the XIX century, which will provide the determinant impulses that made hermeneutics the theory par excellence of the interpretation of historical texts, which goes beyond this objective, by making it all a horizon of understanding of human existence. A clear example is the definition of common sense, which Vico formulates, and which is valued by Hans-Georg Gadamer in *Truth and Method* (1977):

Vico's appeal to the *sensus communis* undoubtedly exhibits a special coloring within this humanistic tradition. In this sphere of knowledge too there is a *querelle des anciens et des modernes*. It is no longer the contrast with the "school," but the particular contrast with modern science that Vico has in mind. He does not deny the merits of modern critical science but shows its limits. Even with this new science and its mathematical methodology, we still cannot do without the wisdom of the ancients and their cultivation of *prudentia* and *eloquentia*. But the most important thing in education is still something else—the training in the *sensus communis*, which is not nourished on the true but on the probable, the verisimilar. The main thing for our purposes is that here *sensus communis* obviously does not mean only that general faculty in all men but the sense that founds community. According to Vico, what gives the human will its direction is not the abstract universality of reason but the concrete universality represented by the community of a group, a people, a nation, or the whole human race. Hence developing this communal sense is of decisive importance for living. (p. 50)

In the light of this research program outlined by Vico, common sense has a special significance, it does not refer to a kind of limited certainty radically different and inferior to that granted by scientific knowledge, but to the formation of community that is of decisive importance for life. But here too comes the energetic pronouncement that with the irruption of modern science and its mathematical methodology something has been lost: the *sensus communis*, that which guides human life. In this line of analysis, Friedrich Schleiermacher (1991) picks up the concept of hermeneutics of religious discourse and reworks from it the theory of how all kinds of historical and literary documents of the past have to be interpreted and understood: "Language is the clearest mirror in the world, a work of art in which the spirit is known" (p. 95).





From then on, hermeneutics begins to take on full philosophical relevance, to conform as a general theory of interpretation and understanding. Schleiermacher goes beyond mere exegetical work, since the historical and philological data are only the starting point of understanding and interpretation, which should not be considered in terms of its object of study, but from the subject who interrogates. For Schleiermacher (1991), “language must represent the thoughts of the spirit and reflect the highest intuition and the most intimate observation of one’s behavior...” (p. 101). But, in turn, the interpretation cannot be limited to the mere understanding of texts, but is devoted to the understanding of the whole. This romantic version of hermeneutics represents a diverse alternative to the positivist and critical method practiced by historians and exegetes of the Enlightenment, and lays the foundations of the path that later will make up the so-called Sciences of the spirit.

Indeed, the hermeneutics understood in this broad philosophical spectrum influences Dilthey and the followers of the historicist current, for whom the textual, historical and biographical data are elements prior to the process of approaching a situation that one wants to understand and, to understand it, it is necessary to articulate the data in a unit of meaning. Hermeneutics appears as the method of the Sciences of the spirit, counterpart of the explanatory method of the Sciences of nature. Dilthey conceives ‘interpretation’ as an understanding that is based on historical consciousness and enables one to better understand an author, a work or an era; in turn, it conceives ‘understanding’ as a process that is directed towards the objectifications of life, which are manifested as signs of a life process or experiences of the spirit. Such experiences, which are the objectifications of life, are apprehended as an objective spirit in the Hegelian sense and are properly objects of science.

According to this assessment, since the scientific revolution of Modernity, science is understood as a set of propositions composed of elements that are clear and distinct concepts, completely determined, simple, constant and of universal validity for human subjectivity. Science is, then, an activity that establishes well-founded links and whose parts are interwoven into a whole that, thanks to the universality of language, can be communicated independently of the individual that states it, or because that whole is thought of entirely an integral part of reality, or because a specific branch of human activity is regulated. Science is the possibility of reducing any event or phenomenon to rational terms, therefore the rational path is the only one that grants access to the truth because human intelligence is based on certain basic operations, conceived as nat-

ural operations, which allow determine the rationality that nests within the phenomena themselves. The following is a long excerpt from the *Introduction to the Huan Sciences* (1949), a work in which Wilhelm Dilthey proposes this differentiation of approaches, to later point out also the arbitrary nature of such division:

