Old and New Questions of Philosophy – Volume 1

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Summary

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Presentation

Old and New Questions of Philosophy comprises a set of three pamphlets containing twenty essays on universal themes that have been and continue to be part of the history of ideas, as well as some that concern our difficult times.

The first volume contains the following seven subjects: "On the Idea of Truth"; "Time, Lord of All (Pantocrator)"; "Between Technophilia and Technoprudence"; "Matter and Spirit: Different, Opposite, Complementary?"; "A Few Words About Death"; "Equalities and Differences Among Men"; "The Meanings of Life".

The second volume presents ideas regarding the following seven questions: "Are Laws Necessary?"; "When We Talk About Culture, What Are We Talking About?"; "Evil, From the Beginning to the Present Day"; "Is a Just Society Possible?"; "Wokism: When Good Intentions Go Crazy"; "What Is Real?"; Modernity and Post-Modernity.

As for the third volume, the arguments cover the following six topics: "Is Freedom What We Ordinarily Think It Is?"; "Is Democracy the Best Political Regime?"; "The Death of Art and the Survival of Aesthetics"; "The False Quarrel of Cultures: On Race and History, by Lévi-Strauss"; "The Age of Masses and Excesses", "The Many Faces and Dimensions of Love".

I. On the Idea of Truth

According to an old philosophical maxim, there are four figures that men tend to admire and respect. This maxim applied at least to times gone by, since in the present era the impression we have is that all values have become uniform, banal and unstable. These figures were: the wise man, for his ability to understand and give meaning to the world and life; the hero, for his courage, for an action beyond conventional human measures or even for his sacrifice or martyrdom in favor of a community; the artist, for his ability to create representations, symbols, and figures in which understanding and sensitivity are combined; and the saint, for assuming and carrying with him if not all, at least a large part of man's pains. Traditionally, three virtues would make the human being the highest or most perfect model of creation: good, truth, and beauty.

If thinking and questioning are undeniable human attributes, both knowledge and the trust required of it depend on this inherent property of reason, which is truth. Initially, therefore, wanting to know the truth is the same as being rational and reaffirming human cognitive or intellectual nature. Even when we refuse the certainty that truth gives us, out of fear or our own convenience, we sense that it exists and can be, in these cases, terrifying. Or as the protagonist of *Dreams*, by Francisco de Quevedo, says, "This is hell, where, to torment men with bitterness, the devil tells the truth".¹

With a similar meaning, Pascal expressed it this way: "Man, therefore, is nothing but disguise, lies and hypocrisy, both to himself and to others. He does not want to be told the truth and avoids telling it to others; and all these dispositions, so far removed from justice and reason, have a natural root in his heart".²

Ortega y Gasset, in turn, is convinced that: "... life is a true chaos, where one is lost. Man suspects this, but is terrified of coming face to face with this terrible reality, and tries to hide it with a ghostly curtain, where everything is very clear.

¹ Francisco Quevedo, *Sueños*, 6. ed. ilustrada, Zaragoza: Ebro, 1967, p. 48.

² Blaise Pascal, *Pensées sur la Religion*, 978 (Le Manuscrit Périer), ub.uni-freiburg.de.

He does not care whether his ideas are true; he uses them as trenches to defend himself from his life, as an affected show to chase away reality".³

Despite this, truth is a necessity for social coexistence. If we all always acted falsely or lied, social life would not be possible, since there would be no stability in relationships or in the so-called commerce between people. As we all know, none of us is capable of providing ourselves with everything we need, and this incompleteness demonstrates the need for others and a minimum of mutual trust.

At the same time, on an individual level, "No one consents to be deceived, in the sovereign part of his being, about the most important things; on the contrary, nothing is so feared as to harbor a lie there [...] being deceived in the soul about the nature of things, remaining deceived and ignoring it, accepting and keeping error there is what we can least bear".⁴

Perhaps with too much enthusiasm, Giordano Bruno attributes to one of his characters an irresistible attraction to the truth (since it is not always welcome): "Maricondo – Now, it must be said that the food of the mind is only that which it desires, seeks and embraces with more joy than any other, and with which it satiates, is satisfied, is favored and becomes better, that is, the truth; which, at any time, at any age and in any situation in which man finds himself, he always aspires and for which he usually despises fatigue, tries any effort, disregards the body and despises this life. For truth is an incorporeal thing".⁵

But knowing that truth is a cognitive requirement that comes naturally to us and, at the same time, a social necessity, it is necessary to define it, so that it presents itself in a clear and, consequently, comprehensible way. Thus, as if we needed a vestibule or a prerequisite for the truth to be said or found, we must use: 1. either logical-analytical and identity reasoning; 2. or logical-dialectical reasoning; 3. or even complex reasoning, which encompasses or includes the two previous ones.

³ Porque la vida es por lo pronto um caos donde uno está perdido. El hombre lo sospecha; pero le aterra encontrarse cara a cara con esa terrible realidad y procura ocultarla con un telón fantasmagórico, donde todo está muy claro. Le trae sin cuidado que sus ideas no sean verdaderas; las emplea como trincheras para defenderse de su vida, como aspavientos para ahuyentar la realidade". La Rebelión de las Masas, II, 7.

⁴ Plato, *The Republic*, book II, 382 a, b.

⁵ G. Bruno, Obras Italianas Completas (Complete Italian Works), Dos Heroicos Furores, second dialogue of the second part. Ed. Perspectiva, S.Paulo.

Traditional analytical logic rejects or opposes the contradiction of terms and statements. With it, therefore, the principles of identity (A = A), the principle of the excluded middle (B = A, or B = non-A, there is no third possibility), and the principle of non-contradiction (B cannot be, simultaneously and from the same perspective, A and non-A) are formulated. At the beginning of his text "Saying the World", Francis Wolff writes in this regard: "The beings of this world are not contradictory: none of them is, at the same time, A and not-A. If Socrates is wise, then he is not unwise, if man is not immortal, then he is mortal [...] if non-contradiction is understood as an ontological law, then every being is subject to it. A being S is not possible if it possesses, at the same time, two contradictory attributes, P and not-P. A contradictory being is not possible, since it is not even possible".⁶

As for dialectical logic, it accepts and makes contradiction an inevitable characteristic of beings and phenomena. Consequently, it considers the changes, interrelations, contrasts, or conjunctions that may be contained in reality or in that to which we refer. In Hegel's words, "Every idea we express necessarily brings with it its dialectic, which, pushing us immediately towards its opposite, brings with it a second idea which is the negation of the first. Then these two ideas together give rise to a third which is, so to speak, the truth of the other two. And the same dialectic force, continuing to act, takes possession of this third idea that has just arisen, in order to bring to light, under the same laws, a new idea more special or better determined and, consequently, more true than the previous one".⁷

The oldest and still perfectly acceptable definition of truth comes, evidently, from the Greeks. The term they used to suggest this idea was $\lambda\eta\theta\eta\varsigma$ (*léthes*), which means forgetfulness, oblivion, and also concealment. It is also the name of one of the five rivers of Hades, the lower kingdom of Greek mythology, the one that erases everything from memory. What should not or cannot be forgotten or concealed is aléthés (permanent in memory, true) or even *aletheia*, unveiling,

⁶ Francis Wolff, *Dizer o Mundo*, 1 (Tell the World) – Da Contradição, p. 25. Discurso Editorial, São Paulo, 1999.

⁷ Georg Wilhelm Friedrich Hegel, *La Logique subjective de Hégel*, trad. H. Sloman et J. Wallon, Paris: Librairie Philosophique de Ladrange, 1854, p.4.

truth (*veritas*, in Latin). I believe that Plato based his conception of idea on this term. Knowing Heraclitus, for whom all beings that we consider "real" transform, die, or disappear, what always resists or subsists for Plato, what can acquire solidity, be transposed, and continually perceived is precisely and solely the idea that we know or elaborate of them, mentally or spiritually. In other words, that which remains and is not forgotten because it lasts for a longer period.

Among these same Greeks, let us mention Parmenides (6th century BC), Aristotle, and the Stoics, to give just three examples. Parmenides says: "You must learn all things, not only the unshakable heart of truth but also the opinions of mortals, in which there is no certain truth".⁸ According to Diogenes Laertius, "he made reason the criterion of truth, and affirmed that sensations are not exact".⁹ It can be seen here that the philosopher divides knowledge into two categories: that which demonstrates truth through reason, and that which remains within the scope of opinion (*doxa*) or sensation (*aisthesis*). The latter two – opinion and sensation – can indicate the existence of something, of course, but they do so in a more incomplete, variable, or inexact way (everything flows), when compared with rational investigation. Truth, or true knowledge, is *episteme* (a word usually translated as science or theoretical knowledge), capable of reaching the essences, the underlying, unshakable reality, or even the determining cause of the being or phenomenon.

As for Aristotle, he states that: "to say of what is, that it is, or to say of what is not, that it is not, is to tell the truth".¹⁰ We have here, therefore, a first definition in the history of philosophy, that is, that truth is the conformity of a mental representation (of an idea, a discourse, a statement, an affirmation, or a negation) with the reality that corresponds to it. Philosophy itself was called by Aristotle *episteme tes aletheias* (science of truth), differentiating itself from the mythical account. This adequacy between a statement and the reality that it describes or refers to is what determines or reveals the truth. For this reason, Aristotle

⁸ Parmênides, apud Hermann Alexander Diels, *Die Fragmente der Vorsokratiker*, Berlim, 1906, pags 117-119, "So sollst Du denn alles erfahren: der wohlgerundeten Wahrheit

unerschüterisches Herz und der Sterblichen Wahngedanken, denen verlässliche Wahrheit nicht innewohnt".

⁹ Diógenes Laércio, *Vidas e Doutrinas dos Filósofos Ilustres*, Livro 9, pag 256, UNB, 1987.

¹⁰ Aristóteles, *Métaphysique*, Livro IV, 1.011b-1.012a, Les Échos du Maquis, 2014.

practically created and developed the logical-syllogistic chain, contained in premises and conclusions, which are universal or particular judgments (referred quantity), affirmative or negative (attributed quality).

Among the Stoics, the criterion for truth is what they called cataleptic representation, that is, an impression that our spirit (consciousness) can grasp, coming from something or a real fact, and that cannot be produced by an unreal object or a non-existent fact. This is how Chrysippus and Apollodorus understood it, as Diogenes Laertius informs us in the aforementioned work.¹¹

Therefore, the Latin sentence of Thomas Aquinas, following Aristotle, is very widespread: *Veritas est adaequatio rei et intellectus. Sed haaec adequatio non potest esse nisi in intellectu; ergo nec veritas est nisi in intellectu.* (Truth is the adequacy of the intellect – or thought – and of the thing, and such adequacy can only be in the intellect).¹² To say that the sun shines and warms correspond, from a linguistic point of view and, simultaneously, from a logical point of view (of analysis of the terms of discourse), to a reality that not only I, but all my contemporaries and all previous generations observe as existing and evident. To say that two apples plus two apples make the quantity of four apples is indubitable in any place and at any time in which the statement is uttered. Thus, something is said to be true when (or because its appearance) produces a clear and correct understanding of what it is; and it is shown to be false when this adequacy or appearance does not occur or is not confirmed, either as a fact to which we refer, or as a logical structure with which we refer to it.

Using a different formulation, but maintaining the same meaning of that link, Spinoza wrote: *Ordo et connexio idearum idem est ac ordo et connexio rerum* (The order and connection of ideas are the same as the order and connection of things).¹³ Hence, truth can be defined as a cognitive procedure that proves effective mentally and linguistically in its correspondence or revelation.

For Giambattista Vico, what is true is the fact itself, that is, what we do and are aware of having done (*verum impsum factum*). Therefore, truth and fact (or deed) are interchanged or converted (*verum et factum convertuntur*). Science constitutes the correct knowledge of the kind and manner in which things are

¹¹ Diógenes Laércio, op. cit.

¹² T. de Aquino, *Questiones disputatae de veritate, articulus 2*, corpusthomisticum.org/qvd01.

¹³ Baruch Spinoza, *Obras Completas, Ética*, Second Part, Proposition VII, Editora Perspectiva, S.Paulo.

done by us, which would prevent human beings from knowing the ultimate truth of that which, created by God (or by nature), is already ready, given, or manufactured. The philosopher says: "In Latin, verum and factum have a reciprocal relationship, that is, in the current language of the Schools, they are interchanged. Intelligere is the same as reading perfectly, knowing openly. Cogitare was said in the sense in which we, in the vernacular, say: "to think" and "to collect". Reason (ratio) meant arithmetic calculation and the gift proper to man, by which he differs from brute animals and surpasses them; the man was commonly described as an animal "participating in reason", not its complete master. On the other hand, just as words are symbols and notes of ideas, ideas are symbols and notes of things. Therefore, just as legere is the act of one who collects the elements of writing, from which words are composed, *intelligere* is the gathering together of all the elements of the thing capable of expressing a perfect idea. From this we can conjecture that the ancient wise men of Italy agreed on the following propositions regarding truth: truth is identified with facts; therefore, the first truth is in God, because God is the first creator; this first truth is infinite, insofar as it is the creator of all things; it is the most complete, since it represents God, insofar as it contains the extrinsic and intrinsic elements of things. To know (scire) means to compose the elements of things: therefore, thought (*cogitatio*) is proper to the human mind, intelligence (*intelligentia*) to the divine mind".¹⁴

Let us make a brief digression here about an interesting or at least curious understanding, which is that of Saint Augustine. He, who is one of the so-called Fathers of the Church, analyzes truth through discernment, which means to sort, to pass through the sieve of understanding, separating right from wrong. This capacity is exercised by considering a bipolar situation, the foris and the intus, what is or comes from the outside, and what exists within the spirit, the soul, the heart or, in modern language, the psyche. According to the theologian, the place of truth is not outside of us, in our exterior, but in our interior. We need to perceive what is external – things, words, events –, but the truth only takes shape when, internally, we give our assent or recognition to this stimulus that comes from

¹⁴ Antichissima sapienza degli italici, Opere filosofiche, a cura di Paolo Cristofolini, avaiable at online.scuola.zanichelli.it/lezionidifilosofia.

outside, and which is a manifestation or revelation of oneself. The highest and truest of voices is the one that became flesh, that of Christ, God, who is the Word himself, and through whom everything was made. To give intimate assent to the divine voice and to act according to its *admonitiones* (warnings, exhortations) is to allow oneself to be guided by the truth and to propose oneself to eternal life.¹⁵

Returning to the idea of truth from the point of view of the philosophical tradition, it must be borne in mind that the identification or correspondence between the statement and the thing or phenomenon to which the thought refers concerns both something or a concrete fact, a real state of affairs, and an internal "reality" or one imagined by the mind. In the latter case, for example, I may have in mind figures from mythology, folklore, or literature that are not physical things or events but rather constitute symbolic realities and constructions, endowed with quite precise characteristics. Therefore, if I say that Zeus is the son of Cronus and took possession of Olympus after dethroning his father and emerging victorious in the war against the other Titans, such a statement is true because it fits the mythical accounts. But if I say that Romeo and Juliet fall in love, marry with the consent of their families, have children, and live happily for the rest of their lives, I am committing a gross error and being untrue regarding the meaning and unfolding of the tragedy, as written by Shakespeare. In this case, we have that the truth corresponds to a strict *fidelity* to a previous idea, fact, or report (albeit imaginary).