That which has developed in the course of human history and which common usage has designated as “the sciences of man, of history, and of society” constitutes a sphere of mental facts which we seek not to master but primarily to comprehend. The empirical method requires that we establish the value of the particular procedures necessary for inquiry on the basis of the subject matter of the human sciences and in a historical-critical manner. The nature of knowledge in the human sciences must be explicated by observing the full course of human development. Such a method stands in contrast to that recently applied all too often by the so-called positivists, who derive the meaning of the concept of science from a definition of knowledge which arises from a predominant concern with the natural sciences. On the basis of that concept, they determine which intellectual occupations merit the name and status of science. Thus on the basis of an arbitrary concept of knowledge, some have shortsightedly and presumptuously denied the status of science to the writing of history as it has been practiced by great masters, and others believed it necessary to transform those disciplines which are founded on imperatives, rather than on judgments about reality, into cognitive sciences of reality. What is contained in the concept of science is generally divided into two subdivisions. One is designated by the name “natural science,” while for the other there is, curiously enough, no generally accepted designation. I shall follow those thinkers who refer to this second half of the *globus intellectualis* by the term *Geisteswissenschaften*. In the first place, this designation is one that has become customary and generally understood, due especially to the extensive circulation of the German translation of John Stuart Mill’s *System of Logic*. This term seems the least inappropriate among the various from which we can choose. To be sure, the reference to the spirit (*Geist*) in the term *Geisteswissenschaften* can give only an imperfect indication of the subject matter of these sciences, for it does not really separate *facts of the human spirit* from the *psychophysical unity of human nature*. Any theory intended to describe and analyze socio-historical reality cannot restrict itself to the human spirit and disregard the totality of human nature. Yet this shortcoming of the expression *Geisteswissenschaften* is shared by all the other expressions that have been used: *Gesellschaftswissenschaft* (social science), *Soziologie* (sociology), *moralische* (moral), *geschichtliche* (historical), or *Kulturwissenschaften* (cultural sciences). All of these designations suffer from the same fault of being too narrow relative to their



subject matter. And the name chosen here has at least the advantage of appropriately characterizing the central sphere of facts in terms of which the unity of these disciplines was actually perceived, their scope outlined, and their demarcation from the natural sciences established, no matter how imperfectly. (p. 13)

The separation of these two spheres of research was marked by specialization as the driving force that made possible the advancement of knowledge. Impulse that undoubtedly had an unavoidable effect on the conscience of men beyond the practical and obvious consequences of the scientific advances linked to industry, technology and the increasingly diversified sphere of engineering. But for Dilthey (1949) the main reason why the habit of separating the sciences of the spirit from the natural sciences was born, was due to a breath of development of human self-consciousness, when in the XIX century the human being found in himself powers that led him to raise the sovereignty of the will, the possibility of being responsible for his actions, the ability to submit everything to analysis and strengthen his existence within the individual subjectivity of each person, which could infer that humans are beings that differ from nature, taken as a whole. However, at present, this separation is only the reflection of an old positivist and ideological view, which responds today to particular interests and not to the real way in which scientific research is carried out. The following lines delineate the scope and limitations of this other conception that links language, knowledge and ontology.

Humanism as a reflection that is basically interested in the meaning and value of the human cannot participate in the division into two cultures, this is so because throughout its history, it has gone through different circumstances, in which its basis always has been the understanding of human life as a whole. This happened with the sociocultural phenomenon of the XIV and XV centuries, known as 'Renaissance humanism'; in the same way with the 'new humanism', typical of German classicism and romanticism in the XVIII and XIX centuries; and later with the 'contemporary humanisms', based on general philosophical approaches and fundamentally ethical orientation. In this journey we can find characteristic phenomena, among them would be the following: the return to the classical, the affinity for nature, the Copernican turn, science as free thought, individualism, the rejection of authority, the valuation of history, interest in culture and knowledge. But at the same time an ideology of utilitarianism and productivity arose in these stages, converted in the end into hegemonic principles of the capitalist system, although in parallel, a strong criticism against this ideology broke out, which made



humanism flourish at the end of Modernity and gave impulse to an integrating thought based on the concept of 'formation'.