Throughout Western antiquity and up until the European Renaissance, the vast majority of men firmly asserted that the Earth was motionless at the center of the universe. What evidence allowed such a statement to be considered true and in accordance with reality? The simple fact that when we look at the sky, the undeniable impression we have is that throughout the day the sun moves invariably from east to west, and that is why it rises and sets every day. Furthermore, we do not feel the Earth moving at all. Throughout our short lives, things are always in the same place. *Eppur si muove*, Galileo would have said during a deposition in his trial, which is a myth invented by no-one knows who in the 17th century. This is a long and continuous experience, the one that most

¹⁵ Agostinho de Hipona, *La Vera Religione*, pp. 36 to 39, avaiable at gianfrancescobertagni.it/materiali/misticacristiana/verareligione.

detracts from the senses, just as the fact that we do not see stars during the day does not mean that there are no stars. Fortunately, intuitive reason came to his rescue to first question and then prove the falsity of the Aristotelian-Ptolemaic theory of the solar system.

When we speak of intuition or intuitive reason, we can turn to Henri Bergson, who distinguishes two modes of knowledge. The first is intelligence, which perceives things from a particular point of view, meaning that it focuses on the external aspects of the object and has a practical purpose. Its model is the use or manufacture of things, instruments, and systems. But since the external reality of objects and phenomena is something extremely mobile or changeable, intelligence knows such objects partially, that is, as technical resources or as means of use.¹⁶

Intuition is a second rational mode of knowledge: unlike intelligence, it is capable of transporting itself directly to the "inside" of the object, of capturing its unique character. It is a form of sympathy through which the object or phenomenon offers itself in its simplicity and nakedness. Thus, formulating the theory of gravity, imperceptible directly by the senses, is an apprehension that goes beyond the mode of intelligence (more immediate) to locate itself directly in the intuition of a cosmic order established by nature. More recent examples were the formulation of the existence of the boson particle, confirmed in 2012, necessary for the balance of the physical-mathematical equations on the expansion of the universe and the constitution of gravitational masses, as well as that of gravitational waves, detected in 2016.

The theory of adequacy or conformity between a thing and its statement was partially modified by Kant when he said that the human spirit possesses within itself certain prior categories (a priori), which are independent of experience.¹⁷ In other words, there is an action of thought on the object investigated, through which it formulates a proposition that may become true or false: categories such as space, time, cause, and effect. With this, the object must necessarily pass through such criteria, which are exclusive to reason, therefore there is a formal treatment of this process, and not just a direct or immediate adequacy.

¹⁶ See H. Bergson, *La Pensée et le Mouvant*, PUF, Paris, 1969.

¹⁷ See Immanuel Kant, *Crítica da Razão Pura*, Fundação Calouste Gulbenkian, Lisboa, 2001.

In the preface to his *Phenomenology of Spirit*, Hegel presents a new concept of truth in the context of philosophical-scientific theories, when he states that "truth is the whole" (*Das Wahre ist das Ganze*).¹⁸ Traditionally, the logical Aristotelian principle of non-contradiction is perfectly accepted, since the same thing cannot, under a single relation, *be and not be at the same time*.¹⁹ Hence, it is difficult to accept, simultaneously, two opposing or contradictory theories or conceptions. The truth must be found in one of them, or even in neither. From another point of view, there are timeless truths, especially of an abstract nature, such as mathematics: the square root of 9 will always be 3, as long as it is possible to think of this calculation.

For Hegel introduces into his conception of truth precisely the play of contradictions and temporality. This "whole" of truth is a formation that is completed by a being or a phenomenon, and it is up to the absolute, the totality, to say the essential result that occurs only at the end, where truth is. There its nature, its reality, and the being or becoming of the subject are revealed. Everything is in process, in a progressive mutation of forms or stages. The metaphor used in his Preface is that of a plant: first a simple shoot, it disappears in the development of flowering to give way to the flower and, finally, to the fruit. The "truth" of this plant is the totality of its changes, which causes the seed contained in the final fruit to begin a new cycle. Each of the forms expels the other since they are incompatible with each other; however, the fluid characteristic of this process makes each of them a moment of organic unity.

Similarly, each philosophical or scientific doctrine represents only a particular and contradictory moment in the construction of the truth of the spirit or of universal consciousness. The contradiction between visions and analyses is a condition of a truth that is only fully revealed at the end of a sequence, be it physical, biological, or sociocultural. Hence, truth is found in the totality of such a process. It also, like philosophy itself, or like the bird of Minerva, only takes flight

¹⁸ See G.W.F. Hegel, *Fenomenologia do Espírito*, Editora Vozes, Petrópolis, 1992.

¹⁹ It is worth mentioning here the dual nature of quantum particles, corpuscular and wave-like, a phenomenon that seems to deny the old principles of identity (A = A) and non-contradiction (B cannot be, at the same time, A and non-A). However, even if a quantum object presents the behavior of either a particle or a wave, according to the equipment used to observe it, "the formal representation that quantum physics makes of particles never attributes these two characteristics to them at the same time. Taken together, these two concepts make no sense" (Étienne Klein, Quantum Physics, Instituto Piaget, Lisbon, 1996, p. 40). There is, therefore, no simultaneity.

when twilight falls over the Earth, that is, over the past day, over what has already happened and which can be thought of more comprehensively.

The influence of this Hegelian thought has extended to modern authors such as the logician Simon Laflamme: "A society cannot exist unless it produces both similarity (A) and dissimilarity (non-A). A society is, in essence, the fruit of a dynamic of similarity and dissimilarity".²⁰ In a certain way, Heidegger resumed the old path of pre-Socratic philosophy, amplifying it to a great extent. The relationship between something external and the proposition made about it continues to be fundamental in the pronouncement of truth. But let us see what makes this relationship possible. The philosopher says in the text "On the Essence of Truth": "We are also dealing with an ancient tradition of thought, although not the oldest, according to which truth consists in the agreement (omoiosis) of an enunciation (logos) with its object (pragma) [...] We speak of agreement in various senses. For example, we say that in the presence of two five-mark coins: there is agreement between them by the identity of their aspects. Therefore, they have a common aspect and, from this point of view, they are equal. We also speak of agreement when we say, for example, of one of the coins: it is round. Here the enunciation is in agreement with the thing [...] But in what way should the thing and the enunciation agree, since both elements of the relationship are clearly different? The coin is made of metal. The enunciation is not material at all. The coin is round. The enunciation has no spatial character. The coin allows one to buy an object. The enunciation is never a means of payment [...] How can something completely different, the enunciation, fit into the five-mark coin? [...] The enunciation about the coin relates to this thing insofar as it presents it and says of the presented thing what it is from the main point of view [...] Presenting here means the fact of letting the thing appear before us as an object [...] This appearance of the thing takes place within an opening whose nature of being open (the bosom) was not created by the presentation, but is invested as a field of relation. The relation of the presentative enunciation to the thing [...] takes place originally as the triggering of a behavior. All behavior, however, is characterized by the fact that, established within the open, it remains

²⁰ S. Laflamme, *Dialectique de l'homogénéité et de la différence*, Nouvelles perspectives en sciences sociales, v. 8, 2012, pp. 28-30.

referred to what is manifest as such. That which is manifest, in the strict sense of the word, was early experienced by Western thought as "that which is present" and has long been called "being" [...] within this openness the being is properly posited and becomes susceptible of being expressed in that which is as it is [...] To the extent that the enunciation obeys this order, it conforms to the being. The saying that submits to this order conforms (true). What is thus said is in conformity (true) [...] The openness that maintains behavior, that which makes conformity intrinsically possible, is based on freedom. The essence of truth is freedom".²¹

f Heidegger seeks to define truth as openness to the entity and a state of freedom so that it presents itself as such, avoiding the utilitarian character of objects in their particularity, Wittgenstein follows the path of "investigation of language", because if our knowledge seeks truth, it necessarily does so through language. Therefore, how can truth be expressed linguistically? The natural sciences perform the task of describing the world, and philosophy the task of describing the conditions of possibility of this true description of the world. Therefore, the object of study of truth is a proposition endowed with meaning, that is, a proposition that is the fruit of a thought that carries authentic content and is capable of being described. The meaning that the proposition carries is bipolar, that is, it can be true or false. For this reason, the expression "the house sleeps" does not constitute a proposition that is literally endowed with meaning nor does it have an authentic content, since the verb "to sleep" indicates an action of a living and natural being. The sentence could be figurative – using metaphor or metonymy -, but in this case, there must be an analogy with another whose literal expression is endowed with meaning and authentic content. In this case, in a poem or a novel, it would also be said that, at night, everything in the house is still, in absolute stillness: people and things. In short, for Wittgenstein, in his Tratactus Logico-Philosophicus, truth refers to the existence of a state of affairs (combination of simple objects, existing or not) or facts of the world (what occurs or can occur). There is no other truth than the agreement between the meaning of an image, of authentic content (logically comprehensible, rationally constructed), and the reality described. If this parallelism were not possible

²¹ Martin Heidegger, *Sobre a Essência da Verdade* (About the essence of truth), (Os Pensadores, The Thinkers), São Paulo, Abril Cultural, pp. 135-139.

(structure of language with facts and state of objective things) it would not be possible to describe and understand the world, and all language would be of no use to us.²²

"What is truth?" Bertrand Russell also asks himself. To answer the age-old question, the philosopher initially says that: "Our knowledge of truths, unlike our knowledge of things, has an opposite, namely error. So far as things are concerned, we may know them or not know them, but there is no positive state of mind which can be described as erroneous knowledge of things, so long, at any rate, as we confine ourselves to knowledge by acquaintance. Whatever we are acquainted with must be something; we may draw wrong inferences from our acquaintance, but the acquaintance itself cannot be deceptive. Thus there is no dualism as regards acquaintance. But as regards knowledge of truths, there is a dualism. We may believe what is false as well as what is true. We know that on very many subjects different people hold different and incompatible opinions: hence some beliefs must be erroneous. Since erroneous beliefs are often held just as strongly as true beliefs, it becomes a difficult question how they are to be distinguished from true beliefs. How are we to know, in a given case, that our belief is not erroneous? This is a question of the very greatest difficulty, to which no completely satisfactory answer is possible. There is, however, a preliminary question which is rather less difficult, and that is: What do we *mean* by truth and falsehood? It is this preliminary question which is to be considered in this chapter. In this chapter we are not asking how we can know whether a belief is true or false: we are asking what is meant by the question whether a belief is true or false. It is to be hoped that a clear answer to this question may help us to obtain an answer to the question what beliefs are true, but for the present we ask only 'What is truth?' and 'What is falsehood?' not 'What beliefs are true?' and 'What beliefs are false?' It is very important to keep these different questions entirely separate, since any confusion between them is sure to produce an answer which is not really applicable to either. There are three points to observe in the attempt to discover the nature of truth, three requisites which any theory must fulfil. (1) Our theory of truth must be such as to admit of its opposite, falsehood. A good

²² See Ludwig Wittgenstein, *Tratactus Logico-Philosophicus*, Edusp, São Paulo, 2022.

many philosophers have failed adequately to satisfy this condition: they have constructed theories according to which all our thinking ought to have been true, and have then had the greatest difficulty in finding a place for falsehood. In this respect our theory of belief must differ from our theory of acquaintance, since in the case of acquaintance it was not necessary to take account of any opposite. (2) It seems fairly evident that if there were no beliefs there could be no falsehood, and no truth either, in the sense in which truth is correlative to falsehood. If we imagine a world of mere matter, there would be no room for falsehood in such a world, and although it would contain what may be called 'facts', it would not contain any truths, in the sense in which truths are things of the same kind as falsehoods. In fact, truth and falsehood are properties of beliefs and statements: hence a world of mere matter, since it would contain no beliefs or statements, would also contain no truth or falsehood. (3) But, as against what we have just said, it is to be observed that the truth or falsehood of a belief always depends upon something which lies outside the belief itself. If I believe that Charles I died on the scaffold, I believe truly, not because of any intrinsic quality of my belief, which could be discovered by merely examining the belief, but because of an historical event which happened two and a half centuries ago. If I believe that Charles I died in his bed, I believe falsely: no degree of vividness in my belief, or of care in arriving at it, prevents it from being false, again because of what happened long ago, and not because of any intrinsic property of my belief. Hence, although truth and falsehood are properties of beliefs, they are properties dependent upon the relations of the beliefs to other things, not upon any internal quality of the beliefs".23

In short, Russell requires a theory of truth that: 1. allows it to accept an opposite, namely, falsehood; 2. makes truth a property of beliefs; 3. makes it a property wholly dependent on the relation of beliefs to external, real things. The philosopher goes on to argue: "Thus a belief is true when it corresponds to a certain associated complex, and false when it does not. Assuming, for the sake of definiteness, that the objects of the belief are two terms and a relation, the terms being put in a certain order by the 'sense' of the believing, then if the two

²³ Bertrand Russell, *The Problems of Philosophy*, chapter Truth and Falsehood, Gutenberg Project, gutenberg.org, 1912/2009, no mention of page.

terms in that order are united by the relation into a complex, the belief is true; if not, it is false. This constitutes the definition of truth and falsehood that we were in search of".²⁴

In short, truth is a fact in itself, arranged in a certain order of complexity and association.

This order is what Descartes had already indicated in the first part of his *Discourse on the Method*: "... the diversity of our opinions does not come from the fact that some are more rational than others, but only from the fact that we conduct our thoughts along different paths and do not consider the same things. For it is not enough to have a good mind; the main thing is to apply it well".²⁵ If science intends to find or formulate the truth, it needs a sequence ($\mu \epsilon \tau \dot{\alpha}$) on the path ($\delta \delta \phi \varsigma$), and therefore a method ($\mu \epsilon \theta o \delta o \varsigma$) that is rational. Descartes stipulated four rules for himself, but which could be generalized if others wished to use them: 1) never accept anything as true that you do not evidently know as such, that is, that is not clear and distinct; 2) divide difficulties into as many parts as necessary to better resolve them; 3) conduct your thought in an orderly manner, starting with the simplest parts and moving on to the most complex; 4) review the path taken to ensure that nothing has been omitted.

Perhaps due to the influence of the theory of relativity, it is common to hear the phrase that all truth is relative, implying that it is changeable, indefinable, and even false. Is a certain house on the right or left of the road? The first answer could be that the position of the house is relative. If I go from A to B and pass by the house, it is on my right; if I come from B to A, it is located on my left and, therefore, there would not be a single, definitive, and true position of the house. If the stars are spherical, there is no fixed vertical position, but rather a relative one, that is, in a constant change of position. If the inhabitants of Moscow have a vertical position "up", those of New Zealand will be upside down and so will their vertical plane. It is equally possible to say that it is day in Tokyo and night in Rio de Janeiro and, consequently, day and night are relative concepts. But do day and night, the vertical plane of any given point, and the position of the house cease to be true, given the relative observation used?

²⁴ Idem, ibidem.

²⁵ Descartes, Discurso do Método, *Obras Escolhidas*, pp. 63-64, São Paulo, Editora Perspectiva, 2010.

It seems to me that there is an error here that is either naive or even deliberately insidious because we forget that in order to elaborate or find the truth, a clear order, a distinct rule of analysis or a system of reference is necessary. Relativity indicates the real, effective, true position or displacement of an observer, not of what is being observed or occurring. For this reason, Einstein writes, after having supposed a very long train traveling along its path at a constant speed and the outbreak of two lightning bolts (A and B) simultaneously relative to the railway track: ""When we say that flashes of lightning A and B are simultaneous with respect to the railway track, we mean that the rays emitted from points A and B meet at the middle (M) of the distance A-B situated on the track. But the events A and B correspond to places inside the train. Let M' be the middle of the line A-B of the moving train. This point M' coincides with the point M at the instant in which the flashes of lightning occur, but it moves (to the right in the drawing) at the speed v. If an observer sitting on the train at M' were not being dragged at this speed, he would remain at M and the light rays emitted from A and B would reach him simultaneously, that is, the rays would meet at the point where he was. But in reality, he runs (seen from outside) towards the ray of light coming from B, while fleeing from the one coming from A. Consequently, he will see the ray of light coming from B before the one coming from A. Observers who use the train as a reference body must conclude that lightning B occurred before lightning A. We then arrive at the following important result: events that are simultaneous with respect to the railway are not simultaneous concerning the train, and vice versa".26

Let us add another example. Solar radiation is continually being emitted, but on planet Earth, it will only be seen or felt eight minutes after its emission, given the distance to be traveled. Both events are true, although not simultaneous: the resulting event (the arrival of light on Earth) and the causal emission of radiation (visible, infrared, and ultraviolet spectrum). Furthermore, the physical theory of relativity is universal, absolute, and not relative to an exclusive part of the universe, just as one of its foundations, the speed of light, is absolute.