This notion of formation became the essential element of the new concept of 'humanity' crystallized in the so-called 'Science of the spirit' of the XIX century. The contemporary humanisms are also inscribed in this line, but they are based on the Hegelian scheme of the idea that constitutes itself throughout history. Philosophy about man develops as a fundamental part of a philosophical system, willing to emphasize the value and dignity of the human being as an individual who builds his own path. During the second half of the XIX century and the beginning of the XX, the phenomenon of historicism offers an opportunity for a thorough rethinking of the methodological assumptions of the historical and social sciences. Therefore, in the attempt of what in Dilthey would be a 'Critique of historical reason' appear new themes and concepts, such as the distinction between explanatory knowledge (*Erklären*), form of knowledge that governs the 'Sciences of nature', and Comprehensive knowledge (*Verstehen*), peculiar mode of knowledge of the 'Sciences of the spirit'. Next, Dilthey is referenced again to locate the point at which the idea of dissimilar theoretical sites arises and, at the same time, to denote how relative this division is in Dilthey's own opinion (1949):

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All purposes lie exclusively within the sphere of human spirit, for this is what is truly real for man; but a purpose seeks its means of realization in the system of nature. The change which the creative power of spirit produces in the external world is often nearly inconspicuous. Yet only through it does the value thus created exist for other people as well. The few pages which came into the hands of Copernicus as the material remnants of the profound mental efforts by which the ancients first conceived the idea that the earth moves became the starting point for a revolution in our conception of the world.

Now it can be seen how relative the delimitation of these two groups of sciences is. [...] The sciences of man, society and history have as their basis the natural sciences, for the same reason that psychophysical units can only be studied with the help of biology but also because the environment in which they develop and in which teleological activity takes place, directed largely to the domain of nature, is constituted by it. (pp. 25-26).

That exiguous polarity - supported mainly by positivist visions - lasted for several decades, until in the seventies of the XX century the methodological problem re-emerged and was centered with renewed purposes in the social sciences. In this emergent context, it is possible to mention at least three alternatives of research: the one that neopositivism

leads, that goes out in defense of the rights of the objectivity of science and reproduces that discord of research horizons; that represented by phenomenology, which includes the approaches of the humanist philosophical tradition placing the problem in the immanence of reflection, and, finally, Marxism, which emphasizes the social interests that are at the base of any type of knowledge.

## Conclusions: towards a new understanding horizon

Up to this point the confrontation of opposite theoretical orientations has been described, but if the intention is to trace this discussion of the two cultures, the most pertinent thing is to sustain the phenomenological proposal of Husserl and to accept that all knowledge is inserted in a determined historical time and in a space, which are the time and space of the knowing subject. And that this in turn is in a given world, the world of life, where both the subject and the object of knowledge coexist in an inescapable interaction. In this world of life, mankind plays his role in creating cultural phenomena, among which are, of course, science and technology as social products, whose approaches and procedures change in the course of history. Thus, man as historical subject establishes horizons of interpretation and, in turn, is conditioned by the historical, social and linguistic contour to which he is ascribed. That is the life of human beings, the dimension that the word strives to relate and where the 'understanding' takes a new turn. With the development of phenomenology and hermeneutics in the XX century, Gadamer (1977) proposes "the idea that language is a center in which the self and the world meet, or better, in which both appear in its original unity" (p.567), and that the reality to be interpreted must be understood as a fusion of historical horizons. Hence: "The being that can to be understood is language" (p.567). With this approach, hermeneutics is conceived in a universal plane that transcends the analytical positions that were intended to make the dissection of language to identify its structural elements. To this new perspective -which fuses language, thought and being-, Gadamer attributes the configuration of basic concepts that characterize current humanism, in which the aforementioned concept of "formation" refers to the process by which the culture of the spirit culture is acquired, as opposed to the acquisition of 'mere' science as a specialized knowledge. In this way, in *Truth and method* (1977) Gadamer points out that:



which, since the days of humanism, criticism of “scholastic” science has made itself heard and how this criticism has changed with the changes of its opponent. Originally it was classical motifs that were revived in it. The enthusiasm with which the humanists proclaimed the Greek language and the path of eruditio signified more than an antiquarian passion. The revival of the classical languages brought with it a new valuation of rhetoric. It waged battle against the “school,” i.e., scholastic science, and supported an ideal of human wisdom that was not achieved in the “school”—an antithesis which in fact is found at the very beginning of philosophy [...] Beginning with the new methodological awareness of XVII science, this old problem inevitably became more critical. In view of this new science’s claim to be exclusive, the question of whether the humanistic concept of Bildung was not a special source of truth was raised with increased urgency. In fact, we shall see that it is from the survival of the humanistic idea of Bildung that the human sciences of the XIX century draw, without admitting it, their own life.



The previous fragment proves that the idea of two spheres of investigation penetrated with certain depth in both discordant positions. However, now it is opportune to recognize that very soon it had opponents that, until now, have only been seen here in some voices that start from the philosophers, especially for the perspective of totality that accompanies their reflections. But if in the humanist sense it was necessary to clarify the separation made in the different fields of knowledge, in the scientists it is possible to trace a similar demand, which conceives science not as an isolated activity cultivated only by specialists, but as an element indispensable of humanism. This is what Erwin Schrödinger does in his book *Science and Humanism* (2009) when he answers the question “What is the value of scientific research?” (pp. 11-19).

In this important text, Schrödinger expresses a reflection on the arbitrary separation of regions and disciplines -a point made by Dilthey- and offers another vision to understand the problem and underlines the absurdity of having split the paths of knowledge. Schrödinger accepts that if one wants to make a genuine contribution to scientific progress, specialization cannot be avoided. However, the objective, scope and value of the natural sciences are the same as those of any other branch of human knowledge: none of them by itself has a significant weight. The isolated knowledge that has been obtained by a group of specialists in a limited field is not important in itself, it only obtains it from its synthesis with the rest of the knowledge, and this is achieved as long as said synthesis really contributes to answer a radical question: what are we? In Schrödinger’s opinion, although specialization cannot be completely dispensed with,



one must change the perspective regarding it and not believe that specialized science is dealing with a virtue, but rather with a necessary evil, since all specialized research possesses an authentic value only in the fabric of the totality of knowledge.

For Schrödinger (2009), the practical achievements of science tend to hide their true value, but to reverse this prejudice is not an easy task, because in his opinion scientific training has been neglected for a long time, such disinterest is a structural defect in the education inherited from generation to generation. In this discernment, the criticism that Schrödinger carries out is very relevant, especially coming from one of the most important scientists of our time; so that this division of two fields of knowledge and of two respective cultures, is but the result of a partial understanding of reality which in turn has been based on a fallacious understanding of nature and an equally fragmentary definition of being human, which is seen as an alien entity, completely disconnected from the natural order. This misunderstanding previously alluded to by Dilthey is now presented in the reflection that Schrödinger (2009) makes in that same tenor:

Most cultivated people show no interest in science and do not realize that scientific knowledge forms part of the idealistic background of human life. Many believe -in their absolute ignorance of what science really is- that its main task is to invent new machinery to improve living conditions. They are willing to leave this task in the hands of the specialists, just as they leave the repair of the plumbing in the hands of the plumber. If people with such a vision of the world are those who dispose of the lives of our children, we will inevitably arrive at the result that I have just explained (pp. 19-20).

The stage in which this differentiation of fields of knowledge is formulated refers to the context of the second half of the XIX century, when there is an unusual boom in science, and it is also the period in which industry and engineering had an influence never seen before in the material and economic aspects of life, which caused them to fade into the background, or frankly fall into oblivion, all other aspects of science, only exalting the productive nature of knowledge at the service of the company. The emergence of a trend such as utilitarian positivism, which had one of its greatest exponents in Stuart Mill, is not accidental. But it is an equally important fact that contemporary science cannot remain a field reserved only for those versed in those disciplines or specialists in particular problems of cutting-edge research with an impact on the generation of wealth. From the XX century, the general scientific development and



physics, in particular, has transformed the sense of reality in which the existence in this region of the universe passes and, consequently, the human condition has been affected by new language schemes, new patterns of behavior and their corresponding ways of life. It would be enough to think about the radical change that the concept of matter has had, to conclude that science involves all human beings and not only those who professionally cultivate some of their disciplines. The need for a multidimensional education today is a requirement rather than a good wish, life on the planet demands resignifying the concept of formation.