Finally, a very different conception of truth was given to us by Nietzsche in a short text entitled "On Truth and Lies in the Extra-Moral Sense", in which his

²⁶ *La Relativité*, first part, chapter 9, pp. 34-36, french edition, Payot, 1981.

condemnation of all past values is, once again, reaffirmed. The philosopher, or, if you prefer, the philology professor, says: "What is truth, then? A mobile battalion of metaphors, metonymies, anthropomorphisms, in short, a sum of human relations that have been poetically and rhetorically emphasized, transposed, embellished, and that, after long use, seem to the people to be solid, canonical, and obligatory: truths are illusions that have been forgotten that they are, metaphors that have become worn out and without sensible force, coins that have lost their effigy and now only come into consideration as metal, no longer as coins".²⁷

In other words, why, for Nietzsche, would truth be an object of our preference or veneration? The truth is, above all, a value, in the sense of something that is desired or chosen. Understood in this way, it depends on our vital needs and on what can bring us something useful or pleasant. If, throughout the history of philosophy, sensible reality was considered a domain of illusion, appearance and error, it is because this reality was fleeting, changing, taking away from man or making it difficult for him to master the environment in which he himself is situated. On the contrary, the categories of Being, identity, substance and durability allow man to recognize, amid the diversity and mutability of sensations, points of support to guide his action. Knowledge would thus consist in taking what is unstable and different into a category that is already known and more secure. Therefore, the construction of truth, for Nietzsche, would be an enterprise of falsification of reality, and would consist in erasing the differences and particularities of things, in denying the perpetual metamorphosis of the world. Truth, therefore, would be a useful error for the maintenance of life. It would tend to erase the manifestation of becoming, of transformation, of the flow of things that Heraclitus had already evoked as the highest reality of the sensible world.

It would remain to ask the illustrious thinker whether what he says is the highest and most certain truth, as other thinkers have affirmed his, or just a battalion of metaphors and anthropomorphisms, a simple value that I may or may not attribute to things and the world, according to criteria of personal use and interest. For even if we were to say, convinced of our skepticism, that "nothing

²⁷ Friedrich Wilhelm Nietzsche, *Sobre Verdade e Mentira no Sentido Extra-Moral* (On Truth and Lies in the Extra-Moral Sense), pg. 48, *Nietzsche, Obras Incompletas (Os Pensadores)*, São Paulo, Abril Cultural, 1974.

can be known," this very statement would already be a manifestation of knowledge and truth on the part of the skeptic (I am absolutely certain that I can know nothing), as much as the statement that "everything flows and nothing is perennial." The truth of knowledge, whether theoretical or practical, scientific or philosophical, is not to be confused with mere personal conviction and does not exhaust the truth, but it must be recognized as such, under penalty of remaining silent, definitively, on the subject.

II. Time, Lord of All (Pantocrator)

Time is a child playing with spinning tops; the kingship of a child. Heraclitus, fragment 52.²⁸

We all perceive the passage of time, which seems to dominate or actually dominates our existence. For this reason, we read in Shakespeare that "Whereby I see that Time's the king of men, He's both their parent, and he is their grave, And gives them what he will, not what they crave".²⁹ This idea stems from the simple fact that we realise that things - including ourselves - either change or follow one another, or transform and disappear, without us having any real possibility of stopping them. Or, as Moisés Maimonides asserts in his *Guide for the Perplexed*: "There is no relationship between God (exalted be He!) and time and space; this is evident because it (time) is an accident of movement, supposing in it the idea of anteriority and posterity so that it is numbered, as explained in the places dedicated ex professo to this subject".³⁰ Thus, time accompanies movement, and movement cannot be conceived without time. What is deprived of movement does not fall under time.

If we compare this notion with that of the space that surrounds us, the variation that the latter offers us to move to the right or the left, forward or backward, up or down, has nothing to do with the experience of time. In space, we can move in several directions and go back. Concerning space, our experience is multidirectional. It offers us the possibility of reversal and repetition. But time does not allow us such mobility in real life.

The making of ancient calendars proves the sense of time and the need not only to predict it, but to act according to its passage and renewal. The oldest calendar ever discovered dates back around 8,000 years, having been made during the Upper Palaeolithic period in what is now Scotland, before the advent

 ²⁸ Heráclito, fragment 52, apud Hermann Alexander Diels, *Die Fragmente der Vorsokratiker, Berlim, 1906: Die Zeit ist ein Knabe, der spielt hin und her dir Brettsteine setzt: Knaberegiment.* ²⁹ William Shakespeare, *Pericles, Prince of Tyre,* Act II, Scene III.

^{30 30} Maimonides, *Guia de Perplejos*, chapter 52, p. 144, Editorial Trotta, iberianconnections.yale.edu.

of agriculture in Europe, which dates back around 7,000 years. And, according to the archaeologists who unearthed it, it was used for around four thousand years.³¹

The Sumerian calendar, the first in historical times, was created around three thousand years before our era (in the Bronze Age) and was simultaneously linked to religious festivals and planting seasons in the region between the Tigris and Euphrates rivers in Mesopotamia. The Egyptian Nilotic calendar, as its name suggests, was based on the fluctuations or flow and flooding of the Nile River. All this means that, if not time itself, at least its measurement can be based on different natural or cultural phenomena. In the first case, it is phenomena external to man himself that measure it. The current calendar, the Gregorian calendar, instituted by Pope Gregory XIII in 1582, takes into account not only the birth of Christ but also astral cycles, that is, simultaneously human and natural phenomena.

For centuries, the interpretation of time was made according to two main approaches: on the one hand, a theological view in which time has the function of distinguishing between two domains of being; one, incorruptible, namely, the divine and eternal, and therefore of if not infinite, at least indeterminate duration; and the other sublunary, the realm of corruptible and mortal creatures that are subject to a finite duration. On the other hand, the philosophical approach was initiated in fact by Aristotle and was maintained among philosophers, mathematicians, and scientists themselves.

Considering the existence and observation of natural phenomena, the conception of an unidirectional time, that is, one that invariably advances, was allied in various cultures, and for a long time, with the idea of a cycle or a continuous return, since the regular alternation of days and nights, of the climate and seasons, of the movement of the tides, of the annual planting and harvesting seasons, seems to indicate or converge towards a time conceived circularly in nature.

One of the most widespread and ancient cyclical conceptions is that of the Vedic measurement of time, that of the first Hindus (the Aryan civilization of the Vedas is estimated to have begun around 1,500 B.C.), which predicted cycles of

³¹ World's Oldest Calendar Discovered in UK, National Geographic, 16/07/2013.

approximately twelve thousand years, beginning with a golden age (Satya Yuga), a period in which man would possess profound spiritual knowledge and would live in harmony with nature. Then, the decline would begin, that is, the gradual loss of knowledge, passing through a silver age (Treta Yuga), then a bronze age (Dvapara Yuga) until reaching the lowest level of life, the Kali Yuga, of the dominion of selfishness and predominance of evil. A generalized conflagration would ruin humanity (Pralaya), which would allow the cycle to be renewed, with a new golden age.

In this conception, each present moment would be a point in the manifestation of an eternal dynamic, in which the becoming and the return to a beginning would participate. In the ancient Western world, we also find references to this cyclical idea of time. For example, in the book *Commentary on Aristotle's Physics*, its author, Simplicius of Cilicia (6th century AD),³² one of the last philosophers of the Academy of Athens, preserved a text by Eudemus, a disciple of Aristotle, according to which the new world that is created at the end of a cosmic period is a faithful repetition of the world that has just perished, and thus the master Aristotle himself and his disciples would reappear in the same environment and the same historical circumstances. Among the supporters of this temporal view in Greece, we find Anaximander of Miletus, Empedocles of Agrigento, and Archytas of Tarentum.

From the usual observation that movements come to a halt, that physical processes and their transformations come to an end, the first two philosophers concluded that the universal becoming, being composed of a finite number of particular phenomena, the cosmic process will also come to a halt one day, after a finite interval. But, the philosophers continue, if it were in the nature of the finite cosmos to remain in this state of rest and stagnation, which would correspond to the end of the world, this fatality would have occurred long ago, during the infinite duration that elapsed before the present moment, for there is no reason why the duration of this unique and perishable world should precipitate itself in this infinite segment of time, rather than in any other.

³² Simplicii in Aristotelis physicorum libros, compilation of Hermann Diels, Berlim, Georg Heim, 1882-1895; Commentaire sur le Traité du Ciel d'Aristote, Leuven University Press, 1957.

A fragment of Anaximander, also preserved by Simplicius, states that if the world and the elements that make it up could perish, they would have already ceased to exist. In Diogenes Laertius' interpretation, Anaximander meant that changes occur for particular, singular phenomena, but that the whole, the innumerable set of phenomena, or cosmic period, remains invariable.³³ In another fragment brought by Simplicio, Anaximander concludes that from the same principle from which things and beings derive their origin, they also derive their destruction, since these phenomena mutually *co-respond* according to the order of time.³⁴ As Charles Mugler writes in his work *Devenir cyclique et pluralité des mondes*, for Anaximander, "universal mobility would be attenuated by a rhythm of differentiations and reintegrations, which, by folding the totality of becoming under the same phases and thus bringing back to reality each being and each thing with its environment in space, and its antecedents and consequents in time, had conferred on the passing instant a part of eternity".³⁵

Empedocles conceived of the world as the result of two cosmic forces, one of attraction and the other of repulsion, which he called Love (Philotes) and Hatred (Neixos). Each of these two forces, linked to a material substrate, would trigger different cycles or phases of time, the first of dispersion and expansion of elements, the second of contraction and union of elements. And this model would repeat itself indefinitely.

Aristotle, in turn, devoted himself to thinking about the phenomenon of time not only, but mainly, in his work Physics, between chapters 1 and 9 of book IV. There the philosopher asks himself whether time is, that is, whether it exists as a thing or object, whether it is part of the things that are or are not. In other words, what is its ontological status? And he argues that *either time is not, or it is constituted by a precarious and indecisive being*.³⁶ Overall, the notion of time that we form, or as it is cognitively apprehended, contains past, present, and future. In this division that we make, one part is no longer and cannot be recovered;

 ³³ Diógenes Laércio, Vidas e Doutrinas dos Filósofos Ilustres, Livro II, Capítulo I, pg. 47, UNB, 1987.
³⁴ Anfang der Dinge ist das Unendliche. Woraus aber ihnen die Geburt ist, dahin geht auch ihr Sterben nach der Notwendigkeit. Denn sie zahlen einander Strafe und Buße für ihre Ruchlosigkeit nach der Zeit Ordnung (Die Fragmente der Vorsokratike, opus cit).

 ³⁵ C. Mugler, *Devenir cyclique et pluralité des mondes*, capítulo I, pg. 28, Paris: Klincksieck, 1953.
³⁶ See Aristotle, *Physics*, Book IV, Chapter XIV, Librairie Philosophique de Ladrange, Paris, 1862,

avaiable at remacle.org/bloodwolf/philosophes.

another is not yet and cannot be anticipated. As a result, *the past and the future are not existentially for us*. And the present?

Limited by the past and the future that are not, the present is only an instant ($\tau \circ v \ddot{u} v$). It constitutes an infinitesimal element that disappears as soon as it appears. If the same instant were to last, we would be faced with eternity, that is, a motionless time, probably existing only among the gods. Consequently, everything indicates that time is a dizzying succession of instants, an uninterrupted flow that presents us with an aporia: it is something, but it continually ceases to be so. Time, therefore, as the Greek philosopher thinks, can resemble a line, made up of successive points. But, unlike the points that coexist on the line, the fleeting instants of time replace each other, since they do not repeat themselves. A being that only exists when it ceases to be. Furthermore, if the reality of time rests only on the fleeting instant that projects itself forward ($\xi \chi \sigma \tau \alpha \tau \chi \circ u$), would it not be virtuality and precariousness?

Before Aristotle, Plato had identified celestial revolutions with time, that is, each revolution of an orb or celestial body would correspond to a certain time: the day to the revolution of the fixed stars, the month to the revolutions of the moon, the year to that of the sun.³⁷ This is why Plato claims that time was "born in heaven". In this passage, Plato does not intend to define time in general, but merely points out that the movement of celestial bodies determines a certain time or a measure of time.³⁸ Even modern science does not intend to define it, but only to represent or measure it.

Aristotle argues, unlike Plato, that movement cannot be identified with time, although time depends on it. To do so means not distinguishing between the uninterrupted continuity of time and the units that serve to measure it. Time itself, common to everything, would be one thing, and the rhythm that is found to scan it would be another. A statue or a temple is one thing, and their measurements

³⁷ See Platão, *Timeu-Crítias*, 38-39, Universidade de Coimbra, 2010.

³⁸ "Indeed, days, nights, months, and years did not exist before the heavens were created, for he prepared their generation at the same time that they were formed. They are all parts of time, and 'what was' and 'what will be' are modalities that come from time, which we apply incorrectly to the eternal being through our ignorance. We say that 'it is', that 'it was', and that 'it will be', but 'it is' is the only word that is true for it, whereas 'it was' and 'it will be' are suitable for that which becomes in the course of time – for both are movements [...] Thus time was created at the same time as the heavens, so that, being created at the same time, they are also dissolved at the same time – if indeed dissolution ever occurs in either of them." (Ibid.)

or dimensions are another, which, although necessary for sculpture or a building, are very variable among themselves. The most important and decisive thing, concerning time, is that it presupposes a diversity of instants. Or, in other words, permanence and flight. The philosopher says: "If there were no diversity of instants, but rather an identity of a single instant, there would be no time".³⁹ And if this diversity of instants goes unnoticed by someone, the perception of time also ceases to exist (in dreams, in fainting, in a lethargic state). Therefore, only the perception of the change of instants leads us to the representation of time from a physical-mathematical point of view (the division between the dimension of a path and the speed impressed, or the sum of days, years, or centuries).

Saint Augustine, in his *Confessions*, wonders about the time of creatures, compared to that of God. And thus, the doctor of the Church says to his Lord: "Your years neither come nor go: ours come and go, so that all may come. Your years all exist at the same time, because they do not pass, and those that go are not excluded by those that come, because they do not pass: while ours will only all exist, when all do not exist. Your years are one day, and your day is not every day, but a "today", because your today does not precede tomorrow; for it does not succeed yesterday. Your today is eternity [...] What, then, is time? If no one asks me, I know what it is; but if I want to explain it to someone who asks me, I do not know: however, I say with certainty that I know that, if nothing happened, past time would not exist, and if nothing happened, future time would not exist, and if nothing existed, present time would not exist. How then do these two times, the past and the future, exist, since, on the one hand, the past no longer exists, and, on the other, the future does not yet exist? As for the present, if it were always present, and did not pass into the past, it would no longer be time, but eternity. Therefore, if the present, in order to be time, only comes into existence because it becomes the past, how can we say that it also exists, whose cause of existence is that because it will not exist, that is, cannot we truly say that time only exists because it tends towards non-existence"?40

³⁹ Aristotle, *Physics*, book IV, opus cit.

⁴⁰ S. Augustine, *Confessions*, Book XI, Chapter XIV or paragraph 17 onwards, depending on the edition.

To summarise, it can be said that, for Augustine, the time of creatures is also a fleeting instant (immediately lived present) between two nothingnesses (the past and the future).

In Spinoza's view, duration "It is the attribute under which we conceive the existence of created things insofar as they persevere in their present existence. Whence it clearly follows that between duration and the total existence of any thing there is no distinction of Reason. As much as is taken from the duration of a thing, is necessarily taken from its existence. In order to determine the duration of a thing we now compare it to the duration of things that have an invariable and determined movement, and this comparison is called time. What is time? - Thus time is not an affection of things, but only a simple mode of thinking, or, as we have already said, a being of Reason; it is a mode of thinking that serves to explain duration. It should be noted here, and this will be useful to us later when we speak of eternity, that duration is conceived as greater and lesser, as composed of parts, and finally that it is an attribute of existence, but not of essence".⁴¹

An understanding similar to Spinoza's, although treated differently, was left to us by Kant, especially in his *Critique of Pure Reason*. In this masterpiece, the philosopher sought to answer the questions "What can we know" and "How can we know", trying to put an end to the dispute between idealists and empiricists. It is not possible to explain his entire idea about the role of Reason and Understanding here, but we can state that, for Kant, it is not our cognitive structure that is regulated by objects; on the contrary, it is the objects that must be regulated by our cognitive structure (especially by a priori concepts, those that precede or are before or above immediate experience) to become objects of knowledge.

Pure reason, i.e., before experience, is an indispensable condition for the formulation of general and necessary concepts. It manifests itself in disciplines such as logic, maths, and scientific theories, especially those of physics, but it can also be applied to ethics or law. It is the categories of pure reason that make

⁴¹ Baruch Spinoza, *Metaphysical Thoughts*, I, 4, p. 275, Complete Works I, São Paulo, Editora Perspectiva, 2014.

it possible to universalise knowledge and distinguish between necessary and contingent ones.⁴²

When analyzing any phenomenon, we make judgments a priori (which precede an immediate practice) or a posteriori (according to experience). Another distinction that Kant establishes is that of analytical judgments and synthetic judgments. A judgment is normally composed of a subject and a predicate. For example: this house is painted white. Subject: "house" (what or who is being spoken of); predicate: "painted white" (what is being said about the subject). In this relationship, the subject may or may not already contain the predicate. In the example given, the predicate "painted white" adds something to the subject, since the house could have any other color. This is a synthetic judgment. But if we say "the house has walls", the predicate "having walls" adds nothing to the idea of a house, since it necessarily requires walls to be constituted (except for the house in the song by Vinícius de Morais). This is an analytical judgement. So an analytic judgement doesn't increase knowledge, it just makes it explicit, while a synthetic judgement brings us something beyond the subject. Kant gives the following example of an analytical judgement: all bodies are extensive; and of a synthetic one: some bodies have weight, while others may not. What's more, analytic judgements are a priori, they don't depend on experience, while synthetic judgements must be experienced.43

Now, our power to reflect on things and on ourselves depends on two sources: sensibility (aesthesia) and understanding (judgment, reason). Sensibility is a passive faculty by which objects are given to us, perceived, "felt," while understanding serves us to think, thanks to the formulation of judgments and concepts. Understanding is an active faculty. Taken in isolation, neither of them produces secure, correct knowledge. In the introduction to Transcendental Logic, Kant summarizes this general conception by saying that "thoughts without content are empty, and sensible intuitions without concepts are blind".⁴⁴

 ⁴² See Immanuel Kant, *Critique of Pure Reason*, Introduction and Part One, Transcendental Aesthetics, Calouste Gulbenkian Foundation, 5th edition, Lisbon, 2001.
⁴³ Ibidem, opus cit..

⁴⁴ Critique of Pure Reson, Second Part, Transcendental Logic, op. cit.

It is therefore important to highlight two fundamental elements of this process: *time and space*. One of the origins of our knowledge of things is intuition or sensitivity, that is, the fact that we are affected by objects and phenomena. Both space and time do not constitute real objects or entities, but *pure forms (a priori) of our sensitive intuition* (what is immediately perceived by the senses or by a leap of imagination). "We cannot," says Kant, "concerning phenomena in general, eliminate time, although we can very well subtract phenomena from time (and space)".⁴⁵ In other words, every phenomenon necessarily occurs in a given time and space, although, for later analysis of that same phenomenon, we can eliminate the time and space in which they occur.

But wanting to suppress them is wanting to see without eyes. To repeat, they are space and time, two categories of our pure sensitivity (which precedes any experience) and *sine qua non* conditions, indispensable to understanding, that is, to the analysis and comprehension of phenomena. They are not, therefore, things, they are not properties of things, but forms established by the spirit (everything indicates that plants and animals do not seem to use these categories) for the formulation of knowledge. This means that our understanding does not passively accept the ideas of external things without modifying them. In order to become objects of knowledge, they must adapt to the forms of consciousness.

Everything happens similarly to the liquid that enters a glass or any other container; it necessarily has to acquire the shape of the vessel. "If we suppress our subjectivity through thought or only the subjective constitution of the senses in general, all the properties, all the relations of objects in time and space, and even space and time themselves, will disappear and will not be able, as phenomena, to exist in themselves, but only in us".⁴⁶ Thus, wanting to intuit objects outside of time and space, which are both categories for our understanding, that is, aesthetics or sensations necessary for the capture of those same objects, would be a cognitively impossible action.

Here, a brief preliminary comment regarding Kantian understanding: although the author may be right in saying that time is a category of understanding, not

⁴⁵ Critique of Pure Reason, On Transcendental Aesthetics, Space and Time.

⁴⁶ Idem, Ibidem.

existing in itself, we will see later, with Heidegger, that it is in time that things exist (historically) and, therefore, time could not be solely subjective.

For Henri Bergson, in his *Essay on the Immediate Data of Consciousness*, the notion of time, as it is used by science and in social life, is completely incapable of describing what real duration is. The notion of "immediate data of consciousness" relates to the inner feeling of the continuous duration of one's own existence, this succession of states of consciousness when the spirit ceases to establish a separation between the present state and previous states.⁴⁷ Numbered, measured time, divided into hours and minutes, is perfectly suited to scientific thought because its objective is essentially to quantify or measure; it is also necessary for socioeconomic life, for exchange and trade between men and nations, as well as for work and all other collective relations. But this time has nothing to do with the continuous flow of *duration* that consciousness, more than perceiving, has as its fundamental nature. Duration, whose essence is to pass without ceasing, only exists for consciousness and memory. In other words, duration, the flow of perceptions, only exists as consciousness, as a spiritual act, and this is its condition of possibility.

The "denatured" time of science and social life is inseparable from quantities and space. But the states and facts of consciousness do not develop in terms of quantity and space, that is, they are not quantitative, but, above all, *qualitative*. In order for me to say "there are fifty people," it is necessary to operate the synthesis of these representations, one person after another, each one of them different from the other, and to bring them together simultaneously, that is, to arrange them together not in duration – in the successive dimension – but in space, the dimension of simultaneity. It is necessary to conclude that every operation by which objects are counted implies the simultaneous representation of these objects; this numerical representation is therefore made in space, and not in the typical duration of consciousness.

⁴⁷ Henti Bergson, *Essai sur les données immédiates de la conscience*, Les Presses Universitaires de France, Paris, 1970. For example: "Every clear idea of number implies a vision in space [...] However, looking more closely, one will see that every unity is that of a simple act of the spirit, and that this act, consisting in uniting, needs some multiplicity to serve as its matter." Pg 40.

When it comes to counting psychic or emotional states, mixed with fears, hopes, and all kinds of feelings and passions (love, hate, envy, emulation, etc.) that are not given in space, Bergson says: "The same does not happen if we consider the purely affective states of the soul or even diverse representations of sight and touch. Here, because the terms are not given in space, we cannot count them except by some process of symbolic figuration".⁴⁸ What happens, for example, when we hear a clock ticking? There are two possibilities: without explicitly counting the beats, "I encompass them in a sequence comparable to a melody, in which each sensation merges with the next, and in this case, I limit myself to collecting the impression, so to speak, qualitative that the quantity produces. I therefore find myself in the dimension of duration, with which that stream of consciousness is confused".⁴⁹ Or I count them separately, per unit, in a spatial succession, mathematically. The same happens with the footsteps of a walker, the strikes of a bell, and a musical sequence.

Here we see the essential idea of Bergsonian duration being outlined, the fact that there are two types of multiplicity: that of psychic life, which corresponds to a multiplicity of interpenetrations of sensations, experiences, and knowledge, an almost indistinct multiplicity of qualitative impressions and which creates or flows into an inner, absolutely subjective time; and the precise multiplicity of measured space.

What, then, is the time for consciousness? It is common practice to think of time, as well as space, as a homogeneous and indefinite medium. Space would be the medium of the coexistence of things, and time the medium of the succession of things, contaminated, however, by the presence of space. Time itself, fundamentally for those who live and perceive it, is pure duration, with no similarity to number or quantity, which is the time of the clock and astronomers. Thinking of a pendulum clock, its movement is always the same; and "it is in me, for and through my consciousness that such identical movements are organized and interrelated. If I suppress my consciousness, duration ceases to exist"; if, on the contrary, the pendulum is suppressed, "my heterogeneous duration remains, the duration of the self, without external moments, without relation to number [...] Totally pure duration is the form that the succession of our states of

⁴⁸ Idem, p. 42.

⁴⁹ Idem, p. 43.

consciousness acquires when our self lets itself live, when we do not establish a separation between the present state and the previous ones".⁵⁰

Therefore, there would be, in fact, three dimensions in our life: homogeneous space, homogeneous time (social and contaminated by space), and subjective, interior duration, perceived by the consciousness of oneself.

In *L'Energie spirituelle*, the author says: "All consciousness is memory - preservation of the past in the present. But all consciousness is [also] anticipation of becoming [...] To retain what is no longer and to anticipate what is not yet, is therefore the first function of consciousness. For it, there would be no present if it were reduced to the mathematical instant. This instant is only the limit, purely theoretical, that separates the past from the future. Strictly speaking, it can be conceived, but it is never perceived; when we believe we have caught it, it is already far from us. What we perceive, in fact, is a certain thickness of duration that is composed of two parts: our immediate past and our imminent becoming. We are supported by this past, we are leaning over the future. To lean on and to bend oneself are the characteristics of a conscious being. Let us say, then, that consciousness is a connecting line between what was and what will be, a point between the past and the future".⁵¹

At every moment, the past is partially present in consciousness and this gives us an identity or an axis of permanent self-recognition, at least while we live. Duration is the movement through which consciousness, in an uncapturable present, remembers the past and launches itself into becoming, providing unity and existential identity to each individual who possesses it. Time, therefore, is succession, continuity, change, memory, and projection into inner life. In the absence of subjectivity, time would not exist.

In Martin Heidegger's opinion, the Aristotelian conception of time has changed little throughout history, as he states in a lecture given in 1924, *Prolegomena to the History of the Concept of Time*, quoting the Greek philosopher ("time is nothing in itself and exists only in relation to the events that unfold").⁵² He also asks whether it would be possible to investigate the notion of time not as a flow

⁵⁰ Idem, pp. 50 to 53.

⁵¹ H.Bergson, *L'Energie Spirituelle*, Chapter I, pp. 5 e 6, Librairie Félix Alcan, Paris, 1922.

⁵² Martin Heidegger, *Prolegomena zur Geschichte des Zeitbegriffs*, volume 20 from Complete Works, Vittorio Klosterman, Frankfurt am Main, 1979.

or outflow of things, but to understand it from within itself. In other words, would it be possible to determine the essence of time, that which constitutes it intimately, its pure state, and not the perception that it is something that opposes eternity, that which is counted on clocks, but rather that which subsists prior to the determinations that man never ceases to give it in his daily life and in the sciences? For Heidegger, before him only Bergson had attempted to escape the understanding of time as the counting of clocks. He understands that he reserves an autonomous right to time, independent of movement, as something that arises directly from the temporality of being and entities. "The basic question about the reality of history and nature is the basic question about a specific area. For the question of being, the concept of time is the guiding principle. Thus, the question of the being of entities is linked, if one wants to understand it radically, to a discussion about the phenomenon of time".⁵³ This is what, in a certain way, the philosopher will achieve in what is considered his main work, *Being and Time*.

In this text, we see, firstly, that every being, to be, can only be simultaneously with its specific time. Something only is if it simultaneously generates or appears in the time that is proper for it to exist, its temporality. One cannot name a being (and particular beings) without simultaneously and jointly naming time. Non-being is timeless or lacks temporality. Man, that is, *Dasein* (Being-there, as it is conventionally translated in Portuguese, Presence, or human reality) refers to the temporal being that is conscious and understands its own being in the world and this world is part of itself. But "it belongs to the nature of Dasein's being to be thrown into the world",⁵⁴ not being an act of its own will. He has two characteristics that are like two priorities: one, the priority and care of his own existence (ontic characteristic), and the other, that of the other beings that surround him and with whom he relates since he can understand their existences (ontological characteristic).

⁵³ "Die Grundfrage nach der Wirklichkeit von Geschichte und Natur ist die Grundfrage nach der eines bestimmten Sachgebietes. Für die Frage nach dem Sein, ist der Begriff der Zeit der Leitfaden. Sonach ist die Frage nach dem Sein eines Seienden gebunden, wenn sie sich selbst radikal verstehen will, an eine Erörterung des Phänomens der Zeit". Pg. 10.

⁵⁴ Being and Time, portuguese version, First Chapter, paragraph 10 [49], p. 93 and following. Editora Vozes, Petrópolis, Editora São Francisco, Bragança Paulista, 2015.

Dasein is also, very particularly, a projection, a throwing itself forward and outside itself, the only being that has the possibility, that is, that is capable of defining its own being (Sartre would later say that existence precedes the essence of Being-there). Thrown into the world and being forced to assume being in the world, Dasein is understood, firstly, under the mode of anguish (die Angst, ein angstfült Seiende), which arises from the perception of the inevitability of death, of its own abandonment and its nullity. Dasein's anguish is the anguish of this nothingness, while fear is the fear of something restricted. But Dasein is, simultaneously, not only an anguish but also a care or concern for itself, for other humans, and things (die Sorge). Absorbed by its cares and concerns, Dasein constantly "transports" itself, thus creating a sui generis temporality (Zeitlichkeit), with which it produces a particular history, that of a society or culture, of all humanity and also the history of other beings (such as the history of the formation and changes of the Earth, geology and animals). That is, he is never "closed" in himself, like other creatures, but always "outside" himself (Aus-sichheraustreten), circulating in the three dimensions of time: "beyond", in his future or because of his project, "back there", as a result of his past, and "here before", in the present moment.

Thus, among the determinations of time (past, present and future), the present is the least capable of sustaining an analysis of what is authentic, with this role falling to the future. Projecting oneself forward, with a view to oneself and one's potentialities, an action that is based on becoming, is a characteristic trait of existence. This condition pushes Dasein to live "outside itself", in "ecstasy", according to the original Greek meaning ($\epsilon \kappa \sigma \tau \alpha \tau \kappa \delta v$), in an authentic or inauthentic way. The anguish of its nullity and care act to create this authenticity or inauthenticity. The inauthentic is the forgetfulness of its finite temporality, the absence of *amor fati* (the love for the common destiny of men), and the dedication to the trivialities of life, without perceiving the profound futility and overcoming of the things of the world. Those who live authentically live the daily life of their people and their times but do so with the necessary distance so as not to be swallowed up by the everyday irrationality of unrealizable actions and projects or those formulated heteronomously, in a way that is foreign to Dasein itself. On the contrary, those who live authentically live guided by reason and according to their

personal possibilities, knowing, at the same time, how to realize them and accept them within their limits.