The relevance of research on language and ontology is that it also involves the investigation of the different ways of knowing, the different styles of living, being and, in general, the corresponding exploration of the very structure of experience. According to tone of the investigation with which the second half of the XXI century began, the distanced position that Wittgenstein defended in the *Tractatus* would be modified in his later work, in which he accepts that this initial figure is a logicist simplification of language functions. Language has several functions, not only is it a logical function. Under this new critical pattern, particularly in *Philosophical Investigations* - first published in 1953, thirty-two years after the *Tractatus*-Wittgenstein (1988) states that there is no 'language', there is a diversity of games of language. Therefore there is no single rule, there are as many rules as there are human needs; language penetrates life and the most diverse activities, in our ways of life, and words, phrases, statements, etc., are seen as pieces of a gear integrated into the totality of our behavior that consists of an infinity of codes.. The language responds, in its multiple forms, to the existential needs. It is not a question of proposing a logical structure that articulates the possibilities of meaning; on the contrary, the forms of life are the ontological sustenance of language, since words have meaning only in the course of life. Each language game has its own grammar, its own rules that are determined by use. The use is not reduced to a mere isolated linguistic operation, but it serves a profound practical dimension. The task of philosophy is to understand what game is being developed in each case. Hence, the relationship between language and ontology is revealed with much greater urgency if one considers the oppressive sense of reality in which human history now passes.

For this reason, on the horizon of the XXI century, a critical theory of society warns about the fatal consequence of the crisis of the present, which translates into the experience of damaged life and the degradation of individual existence, despite so much cognitive development. A clear example of this loss is the techno-scientific praxis implied in the industri-





al program of the military administration, established to create the new genocidal weapons, concrete manifestation of the political control that has made use of the advanced technologies of destruction, the same ones that, ironically, the scientists imagined how the artifact that could end the threat of war. This unmasks the paradigm of a sector of scientific practice, unable to reflexively assume the conflict between its own development and the corporate or military interests that finance it, which is evident in the problems arising from climate change, exploitation of work, the destruction of the biosphere or the use of agricultural production systems under the effects of the implantation of genetically manipulated species. In a decisive text for the understanding of contemporary reality such as *Crisis of the European Sciences* (1984), Husserl gives an account of this distancing of scientific research with respect to human existence as a whole; there we see how the Kantian ideal of a knowledge detached from the sphere of economic interests and political powers is already unsustainable, knowledge has been transformed into power and hegemony, a phenomenon that highlights the structure of current technoscience put at the service of the desire for dominion over nature. Following the analysis of the survival of two exclusionary research fields, it can be seen that this polarization has given any ground; but that inside science and philosophy, itself, has increased this phenomenon of in-communication, which clearly responds to the productivist dynamic that permeates the vast majority of human activities and keeps people isolated. This fact has reached such a high degree that philosophers and scientists are busy cultivating, as experts, a specialized plot, without maintaining any relationship with other interlocutors who do not belong to their small group, nor dare to build a bridge to cancel the ostracism caused for the individualistic mercantilism to which education has succumbed.

Critical thinking has been concerned with studying the dialectical tension between culture and progress, but in doing so it uncovered the framework in which the establishment of the cultural order brings with it the negation of the person and the breakdown of the individual experience of life. There is then a drastic break with the premises of the rationalist conception of history, upon noting the moral and psychological inconsistency of the conscience, since under the conditions of conflict and frustration that characterize the life of individuals in contemporary society, what we see emerging is the 'rational' idea of destruction. Culture works in favor of death, therefore, by denying life, culture rushes into the deepest crisis: we need to wake up from the technological dream.

As Adorno and Horkheimer (1998) point out, after the rupture of the ideals of the Enlightenment, pessimistic positions were imposed that related the transition from progress towards regression, from the domination of nature towards the subjugation of human beings. But despite everything, scientific reason cannot be seen as an autonomous entity to which all evils can be attributed and, for its part, the humanities should not be seen as a knowledge of dilettantes that does not involve any rigor. What the society of the present requires is to promote a new critical reflection that breaks once and for all with that false idea that there are two cultures and fight at the same time the schematic and uncreative procedure with which science is taught at all educational levels. If it is necessary to criticize the automation in which human life has fallen, it is also necessary to accept that in many aspects we have to go beyond sectarian positions and recognize the presence of scientific research in different margins of social materiality, which makes this time is a crucial moment to leave the dichotomies behind and to promote, apart from the necessary specialization, binding ways of thinking, in which disciplinary differences are also recognized. It is worth pointing out that the fact of changing the physical concept of causality and arriving at indeterminacy does not mean expecting an immediate impact on the ethical level, but we could hope for an awareness more in line with the achieved cognitive development. The humanism of the XXI century has to work on a concept of non-repressive culture and make it see, both to all and sundry, that despite the complexity and abstraction of its postulates, all scientific knowledge takes root in the world of life.



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