Transporting us to a neighboring area, that of science, Stephen Hawking writes: "Before 1915, space and time were regarded as a fixed stage on which events occurred, unaffected by what happened in them. This was true even of the special theory of relativity. Bodies moved, forces attracted or repelled each other, but time and space simply remained unchanged [...] The situation, however, is quite different in the general theory of relativity. Space and time are now regarded as dynamic quantities: when a body moves, or a force acts, this affects the curve of space-time, and in turn, the structure of space-time affects how bodies move and forces act".⁵⁵

Einstein's theory of special relativity postulated that the speed observed or measured by an object depends on the observer who acts observing or measuring. Thus, the measured time can be very different if two observers located at different points in space observe the same object moving. And if one of these observers is in motion, the time he finds in his measurement will be proportional to the speed at which it moves.

For example, a beam of light sent from Earth to the moon to measure the distance between the two stars will take x seconds to travel there and back for an observer on Earth, recording a distance of 384 thousand kilometers. However, for an astronaut traveling near Earth and the moon, the same beam of light will take longer to detect, because to him the distance between the two stars will appear to be extended, both because he is moving and because the beam of light describes a zigzag movement, not a straight line, like that of the observer on Earth. In other words, clocks or time markers in motion move more slowly than clocks that are "stationary" or closer to the center of gravity, since the reference points (the coordinates) are not the same.

With general relativity, which incorporates gravity and energy fields into its postulates, Einstein defended the well-documented idea that the density of matter (a large mass) produces a curved space-time structure that modifies the trajectory and speed of electromagnetic particles and objects that enter its field

⁵⁵ S. Hawking, *Uma Breve História do Tempo* (A Brief History of Time), pgs. 59 e 60, Rocco, 5ª ed., Rio de Janeiro, 1988.

of action (it is worth noting, in connection with the name general relativity, that the first two and most important principles of the theory are: in the universe, all the laws of physics are the same for all observers, anywhere and at any time, regardless of the effects of motion and gravity; the speed of light is constant [or absolute] and nothing can exceed it. Therefore, despite the name relativity, Einstein's laws are universal, and not relative to a part of the universe). Thus, the more powerful the gravitational field, the slower a clock will run compared to one that is less subject to gravity. Space-time thus has four dimensions: three spatial and one temporal, all of which are deformed by the presence of a large gravitational mass. A very common example today is that of the atomic clocks around the Earth, which are part of the GPS (Global Positioning System), which require constant correction to compensate for the effects of Earth's gravity and the curvature of space-time.

From the point of view of cosmology and the physical-chemical processes that occur in nature, it seems that irreversibility and thermodynamic entropy are inevitably linked to the origin of time and the universe itself. The birth of time with the creation of matter and energy is characterized by the impossibility of a return to what was created, be it spatial or temporal, and in this respect, we have what is called the *arrow of time*. It manifests the very diffusion of light, which spreads forward, as if towards "the future", as well as the natural tendency of things to mix, cool, and deteriorate, as the second law of thermodynamics proves. In other words, in the course of an irreversible physical-chemical process, entropy always increases, which means an unavoidable change in the future state. Time, therefore, is the inherent expression of change and deterioration of everything, whether that whole is natural, cultural, or artificial.

But returning to philosophy, the most recent contribution to the interpretation of the phenomenon seems to me to have been that of André-Comte Sponville, in a pamphlet entitled Being-Time.⁵⁶ In this text, the philosopher presents four theses on the subject. In the first of these, from which all the others derive and depend, he states that *time is the present*, an interpretation already offered by Chrysippus, a Greek Stoic philosopher, but which Sponville enriches. In his own

⁵⁶ A. Comte-Sponville, *O Ser-Tempo*, Martins Fontes, São Paulo, 2006.

way, Gregory of Nyssa (the first Father of the Church) also attributes the greatest importance among the three intervals of time to the present. Referring to the need for prayer as an intimate dialogue with God, the theologian says: "You are master only of the present, so that, even if you do not cease to give thanks continually, you will only be able to pay your debt by the grace of the present, without being able to find, either for the past or for the future, any means of compensating for what you are indebted to."⁵⁷

For Sponville, the permanence of the present moment is the only temporal reality. If all consciousness were to disappear from the universe, there would be nothing more than a present without memory and anticipation. Both memory (of the past) and anticipation of the future (foresight) only subsist and can only be enunciated here and now, in the present moment. And in this continuous present – being children in the present of childhood, being adults in the present of maturity, being old in the present of old age – there is an analogy with truth. A true fact or phenomenon was not true before and will not be true afterwards, because truth is only present, without depending on a *before or after*. The fact that Socrates truly existed is that his existence occurred presently in his time, that is, neither before nor after.

That is why Sponville states: "What Spinoza calls duration, and what I will call being-time, is something other than a measurement; it is not the result of a sum (mathematical time) or the limit of a division (the instant), but the undivided continuation, divisible only by thought, of an existence. Time, to put it another way, can only be reduced to the present if the present endures; therefore, the present instant must also endure and remain the same, although always changing [...] The fact that the same event can be in the future, in the past, and in the present for three distinct observers does not in the least alter the fact that each of these observers, and even the event itself, objectively exists only in the present. This does not prevent, and would rather confirm, that only the present is real".⁵⁸

⁵⁷ Grégoire de Nysse, *Homélies sur le Notre Père*, pg. 311, Paris, Cerf, 2018, (Collection Sources Chrétiennes).

⁵⁸ A. Comte-Sponville, op. cit., pp. 55 to 58.
The second thesis is that the present is eternity itself: if only the present exists for things to happen, and this present endures, it continues to be present at every moment. This would be what Augustine called "God's perpetual today." In other words, the present replaces itself, and that is why it is present, and that is why it is eternal, not in the sense of infinite duration without change, but in the sense of an identity of being there that necessarily involves each event. Today, here and now, has just succeeded a today, here and now of seconds ago, of previous days, of past centuries that were, in their existence, present. This phenomenon constitutes, in the philosopher's statement, pure succession. Succession because there is movement, change, becoming; pure because it only replaces itself in real existence.

Thus, speaking of the arrow of time, that is, of a temporal succession that always goes forward, that goes from a past that produced the present, and from this to an inevitable future, is the point of view of scientific consciousness, one that moves between the past cause, the origin, and the future consequence, the result of an action. The arrow of time means that time (whatever it may be) is irrepressible as to the future and irreversible as to the past. This is the history of beings and beings. But, despite this inevitability, it remains an imaginary concept, because who has ever lived the same day twice, yesterday, or tomorrow in today? Therefore, if there is an arrow of time, it is because time is, simultaneously, the arrow that moves forward and the target itself to be reached, that is, the present lived or actually existing, real.

Sponville's third thesis takes up Heidegger's assertion: being and time are inseparable. Hence Sponville says: "Time is being, for what could change, or what could last, if nothing existed?... What is real must last, persevere in its being, subsist, insist. I choose this word insistence on purpose, to oppose it to existence, which has been filling our ears for more than half a century [...] What I understand by insistence would be something inherent to every being, conscious or not, alive or not: the etymology suggests the meaning of that which strives to preserve itself within itself, within a time and space that are immanent to it and on which it depends".⁵⁹

⁵⁹ Ibidem, pp. 89 to 93.

Only through insistence, through a natural being-there, can one think of existence. This insistence of being, which manifests itself only in a continuous present, says Sponville, is not his invention but rather takes up Epicurus' ideas of *force*, Lucretius' *energeia or vis*, Spinoza's *conatus*, Schopenhauer's *will*, or Nietzsche's *will to power*. Therefore, being is simultaneously time and time is simultaneously being, which can only manifest itself in the present.

The fourth and final thesis states that time and space are matter. In other words, the present state is the very being of things occupying a certain space, which constitutes matter and emptiness. The author says: "Only the spirit can give an appearance of existence to what is no longer (past) or to what is not yet (future); everything that exists independently of the spirit, therefore, everything that exists, only exists in the material present [...] Being is being or being present at a point in space-time, and this is what is called matter, or, as modern physicists say, matter-space-time". Matter, what demonstrably exists here and now, "is, from a philosophical point of view, an essentially negative concept: it is everything that is not of the spirit, of consciousness, of thought, and that exists independently of the consciousness that we have of everything".⁶⁰

To conclude, let the reader allow me to bring what Erasmus of Rotterdam reveals to us in one of the 4,200 aphorisms that he collected and commented on in his monumental book Adagiorum, from writers, poets, and intellectuals of antiquity, such as Aulus Gellius and Tertullian, the latter one of the first Christian authors, whose life was spent in Carthage, between 160 and 220. This is the aphorism "tempus omnia revelat". Erasmus writes: "Tertullian refers to it in his Apologeticum contra ethnicos (Apology Against the Pagan Nations): 'Rightly, then, since time reveals everything, your proverbs and sayings bear witness to it.' Aulus Gellius, in the twelfth book, quotes a sentence from a verse by Sophocles: 'For this reason, hide nothing, since seeing and hearing everything, time reveals everything'".⁶¹

⁶⁰ Ibidem, pp. 104-108.

⁶¹ Erasmo de Roterdã, *Adagiorum*, Bompiani Libri, Nederlands Letterefonds Dutch Foundation, Milano, 2014. Proverb 1317, Tempus Omnia Revelat: Tertullianus quem divus Cyprianus praeceptorem suum appellare consuevit, in Apologetico contra ethnicos "bene autem" inquit, "quod omnia tempus revelat, testibus etiam vestris proverbiis atque sententiis". Aulus Gellius Noctium Atticarum livro duodecimo, cap. Item duodecimo, citat in hanc sententiam hos Sophocles versus: "ob ista ne quid occulas siquidem intuens / cuncta audiensque, cuncta proferet

In the same passage, Aulus Gellius warns that one of the old poets had called truth the "daughter of time," because even admitting that it has sometimes been hidden, with time, nevertheless, it comes to light. Thales had the same belief when he said that "time is the wisest of all, for it always discovers everything." And Pindar (in the *Olympics*) calls time the father of all things, because everything happens with the passing of time, and says: "Not even time, the father of all things, could make what happened not happen."

dies... Pindarum in Olympiacis "posteri dies sapientissimi testes"; idem alibi tempus "omnium parentem" appellat, quod nihil non fiat progressu, is est "ne tempus quidem, rerum omnium pater, possit, quod factum est, infectum reddere".

III. Between Technophilia and Technoprudence⁶²

One fatal Tree there stands of Knowledge call'd, / Forbidden them to taste: Knowledge forbidd'n? / Suspicious, reasonless. Why should thir Lord / Envie them that? can it be sin to know, / Can it be death? and do they onely stand / By Ignorance, is that thir happie state, / The proof of thir obedience and thir faith? / O fair foundation laid whereon to build / Thir ruine! Hence I will excite thir minds / With more desire to know, and to reject / Envious commands, invented with designe / To keep them low whom knowledge might exalt / Equal with Gods; aspiring to be such, / They taste and die: what likelier can ensue? (John Milton, Lost Paradise, Book IV, 515-520 – Satan words.)

In the eighth circle or pit of hell, Dante meets Ulysses and asks the seafaring hero, through Virgil, to tell them how he came to die. Engulfed in flames, the one who had been, at the same time, the cunning and daring Greek prince, thus expresses himself: "When I From Circe had departed, who concealed me / More than a year there near unto Gaeta, Or ever yet Aenas named it so, / Nor fondness for my son, nor reverence / For my old father, nor the due affection / Which joyous should have made Penelope, / Could overcome within me the desire / I had to be experienced of the world, / And of the vice and virtue of mankind; / But I put forth on the high open sea / With one sole ship, and that small company / By which I never had deserted been. / Both of the shores I saw as far as Spain, / Far as Morocco. and the isle of Sardes, / And the others which that sea bathes round about. / I and my company were old and slow / When at that narrow passage we arrived / Where Hercules his landmarks set as signals".⁶³

After passing the extreme point where the Mediterranean meets the Atlantic, a symbol of the limits of known space and human adventure, the prince continues: "Five times rekindled and as many quenched / Had been the splendour underneath the moon,/ Since we had entered into the deep pass, / When there

⁶² We could have used the word technophobia here as a contrast to technophilia, meaning not an irrational phobia towards technology, but rather a distrust or reservation regarding the messianic or redemptive character of technology. However, we believe that technoprudence indicates a more serene attitude in the analysis of the problem.

⁶³ Dante Alighieri, *Divine Comedy*, Circle Eight, Canto XXVI, translated by Henry W. Longfellow, avaiable at wyomingcatholic.edu.

appeared to us a mountain, dim / From distance, and it seemed to me so high / As I had never any one beheld. / Joyful were we, and soon it turned to weeping; / For out of the new land a whirlwind rose, / And smote upon the fore part of the ship. / Three times it made her whirl with all the waters, / At the fourth time it made the stern uplift, / And the prow downward go, as pleased / Another, Until the sea above us closed again".

The story told by the Florentine poet, unlike that offered by Homer, has as its epithet the "insane flight" (folle volo) desired and even carried out by men in search of knowledge and actions that go beyond the limits of their condition and fragility, imposed or offered by nature.

This desire to know and to act, simultaneously courageous and reckless, of Dante's Ulysses, is reproduced in modern times with the maritime voyages of the Iberian explorers. Portuguese-language literature has another poet who also perceived such an incurable desire: Camões. In Canto IV of The Lusiads, we come across the Old Man of Restelo who, upon seeing the ships preparing to conquer new worlds, thus disapproves of the great and daring Portuguese expeditions: "O frantic thirst of honour and of fame, / The crowd's blind tribute, a fallacious name; / What stings, what plagues, what secret scourges curs'd, / Torment those bosoms where thy pride is nurs'd! / What dangers threaten, and what deaths destroy / The hapless youth, whom thy vain gleams decoy! / By thee, dire tyrant of the noble mind, / What dreadful woes are pour'd on human kind: / Kingdoms and empires in confusion hurl'd, / What streams of gore have drench'd the hapless world! / Thou dazzling meteor, vain as fleeting air, / What new-dread horror dost thou now prepare! / High sounds thy voice of India's pearly shore, / Of endless triumphs and of countless store: / Of other worlds so tower'd thy swelling boast, / Thy golden dreams when Paradise was lost, / When thy big promise steep'd the world in gore, / And simple innocence was known no more".⁶⁴

The poet, even though he is the one who extols the extraordinary deeds of his contemporaries, here gives a word of warning to these same ambitions of glory, fame, and honor, which, deep down, mean power and conquest, unbridled greed and the innate vanity of humanity (mist or smoke, as the Hebrew Qoheleth says

⁶⁴ Translation by Williams Julius Mickle, George Bell and Sons, Covent Garden, London, 1877.

textually), sufficient causes of men of all nature, including the vain hope of infinite power, capable of seizing even the celestial kingdom.

Man has already been defined by Western culture as a living being endowed with speech and thought (*zoon logon ekon*); as a socio-political being, who establishes common norms (*zoon politikon*); as a being who strives to maintain the reproduction of his living conditions (*homo laborans*); who is aware of himself and his surroundings, or else a window that opens first and foremost onto himself (*homo sapiens*); who ensures his subsistence through an orderly action between production and consumption (*homo oeconomicus*) and a skilful producer of tools or instruments that are always useful for his purposes (*homo faber*).

For it seems to have been precisely with the idea of progress and the industrial revolution that the pride of *homo faber, technicus et oeconomicus* not only supplanted but began to guide or drag along all the other characteristics that could be attributed to it, including that of homo ludens, a being who plays freely with imagination and creativity. Technicist ideology, or technophilia, is this conception and hope that science and its fruits or applications will correct all worldly defects and save us from all the contradictions and miseries we still live with.

In the "Preliminary Discourse" of the French Encyclopedia of 1751, written by D'Alembert, the concept of infinite progress is still quite dubious, since, for the philosopher and mathematician, human nature does not always change favorably with the dominion it exercises over the material world. Hence we can read: "The general system of sciences and arts is a sort of labyrinth, a tortuous path in which the mind embarks without really knowing the route to follow. Pressed by its needs and by those of the body to which it is attached, it initially studies the first objects that present themselves to it; it penetrates as far as it can into the knowledge of these objects; it soon encounters difficulties that deter it and, whether out of hope or despair of overcoming them, it sets out on another path; it soon retraces its steps and overcomes the first barriers to encounter others later; and passing rapidly from one object to another, at different intervals and as if by jerks, it makes each of these objects a series of operations whose generation of ideas makes discontinuity necessary [...] The masterpieces that the ancients had left us in almost every genre had been forgotten for twelve centuries. The principles of science and art have been lost, because the beautiful and the true, which seem to show themselves to men from all sides, do not reach them unless they are warned of it [...] Let us not be surprised, therefore, that our works of the mind are generally inferior to those of the preceding century. One can even find the reason in these efforts we make to surpass our predecessors. We have, at the same time, more principles to reflect upon, greater lights, better judges, and fewer good works".⁶⁵

But from the 19th century onwards, the surprising achievements of industrialization generated widespread confidence, something never seen before. Only a few intellectuals with an Enlightenment spirit (or who were previously Enlightenment-minded, such as Leibniz) had viewed man's journey on Earth with complete optimism. The positivist conception of knowledge and human action seemed crystal clear. In a very summarized way, it was taken for granted that: 1. one can only truly know what the scientific method applied by the natural sciences allows us to investigate; and this method, which formulates the laws of cause and effect of phenomena, applies equally to the examination of society and, therefore, to the social sciences; 2. the technical application of scientific knowledge is the only or, at least, the best solution for human problems and their concrete interests; 3. consequently, there is real hope in rationality, in the continuous and growing progress of societies, as well as in the technological mastery of nature; 4. through processes or stages, everything evolves from the simplest to the most complex, from the undefined/imperfect to the defined/perfect, or even from contradictions to stability – matter, life, art.

With the belief in such power and effectiveness, it was stated that what technical knowledge can achieve is morally, socially and economically justifiable. Theoretical knowledge and its practical application will free human beings from superstition and ignorance, elevate them to the status of masters of nature and make them the happiest of creatures. Technoscience continues to shape not only the production, distribution and consumption of instruments and machines, goods and services, but also, and certainly, most mentalities and the functioning of companies and institutions, both public and private. The evidence, still prevalent today, is that technoscience and the current cybernetic, computerized and

⁶⁵ Jean le Rond d'Alembert, *Discours Préliminaire à l'Encyclopédie,* pp. 30 and 31, Les Echos du Maquis, 2011, philosophie.cegeptr.qc.ca.

automated world are more powerful than our physical and mental capacities (even if derived from them), which undoubtedly notably increases the efficiency and precision of tools, machines and devices, as well as notably reducing or even freeing us from various daily needs and tasks. Feelings of freedom, sociocultural equality, competence and power over things and phenomena are expanding with the speed of communication, leading to the instantaneity of almost all actions and the satisfaction of desires, especially material ones. Through the worldwide web and virtual communities, freedom of expression, suggestion or collective incitement and organization seems infinite, even though equally technical blocks or restrictions can be applied for criminal, dishonest, or obscene purposes. It is as if all the powers or energies of nature could be progressively subjugated and domesticated for the greater happiness and longevity of human beings. For technophiles, this exponential development contains a perspective, that is, something that is not limited to making history, but also to giving it a purpose.

From another point of view, with current and future connectivity, archiving, and processing devices, we can access almost all of the world's knowledge contained in books, as International Business Machines (IBM) assures us. One example of such evidence: the current eleven million volumes of the National Library of France will be contained in a single electronic piece twelve centimetres on a side and a tenth of a micron thick.

At the same time, pervasive computing is growing, capable of integrating computing power into everyday objects (clothes, vehicles, equipment, and household appliances, for example) to make them communicate and perform useful tasks. Unlike desktop computing (a personal computer screen), ubiquitous computing can work with any device, anywhere, at any time, connecting people, machines, and objects. Its highest ideal is to make computing so exciting, so marvellous that we never leave it 24 hours a day. It is to make it so "invisible", so embedded in all things, that we no longer even think about its existence.

Hence an optimistic analysis such as that of Pierre Lévy in *L'Intelligence collective: Pour une anthropologie du cyberspace*.⁶⁶ For the author, collective intelligence is defined as an intelligence distributed everywhere, continually

⁶⁶ See Pierre Lévy, *L'Intelligence collective: Pour une anthropologie du cyberspace*, Paris, La Découverte, 1997.

valued and coordinated in real (immediate) time, and which results in an effective mobilization of skills. In a later text, written for the journal Sociétés, the philosopher and professor says: ""The emergence of this new field of research intervenes in the context of a remarkable growth of interactive, collective and decentralized modes of communication through an increasingly extensive, dense and powerful network of interconnected computers. This new mode of communication is spreading at the same time as international economic relations are intensifying (globalization), economic and organizational structures are undergoing rapid changes (knowledge economy, virtualization of organizations) and new modes of production and communication of cultural signals are being invented (digitalization, deterritorialization, virtual communities)... As for practical and aesthetic issues, they are linked to teaching, training, and intervention projects aimed at stimulating or improving processes of intellectual cooperation, whether in research networks, groups involved in collaborative learning, companies, online markets, administrations, associations, and virtual communities of all kinds".67

In the section on *The Doctrine of Progress* in his book "Technics and Civilisation", Lewis Mumford writes: "In the eighteenth century the notion of Progre~s had been elevated into a cardinal doctrine of the educated classes. Man, according to the philosophers and rationalists, was climbing steadily out of the mire of superstition, ignorance, savagery, into a world that was to become ever more polished, humane and rational-the world of the Paris salons before the hailstorm of revolution broke the windowpanes and drove the talkers to the cellar. Tools and instruments and laws and institutions had all been improved: instead of being moved by instincts and governed by force, men were capable of being moved and governed by reason. The student at the university had more mathematical knowledge than Euclid; and so, too, did the middle class man, surrounded by his new comforts, have more wealth than Charlemagne. In the nature of progress, the world would go on forever and forever in the same direction, becoming more humane, more comfortable, more peaceful, more smooth to travel in, and above all, much more rich".⁶⁸

⁶⁷ Sociétés, nº 79, pp. 105 and 106, Paris, 2003.

⁶⁸ L. Mumford, *Technics and Civilization*, pg. 182, Routledge and Keegan Paul, Londres, 1955.

For his part, Oswald Spengler ironically adds about the hope of continuous improvement: "No more wars, racial distinctions, differences between peoples, between states or religions; no more criminals, adventurers or conflicts arising from differences between one and the other, nor hatred or revenge; only an endless comfort until the end of the centuries".⁶⁹

As a final corollary, there is the utopian and redemptive face of technology, which today still predominates among scientists, technicians, businesspeople from all fields, economists, administrators, and the majority of the population.

But before we continue, let us take a step back and ask ourselves: after all, what do we understand by technique and, currently, by technoscience? Without there being any hierarchy in the description that follows, nor any intention, evidently, to exhaust the subject, the technique is, initially, an artificial adaptation of the environment and its phenomena (such as mechanical and physicalchemical ones) and of other natural creatures for the conservation of the human subject itself - for example, controlling fire and manipulating it to cook food, or using flint to carve or cut another object; at the same time, technology is a means, or even a method, of satisfying, reducing or eliminating the most painful nature of primary or secondary needs, and of creating new ones, material or spiritual, which arise from them almost automatically, employing tools, utensils and machines. For example, to have access to fire when needed, there is a need to cut and store firewood, which requires a new instrument, the axe, made of stone or iron; or to use a horse, all the harnesses essential for controlling the mount (saddle, bridle, stirrups) are manufactured. Due to the need for writing, stone slates, clay tablets, parchment, paper, typewriters, keyboards, and computer screens have been created throughout history. In other words, the creation of a need inevitably leads to a tool, apparatus, machine, or artificial resource; and these, in turn, suggest their improvement and stimulate their overcoming, in a sequence that seems unavoidable to us.

Analyzing the transformations between the Paleolithic and Neolithic periods, Spengler also wrote: "As we delve deeper into this new universe of forms of human activity, we soon become aware of the existence of complex and bizarre relationships. All these forms of activity presuppose techniques that enable them

⁶⁹ O. Spengler, *O Homem e a Técnica*, pg. 38, Lisboa, Guimarães e Cia. Editores, 1980.

to exist. Animal husbandry requires the cultivation of fodder; the sowing and harvesting of edible vegetables requires the availability of draft animals and pack animals, just as these require enclosures. Construction, of any kind, also does not dispense with the preparation and transportation of materials, and this transportation presupposes paths and roads, vehicles and boats".⁷⁰

Thirdly, there is the more restricted conception of technique as a sequential and ordered set of rules and procedures for carrying out a given operation, which is confused with the notion of protocol, which is very much in vogue today: flight technique, sculptural technique, diving technique, surgical technique or even laboratory techniques.

And finally, it is worth remembering that technique, as a more effective way of doing something, predates science, the theoretical knowledge that investigates and controls its own experience, and was largely developed through the practical and immediate knowledge of family generations and merely empirical conditions, before becoming closely linked to it, which can already be seen from the Renaissance onwards. Significant examples of this combination can be found in optics (light radiation, lenses, mirrors, glasses, shadow formations, creation of the telescope), with Giovanni della Porta (Magiae naturalis, 1584), Francesco Maurolico (*Photismi de lumine et umbra*, between 1521 and 1530), Galileo Galilei and Johann Kepler; and in pyrotechnology (production, refining and control of the casting of metals and ceramic pieces), in the works of Vannoccio Biringuccio (De la pirotecnia, 1540) and Georgius Agricola (De re metallica, 1556). From then on, and progressively in all areas of research and practical application, "a technological device can lead to both a scientific advance and a new technological device, and the potential in the association of technology and science is a chain reaction of scientific discovery and technological invention".⁷¹

For his course "Meditation on Technique," taught in 1933, Ortega y Gasset wrote: "Technique is the opposite of the subject's adaptation to the environment since it is the adaptation of the environment to the subject. This alone would be enough to make us suspect that we are dealing with a movement in the opposite

⁷⁰ Ibidem, pp. 76 and 77.

⁷¹ Melvin Kranzberg, *The Unitiy of Science-Technology*, American Scientist, v. 55, pp. 48 to 66, 1967.

direction to all biological movements. [...] From which we can deduce that man's commitment to living, to being in the world, is inseparable from his commitment to being well. Furthermore, that life means for him not simply being, but well-being [the need for needs, according to the author] [...] Let us therefore remain with the idea that human needs exist only for the sake of well-being. And this complicates things formidably. Because, who knows what man has ever understood, understands, or will understand about well-being"?⁷²

These constant changes in their needs, which range from the essential to the superfluous (which, in turn, also becomes a need or an imperative desire) make the human being not something entirely given, an entity that is content to be just what it is, but a pretension, a project, which is realized or not, albeit differently, according to its past and its contemporaneity. Technology, whether of a material or spiritual nature (if we consider creations of language, art, and theory as such), is an indispensable means of this pretension or project.

The most pertinent and still controversial question, which only time will be able to resolve (although too late), refers to the consequences or where the development of the phenomenon or technical civilization is leading us. This is not just about pointing out the most obvious risks of fossil fuel exploitation, the use of pesticides, the drastic reduction of biodiversity, the suffocating accumulation of waste and debris, the global computer communications network, such as fraud, spying on private life, fake news, extremist and irrational speeches or generalized system failure.

Well before that, that is, since the beginning of the 20th century and the First World War, we have been aware that, globally, "technology has become autonomous and constitutes a devouring world that obeys its own laws, denying all tradition [...] its evolution is too rapid, too subversive to integrate traditions [...] permanent invention constantly transforms acquired habits [...] As for his destiny, man cannot currently choose his means, by technical autonomy, since the variability, the flexibility of technology [...] do not prevent that, at a given time and place, there is only one usable technical means [...] [such as, for example, dispensing with electrical energy, whatever its mode of production?] This

⁷² José Ortega y Gasset, *Meditación de la Técnica*, Obras Completas, tomo V, 6ª edition, pp. 326 to 328, Revista de Ocidente, Madrid, 1947.

technique is endowed with a 'specific weight', it is a power with its own strength [...] regardless of the objectives that man may attribute to a given technical means, since the means contain within itself a virtual purpose from which it is impossible to divert it. And if there is competition between this intrinsic purpose of the means and an extrinsic end proposed by man, it will always be the former that prevails [...] far from being held back by any scruples in the face of the sacred, technology does not rest until it has accomplished its work in it. Everything that is not yet technical must become technical; technology denies the mystery. This is only that which has not yet been technicalized [...] technology is sacred because it is the common expression of man's power and because without it he would once again be poor, alone and naked, without disguises, ceasing to be the hero, the genius, the archangel that an apparatus allows him to be at a modest price".⁷³

Ortega also argues, in the form of a warning: "There are those who believe that today's technology is more firmly established in history than others because it has ingredients that differentiate it from all others; for example, its scientific basis. This supposed certainty is illusory [...] All these certainties are precisely those that endanger European culture. Progressivism, believing that a historical level had already been reached at which there was no room for substantial regression, but rather that it would advance mechanically towards infinity, released the pegs of human caution, allowing barbarism to erupt once again in the world".⁷⁴

For Heidegger, in *Die Frage nach Technik* (The Question of Technology or The Question About Technology),⁷⁵ a lecture given in 1953 at the Munich Technical School, we must initially recognize that the role of technology is to shape man's own way of being in the world. Everyone is familiar with the statements that define it from an anthropological point of view: it is a means, developed by man, for certain ends. And he warns us that the danger does not

⁷³ Jacques Ellul, *La Tecnique ou l'Enjeu du Siècle*, chapter I, pp. 21 e 22, chapter II, pp. 149 to 154, A. Colin, Paris, 1954.

⁷⁴ J.O. y Gasset, opus cit, p. 332.

⁷⁵ M. Heidegger, *Die Frage nach der Technik*, Gesamtausgabe, I Abteilung: Veröffentlichte Schriften, Band 7, Vorträge und Aufsätze, Vittorio Klostermann, Frankfurt am Main, 2000.

lie in technology itself; what matters is the mystery of its essence. The truth is that we have always been dependent on it, and today, more than that, imprisoned by it, whether we are its fans or detractors. And the more we judge it to be neutral, the more we will be surrendered to technology.

Thus, where ends are pursued and means are employed, instrumentality prevails. From a philological and original point of view, that which enables technical production, that which gives rise to it or makes something arise is a commitment (from *missi, missum*, to let out, to launch, or even to admit into), that is, the meeting of four traditional causes (the matter used, hylé; the determined form, *eidos*; the purpose sought, *telos*; and human action). The author says: "From the perspective of what the Greeks experienced in commitment (aitía), we now give the word to occasion (veranlassen) a broad meaning, to the point that this word names the essence of causality, thought of in the Greek way [...] All occasioning, which always overflows and anticipates itself in a presence, is poiesis (to produce, hervorbringen)".⁷⁶ It is not only that which is produced manually or artificially that is poiesis, but that which nature itself creates or makes arise, such as, for example, the flower that comes from the act of blooming. Consequently, technology is a production that makes an entity, a presence, appear, exposes or unveils it. And the Greek words tekhne and episteme are equivalent to it, in the sense of allowing to emerge. Heidegger continues: "But the unconcealment (unveiling) that dominates modern technology does not unfold into a *bringing forward*, in the sense of *poiesis*. The unconcealment that prevails in modern technology is a challenge (or provocation - herausfordern) that establishes, for nature, the requirement to provide energy capable of being stored".⁷⁷ For example, coal or hydrocarbons can be unconcealed or brought to the surface not as secular deposits of natural chemical transformations, but as fuels. All the machinery and the entire system for the extraction and processing of these entities is a gigantic exploitation that challenges nature".

"The power station – Heidegger observes – is located on the Rhine. It puts (stellt) the Rhine by the pressure of its waters, causing its turbines to turn, and the turning makes the machines that generate energy work [...] The power station

⁷⁶ Ibidem, opus cit., p. 12.

⁷⁷ Ibidem, p. 15

is not built on the Rhine like the old wooden bridge that has joined one bank to the other for centuries. On the contrary, the river is built on the power station".⁷⁸

The essence of technoscience, its soul, is precisely this gathering of actions that man puts forth *(stellt*), that is, a framework (*Gestell*) or structure on screen through which and with which he challenges nature to uncover reality. In his words, "framework means the way of uncovering/unconcealing that prevails in the essence of modern technology, and which is not, strictly speaking, anything technical".⁷⁹

Technique, apparatus, devices, mechanisms, structures and networks are ways in which we name the power of this technical framework, which is neither entirely human nor entirely inhuman, but rather a decentralized, ubiquitous power, capable of absorbing, incorporating, and dealing with all other worldly entities. In other words, technology and power are inseparable things, and the more closely linked they are the greater or more intense the interconnections that exist between them. What is important to understand is that techno-scientific power, in any current form of use, pressures, drags, and supplants man as a result of the interconnection of techniques, like a self-feeding circle. This power has grown disproportionately in the last two centuries, reaching a level or intensity that has overridden human will or decision-making capacity, since it no longer proceeds from either one, but rather from the very possibility of revelation and linked uses. According to the philosopher, this changes the conditions for creating meaning and value in human actions, since technoscience is an aggressive form of revealing entities (beings and things), based on their manipulation or use. The entity or thing itself is no longer important, but rather the possibility of using them, following their nature and plasticity. For this reason, entities become, above all, a kind of survival stock (*Bestand*) because they can be manipulated in some way and for some purpose, immediately or later.

Hence, the greatest danger that technoscience represents, in Heidegger's view, is the predominance or even the one-dimensionality of reason and action, an almost unique way of being or projecting oneself in a finite world. This is because the human being ceases to be a listener of nature (Hörender) and

⁷⁸ Ibidem, p. 16.

⁷⁹ Ibidem, p. 21.

becomes, above all, a servant (Hörige) of this preponderant dimension. In his words: "The fate of uncovering/unhiding is not, in itself, any danger, but the danger. And if fate prevails in the mode of fabrication, then it is the greatest danger. As soon as what is uncovered no longer interests man as an object, but as subsistence and man, amid the lack of object, is only the one who requires subsistence, man will walk on the outermost edge of the precipice, that is, he will walk towards the place where he himself must be taken as subsistence. Precisely this threatened man arrogates himself to the dominating figure of the Earth".⁸⁰

What Heidegger intends to allude to is that man no longer finds himself, no longer cares about his essence, no longer assumes responsibility for himself, having surrendered himself to the "entourage of challenging the framework" (to the exponential development of technology). This is because technology is truly capable of breaking with the circularity or complementarity between living beings, creating a gap or caesura whose recovery or filling becomes uncertain or even impossible. A flower attracts birds that feed on it and, consequently, disseminate or pollinate the plant itself in other areas. A predator never exterminates its food source, even if it does not make statistical calculations of the populations it hunts.

In *Minima Moralia*, Adorno also ventured to suggest the effects that technology causes us when we act under its control or submit ourselves to objects, whether they are everyday or extraordinary: "Technical automation makes gestures precise and crude, and therefore [also] people. It eliminates all prudence from gestures, all care, and all civility. It subordinates them to irreconcilable demands as if they were deprived of history".⁸¹ In other words, Adorno saw in modern technology the danger it contains dragging man to the withering away of his own individual expertise, which we can see very clearly in the arts after the 19th century, whose previous traditional techniques, manual or radically subjective, gave way to impersonal automatic or electronic mechanisms (with the help of machines and computing).⁸²

Hence, Mario Costa, in the essay "The Technological Sublime", wrotes: "The advent of technologies such as the daguerreotype (photography), the telephone

⁸⁰ Ibidem, pp. 27 and 28.

⁸¹ Theodor W. Adorno, *Minima Moralia: Reflexionen aus dem beschädigten Leben*, Nummer 19, –Nicht anklopfen – avaiable at giuseppecapograssi.files.wordpress.com/2013/mínima_moral, s/d, s/p.

⁸² In this regard, see the article "The Death of Art and the Survival of Aesthetics" in this same series.

and the phonograph opened a new era of aesthetics, which matures in the times in which we live. Technologies have not only provoked and initiated a process of corrosion of the essence of art, liquidating its right to exist [...] The transition from techniques to technologies in artistic production constitutes a true mutation; images, words, movements, and sounds are technologically produced and technologically preseroed and recreated; all of this is subtracted from the body and ceases to be the result of its actions; with technological production, art is always less representation (*Vorstellung*) than presentation (*Darstellung*), but what it presents is no longer the "truth" (of reality) or the "meaning" (of feelings and thoughts), but signifiers (pure forms) and objective logic, the logic of technique itself (techno-logic)".⁸³

Such warnings and observations, which are also a form of skepticism regarding the excess of instrumental reason, are expressed by Eugene S. Schwartz,⁸⁴ through the following constraints, without considering the limitations of human knowledge itself: 1. by finiteness, that is, by the physical limits of terrestrial resources and by the slowness of natural processes, many of which will not even be repeated (those existing in deposits), and some of the renewable \Box nes will cease t \Box be s \Box due t \Box human acti \Box ns \Box r natural circumstances; 2. by the limits of maintenance of life, which means that the relationships between solar radiation, atmospheric and soil compositions and the ecosystem of living organisms (animals and plants) are relatively fragile or are located within a narrow and disruptive range of parameters. Therefore, the self-maintenance functions of the environment require the correct balance between gas exchange, air purification, the nutrient cycle, and all ther prcesses that maintain life; 3. by the principle of impotence, that is, by what Alfred Whitehead had written in Science and the Modern World, when he said that nature had assumed the attributes of classical Greek destiny: "It is this inevitability that permeates scientific thought. The laws of physics are the laws of destiny." The principle of impotence states what can and cannot be done, given the impossibilities of the world itself, such as the first two laws of thermodynamics, or the principle of competitive exclusion,

⁸³ M. Costa, *O Sublime Tecnológico*, Editora Experimento, São Paulo, 1995, chapters I, p. 15 e III, pp. 45 and 46.

⁸⁴ E.S. Schwartz, The Inflation of Technique (Overskill), especially the chapter Limits, Impotence and the Insoluble, pp. 81 to 107, Edições Melhoramentos, São Paulo, 1971.

according to which two organisms that compete in all activities cannot coexist indefinitely; 4. by the perimeter \Box the p \Box ssible, which als \Box refers t \Box natural and insurmountable laws. Once a limit is reached, it cannot be gone beyond. Thus, for example, "once electrical communication has circumscribed the Earth, it is not possible to achieve an improvement in the speed of communication [...] Another limit is absolute zero, 273 degrees Celsius below zero. At this temperature, cellular activity ceases and the phenomenon of superconductivity appears." The most crucial human limitation, however, arises from the limits of its capacity for adaptation. In other words, even if technological capacity continues to advance, the same phenomenon will not occur with the human body. Therefore, no matter how fast you move through space, you will not be able to colonize it in the juvenile way f fictin; 5. by the certical growth f the population. "Ecen man, who reproduces slowly, has doubled in number in the last twenty-five years and, at this rate, in less than a thousand years there will be no more space for his progeny." The same planet that in 1650 should have contained around 470 million inhabitants, was home to 1 billion in 1804, 2 billion in 1930, 6 billion in 2000 and 7.7 billion in 2020. By 2100, it will have 11 billion (according to the *Pew Research Center*), that is, an unbearable pace f \Box r natural res \Box urces and quality \Box f life; 6. by the ecological imbalances and catastrophes that seem to be intensifying, with or without direct human responsibility.

Schwartz could not have foreseen in his time (the late 1960s) another type of constraint and even coercion that new computer technologies would spread – the end of privacy. Having made it possible to create a society of computerized surveillance, both States and organizations and private networks store and can monitor or manipulate information about each citizen, whether national or even foreign, using it according to their interests. In other words, large platforms begin to use stored personal data to transform it into behavioral predictions thanks to artificial intelligence algorithms. This is the economicadvertising transformation of knowledge into power. An experiment carried out by Facebook in 2012 on the contagion of emotions proved the real possibility of this thesis.

A few years after the works of Ellul and Schwartz, Langdon Winner begins his analysis of "autonomous technology" by arguing that "The truth of the matter is that our deficiency does not lie in the want of well-verified 'facts'. What we lack is our bearings. The contemporary experience of things technological has repeatedly confounded our vision, our expectations, and our capacity to make intelligent judgments, arguments, conclusions, and choices that would have been entirely obvious in earlier times. Patterns of thinking that were entirely reliable in the past now lead us systematically astray. Many of our standard conceptions of technology reveal a disorientation that borders on dissociation from reality. And as long as we lack the ability to make our situation intelligible, all of the 'data' in the world will make no difference".⁸⁵

He could also have quoted Ellul, when, in his text on The Humiliated Word, the French thinker says, referring to the overwhelming predominance of the image in our era, as well as our desire, acceptance, and submission to the phenomenon: "Technique is the possibility of the explosion of images, of their infinite multiplication [...] it was the multiplication of visual techniques that led to the invasion of our eyes and our thoughts by images [...] The universe of images derives solely from technique, and not from any prior intention of man, from a philosophy, from an economic structure or from the thirst for profit, from the class struggle or Oedipus and all that pseudo-intellectual baggage that today takes charge of the slightest explanation [...] when the apparatus exists, it is necessary to make use of it. Modern man cannot leave his discoveries [or inventions] inactive nor his capacities in the realm of the possible. A need can then arise, a habit imposed on him by the power and weight of technology: one becomes accustomed to the multiplication of images simply because this multiplication is proposed to him by technology, and technology imposes itself on him simply because it can do so.

Winner admits that unpredictability, uncertainty, and lack of control are common to human action and that in modern times there is an imperative technological order and even politics is limited to managing this hegemony, since everything must adapt to the techno-scientific and economic demands. However, the exaggerated fear of continuous growth in the importance of the technological world would be more psychological than real. Therefore, for the author, there

⁸⁵ L. Winner, *Autonomous Technology: Technics-out-of-Control as a Theme in Political Thought*, Introduction, Cambridge, MIT Press, 1977.

must be a need for things to be well created or produced, with sufficient care so that they are more beneficial than harmful.

More pessimistic is Baudrillard, author of *The Transparency of Evil*. Regarding the subject of Energy, the philosopher assures us that "There will be more and more energy, in all forms, at least within a time frame beyond which we do not feel humanly involved. Nuclear energy is inexhaustible, solar energy, tidal energy, energy from large natural flows, including that from natural disasters, earthquakes and volcanoes is inexhaustible (we can trust in technical imagination). On the contrary, the dynamics of imbalance, the acceleration of the energy system itself, are dramatic, and could provoke a homicidal disorder in the short term. We already have some spectacular examples of the release of nuclear energy (Hiroshima, Nagasaki and Chernobyl), but any chain reaction, whether viral or radioactive, is catastrophic [...] [In the daily energy expenditure of New Yorkers] any notion of normal functioning has disappeared. All beings conspire, as was said in the 18th century, towards the same overflow, towards the same dramatic overexcitement that far surpasses the need to live, and is more like an unreal obsession to survive, a cold passion to survive that takes hold of everyone and feeds on their own fury".86

This fear of a technology that could lead us to catastrophe has debouched in contemporary "collapse", the belief that the depletion of resources and the collapse of animal life have become inevitable, no longer on a distant horizon – which is quite possible – but rather near, due to anthropogenic causes.⁸⁷ This is a thought derived from the maxim created by Hans Jonas – *in dubio pro malo* – that is, in case of doubt, it is very likely that the worst will happen. The authors say: "For 20 years we have continued to accelerate with full knowledge of the facts, destroying at an even faster rate the Earth system, the one that hosts and sustains us (concentration of CO2, N2O, CH4, surface temperature, ocean acidification, coastal biogeochemistry, loss of forests, degradation of the biosphere, etc.). No matter what the optimists say, the times in which we live are clearly marked by the specter of colapse".

⁸⁶ Jean Baudrillard, A Transparência do Mal, pp. 108 to 110, Papirus Editora, São Paulo, 1992.

⁸⁷ See Pablo Servigne and Raphaël Stevens, *How Everything Can Fall Apart: A Short Handbook of Collapsology*, Editora Perspectiva, São Paulo, 2024.

Although their predictions are contested, since they choose only the harmful aspects of the techniques, disregarding the positive or beneficial ones (renewable energy, geoecology, geoengineering, etc.), it would be advisable to require philosophy and its younger daughters, such as sociology and anthropology, to include in their conceptions, hypotheses and analyses the increasingly prominent figure of *homo stultus*, a being capable of lazily, arrogantly and irrationally, going beyond the Pillars of Hercules, that is, promoting its own decadence and technical-cultural servitude or even its extinction as a species.

IV. Matter and Spirit: Different, Opposite, Complementary?

In physics, matter refers to the substance of all bodies or, more clearly, that with which or of which a given object in the universe is composed (from the Greek $\ddot{u}\lambda\eta$ - *hyle*). Effectively, it is the chemical elements (the atoms of hydrogen, helium, oxygen, carbon, etc.), a total of 118 (according to the IUPAP - International Union of Pure and Applied Physics), these basic constituents of nature. But it is also a solid extension, endowed with resistance, as well as a general power ($\delta uv\alpha \mu \varsigma$ - *dynamis*) capable of manifesting itself in some form or aspect ($\epsilon i \delta \sigma \varsigma$ - *eidos*), with a certain magnitude ($\mu \epsilon \gamma \epsilon \theta \sigma \varsigma$ - *megethos*), in a particular extension or body.

It was with Aristotle that the term hyle came to designate this universal substrate in potential "that aspires to a form", expanding the then primary and vulgar meaning of wood, an element used at the time for the construction of various objects (in Latin, materia, as in *caedendis materiis occupatus*, occupied in cutting wood). In his work Physics, the author says: "... since of the beings that are by nature there are first causes and principles, by which they are said to be in their essence, it is clear that everything comes into being from an underlying (*hypokeimenon*) ... The underlying nature can be recognized by analogy. For just as bronze is for the statue, or as wood is for the bed, or as matter and formlessness (before assuming form) are for something that has form, in the same way, this nature is for the substance, for a certain this and for something that is".⁸⁸ In other words, an underlying that, when giving form to a being, belongs to it in an immanent way, and not by accident.

Through Latin, the concept came to us together with the word mater, in the sense of source, cause or principle in general. Still for Aristotle, if the apparent qualities of something existing (from matter) are separated, nothing seems to remain, due to the differences between them (the earth, minerals, plants, animals, in their respective kingdoms). For this reason, the apprehension of matter would be made mainly through the change observed in natural entities and through reasoning or intellection.

⁸⁸ Aristóteles, *Física*, I, 190b17 e 191a7 (traduction de Lucas Angioni), Editora Unicamp, Campinas, 2010.

Hence the initial definition given by the *Encyclopédie Française*, by Diderot and D'Alembert: "extensive, divisible, mobile and passible substance [that can undergo actions], the first principle of all natural things and that, by its different arrangements and combinations, forms all bodies".⁸⁹

Linked to the concept of matter is the definition of energy ($\varepsilon v \varepsilon p \gamma \varepsilon i \alpha$), a force or power in action, or "the capacity that a body or system has to produce work or its equivalent" (mechanical work, electrical work) and, therefore, a phenomenon that is established between bodies (particles, waves or masses) and systems of material nature. The theory of restricted relativity predicts the conversion of mass (matter) into energy, by the formula $E = mc^2$, while general relativity integrates matter into the structures of space-time.

The spirit ($\pi v \epsilon \tilde{u} \mu \alpha - pneuma$, in Greek, *spiritus*, in Latin, that is, air, breath, respiration), was initially understood by Greek philosophy, starting with Anaximenes, as a fiery and aerial principle *(aer)* that would penetrate and mix with everything to give cohesion to the elements. In the Stoic conception, this cosmic pneuma would correspond to a pneuma of living beings, both φυσιχός (physical, due to respiration) and ψυχικός (psychic), endowing the mind with consciousness, thought or reflection, knowledge, subjectivity and intentionality,⁹⁰ that is, the certainty that we have our own inner life - what Descartes calls res *cogitans*. The modern and scientifically experienced language of biology updates, but does not profoundly modify the ancient Stoic concept. Let's see: "Since the birth of life, a force emanates from organic matter, just as physical energy is born from inert mineral matter. To designate it, only a name with a sufficiently broad meaning is needed to encompass all reactions, from the most elementary to the most evolved, that is, from the tropisms of unicellular beings and the reflexes of multicellular beings to the most elaborate mental faculties: this word is spirit... Let us note that in the evolved being the spirit is not linked to the entire organism, but only to the brain, with which it is born and dies... The life of the body is effectively

⁸⁹ J. le R. d'Alembert and D. Diderot, op. cit., entry Matter.

⁹⁰ Intentionality corresponds to the spirit's ability to forge mental and non-mental representations of its own interiority and the environment that surrounds it, both through what it knows or believes, and through desires it has.

distinguished from that of the spirit... The spirit appears and evolves with the matter. It is its servant. Once it reaches the human level, it becomes its master".⁹¹

An idea very close to that of the vital principle is found in the Hebrew Bible, since the word *Ruah* (רוח) indicates the warm and divine breath, creator of beings and life. It appears not only in the book of Genesis 1-2, but in several other passages, such as that of Isaiah (11, 1-2), in which the coming of Christ is announced to Christians: "And there shall come forth a rod from the stem of Jesse, and a flower shall blossom from his roots: and the Spirit of YHWH shall rest upon him, the Spirit of wisdom and understanding, the Spirit of counsel and might, of knowledge and piety".

In both cases, that is, of a cosmic or even divine spirit, it is the transcendental cause of individual spirits. But it does not necessarily have to be found in a specific person but correspond to a human faculty (at least from a certain stage or evolutionary lineage of the species), which expresses itself both abstractly, using signs, and concretely, through acts, expressed sensations or objects created humanly or divinely.

Spirit and matter can be seen as references to heterogeneous phenomena if the spirit is understood as a substance radically dissimilar to matter or the strictly physical world (*res extensa*, also in Cartesian nomenclature), with the spirit then being a metaphysical expression (beyond or apart from the physical world). A dualistic conception, therefore. If a star, a rock, an electromagnetic wave, or a chemical configuration constitute inanimate material beings and are fully subject (apparently) to necessary laws, spiritual manifestation absolutely requires, as we know it, a specific or characteristic form of life, in which basically abstract phenomena appear (awareness of oneself and the environment, reflection, knowledge, language, will, intention and complex affective feelings, such as astonishment and compassion, for example) and the perspective of freedom and creation, even if relative or limited to the environment and time. In the mouth of Socrates and in the intentions of Plato, we read in the Republic: "Does not the soul have a function that nothing else but itself could fulfil, such as that of watching, commanding, deliberating and everything of this kind? Can we attribute

⁹¹ Guy Lazorthes, *Le Cerveau et l'esprit*, Chapter I, p. 21, Chapter VII, p. 186 and Introduction, Flammarion, Paris, 1982.

such functions to anything other than the soul, and do we not have the right to say that they are inherent in it"?⁹² In other words, although they may be united, spirit and matter constitute different substances (dualism).

In the words of Saint Augustine, spirit is everything that is not body or matter, but is nevertheless something.93 God, the creative power of an incorporeal nature, which is not restricted to any place, being in all, is only perceived by the interiority of the human being (mens rationalis). Even before Descartes, we already find in him that strong and evident characteristic of spiritual singularity: "For men certainly have doubted whether the power of living, of remembering, of understanding, of willing, of thinking, of knowing, of judging, be of air, or of fire, or of the brain, or of the blood, or of atoms, or besides the usual four elements of a fifth kind of body, I know not what; or, whether the combining or tempering together of this our flesh itself has power to accomplish these things. And one has attempted to establish this, and another to establish that. Yet who ever doubts that he himself lives, and remembers, and understands, and wills, and thinks, and knows, and judges? Seeing that even if he doubts, he lives; if he doubts, he remembers why he doubts; if he doubts, he understands that he doubts; if he doubts, he wishes to be certain; if he doubts, he thinks; if he doubts, he knows that he does not know; ; if he doubts, he judges that he ought not to assent rashly. Whosoever therefore doubts about anything else, ought not to doubt of all these things; which if they were not, he would not be able to doubt of anything. They who think the mind to be either a body or the combination or tempering of the body, will have all these things to seem to be in a subject, so that the substance is air, or fire, or some other corporeal thing, which they think to be the mind; but that the understanding (*intelligentia*) is in this corporeal thing as its quality, so that this corporeal thing is the subject, but the understanding is in the subject: viz. that the mind is the subject, which they judge to be a corporeal thing, but the understanding [intelligence], or any other of those things which we have mentioned as certain to us, is in that subject. They also hold nearly the same opinion who deny the mind itself to be body, but think it to be the combination or

⁹² Plato, *The Republic*, book I, 353d.

⁹³ S. Augustin, *On the Trinity* (*De Trinitate*), avaiable at monergism.com/thethreshold/sdg/augustine.

tempering together of the body. The difference is that the former says that the soul is a substance in which intelligence is an accident; the latter, that the soul itself is an accident, the body being the substance of which it makes cohesion and harmony".⁹⁴

The materialist understanding claims that only matter exists, with consciousness being one of its products among all the others (monism). Epicurus, in his Letter to Herodotus, argues that nature is all a combination of atoms, in infinite quantity, and the soul is also made up of them. They would, however, be subtle atoms that would disintegrate with death. In Diderot's interpretation, 'Hobbes, Spinosa, etc. maintain that all beings in the universe are material and that all their differences come only from their different modifications, their different movements, etc. Thus, they imagine that an extremely subtle matter agitated by a very lively movement can think⁹⁵ and for Jean Cabanis, "direct experiments... have proved that the brain, the spinal cord and the nerves are the true, or at least the principal organs of feeling.' 'Thus, it is truly the nerves that feel, and it is within the brain, in the spinal cord, that the individual perceives sensations.' 'We shouldn't be surprised that the operations which together bear the name of moral are related to those operations more particularly called physical, and that they act and react on each other'; 'Now, the laws which govern, for example, all the abdominal viscera are evidently common to the organs of thought; the latter are equally subject to them, and this without any restriction. If the portal vein system influences the liver and the spleen, and the spleen and the liver influence the stomach... the cerebral organ, considered as that of thought... is no less linked by close ties of reciprocal influence with the liver, the spleen, the stomach and parts of the generation".96

And also Nietzsche: "The phenomenon of the body is a richer, more explicit, more comprehensible phenomenon than that of the mind. It should be placed in the first place, for reasons of method, without prejudice to its final meaning. [...]

⁹⁴ Ibidem, Book X, paragraphs 14 and 15, pp. 257 and 258.

⁹⁵ Denis Diderot, entry *Matter* in the Encyclopédie Française, digitalized edition, volume X, pg. 190, enccre.academie-sciences.fr.

⁹⁶ Pierre-Jean-Georges Cabanis, *Rapports du physique et du moral de l'homme*, Premier Mémoire, pgs. 84 e 85, Onzième Mémoire pgs 504 e 505, Fortin, Masson et Cie. Editeurs, Paris, 1843.

In fact, consciousness is no more than an instrument [...] neither the most necessary nor the most admirable. [...] We must therefore reverse the hierarchy [...] and preserve the spiritual as a coded language of the body".⁹⁷

In The *Astonishing Hypothesis*, biophysicist and neurobiologist Francis Crick is definitive: "A person's mental activities are entirely due to the behavior of nerve cells, glial cells, and the atoms, ions, and molecules that make them up and influence them [...] You, your joys, your sorrows, your memories and ambitions, your idea of personal identity and free will are in fact nothing more than the behaviour of a vast assembly of nerve cells and their associated molecules. As Lewis Carroll's Alice might have phrased it: 'You're nothing but a pack of neurons'. This hypothesis is so alien to the ideas of most people alive today that it can truly be called astonishing".⁹⁸

But the concepts can be understood as complementary, and there must be a material basis for the manifestation of spiritual power, as Hippocrates and Galen already believed (cephalocentrism theory). In the human case, therefore, it is now known that spiritual activity depends on the structure and functioning of the cerebral cortex (its lobes and neurons, their electrochemical interactions), the cerebellum and the brainstem. In short, all mental phenomena stem from brain processes that are characteristically *biological*.

Thus, for neurobiology, consciousness could be divided into cognitive and phenomenal. Cognitive consciousness would be made up of primary consciousness (sensations), introspective consciousness (which observes internal states) and self-consciousness (the awareness of being conscious). They correspond to those mental processes that can be communicated with others and are therefore objective. As for phenomenal consciousness, it would include personal feelings, tastes, evocations of past experiences that cannot be fully communicated to another person, remaining internal and subjective occurrences (mental states also called *qualia*).

For no other reason, argues John Searle: "Just as we need the macro/micro distinction for any physical system, so, for the same reasons, we need the

⁹⁷ F.W. Nietzsche, *Fragments posthumes*, pg. 206 e seguintes, Gallimard, Paris, 1976.

⁹⁸ Francis Crick, *The Astonishing Hypothesis: The Scientific Search for the Soul*, preface and pg. 3, New York: Simon and Schuster, 1995.

macro/micro distinction for the brain [...] while we can say of a particular brain that it is conscious, feels thirst or pain, we can say nothing of a particular neuron in the brain: this neuron feels pain, this neuron is thirsty [...] Nothing is more common in nature than that the surface characteristics of a phenomenon are caused by and realised in a microstructure, and these are exactly the relationships exhibited by the mind's connection with the brain".⁹⁹

From another point of view, we can clearly see that matter and all its processes pre-existed the advent of spirit, considering that consciousness (at least human consciousness) is something very recent in the history of the universe and in the evolution of living beings on this planet Earth.

But beyond a primary biological structure, the spiritual manifestation would constitute a qualitative leap or transformation of the very matter on which it is based, the adjective quality being understood as a characteristic or peculiar property of something. The spirit is reason, intellect and volition, in other words, thinking, knowing and desiring. The act of thinking is capable of going beyond what exists or is seen, which is precisely why metaphysics or maths was created; knowing requires criteria of truth; volition often considers freedom of choice. These attributes, which are found in consciousness, transform the human being into a 'microcosm', to use Stoic terminology here, in other words, into a small universe possessing self-finality. Or, in Epicurus' view, it is the organ of cognition and the generator of interpretations and choices that other natural beings are deprived of. From this point of view, matter and spirit consist of natural or divine attributes that converge and associate in the human figure. If a computer or any other similar device is capable of retaining a phenomenal quantity of data, which its builders call memory, ours, although evanescent, is called *remembrance* or recollection, and it can reappear endowed with humor, sadness, regret, longing or a mixture of such affections. This is spirit. If the artificial intelligence machine can respond quickly to any request made to it, we can doubt and reflect, weigh and even deny the request. We can love or hate a character in a novel, a public and historical figure, either because we identify with them or because we despise them. And this is spirit.

⁹⁹ J.R. Searle, *Mente, Cérebro e Ciência*, chapter I, pgs 28 e 29, Edições 70, Lisboa, 1984.

In this regard, it's interesting to note what the first Church Father, Gregory of Nyssa, says in *The Creation of Man*, written in 379, and which well summarises the concept of a cosmic characteristic and hierarchy that had been forming since antiquity¹⁰⁰: "Scripture teaches us that the strength existing in living and animate beings is of three kinds: firstly, that which allows beings to grow and nourish themselves, attracting to themselves the nourishment necessary for their increase (αὔξησις - auksesis). We call it 'natural'; it is found in plants. In the products of the earth, in fact, you can see a vital force, even if it is deprived of sensation. Secondly, there is another form of life that possesses the first force and also contains a sensory organism. This is the case with irrational animals: they nourish themselves and grow, and there is also a sensitive and perceptive activity. Finally, the perfection of bodily life is found in rational nature, that is to say, in human nature: it nourishes itself, possesses senses, participates in reason and is governed by the spirit [...] Thus, after inanimate matter, which is like the foundation on which the genus of animate things rests. Moses tells us about the formation of this 'natural' life that exists in plants; then he places the birth of beings that possess a sensitive organisation. Then, following the same logical order, among the beings that receive life through the flesh, there are, on the one hand, sentient beings devoid of spiritual nature, and on the other, beings endowed with reason, which would not subsist if there were no sentient organism. Thus, man was created last, after the plants and animals, because nature progresses towards perfection through order and a regular path. This rational animal is formed by the fusion of all the other genders".¹⁰¹

Referring to the relationship between body and soul, soul and spirit, Hannah Arendt argues: "Thought is inconceivable without speech [...] And although the discursive capacity can be physically localised with better precision than many emotions - love, hate, shame, envy - its locus is not an 'organ' and it has none of

¹⁰⁰ For example, in Plotinus, 11th Ennead (On the Origin and Order of Beings): 'In the case of the soul that enters some plant species, what is there is a hypostasis, the most rebellious and least intellectual, the vegetative. In the case of the soul that enters an animal, what prevails and leads it is the sensory faculty. In the case of the soul that enters man, what prevails in the outward movement is the rational faculty.' Plotinus, Tratado das Enéadas, São Paulo: Polar, 2000.

¹⁰¹ Grégoire de Nysse, *La Création de l'Homme*, chapter VIII, pg. 108 and follows, Éditions du Cerf, Paris, e Éditions de l'Abeille, Lyon, 1943.

the strictly functional properties so characteristic of the whole organic process of life [...].] The language of the soul in its merely expressive stage, prior to its transformation and transfiguration by thought, is not metaphorical (like thought); it does not distance itself from the senses or use analogies when in terms of physical sensations [...] Merleau-Ponty, the only philosopher who has not only tried to account for the organic structure of human existence, but who has firmly attempted to initiate a 'philosophy of the flesh', has also confused himself with the old identification between spirit and soul when he defined the 'spirit as the other side of the body' [...] since there is a chiasm between them. Precisely the absence of such chiasms or connections is the main enigma of spiritual phenomena, and Merleau-Ponty himself, in another context, recognised this absence quite clearly. Thought, he writes, 'is fundamental because it is not founded on anything, but non-fundamental because with it we do not arrive at a foundation on which we must base ourselves and remain there. In principle, fundamental thought has no foundation. It is, if you like, an abyss".¹⁰²

Over the course of the 20th century, however, the so-called cognitivism, an interdisciplinary area of study and research into the workings and capacities of cognition, involving neuroscience, scientific psychology, the logical-mathematical formalism present in informatics or computer science, including artificial intelligence, tended to replace the traditional or primordial notion of spirit in various academic circles. For certain researchers of the new current (such as the US duo Herbert Simon and Allen Newell), the way the computer works would be the model of the human spirit and, in certain respects, would supplant our individual capacity, as in chess, since it would be able to store more data, make more connections and act more quickly in this area of 'cold cognition', i.e. information processing.

Briefly, this multidisciplinary line of research understands cognition as a natural mental system or an artificial structure for receiving and processing information, with which it is possible to build representations, establish knowledge and then act in the world. To this end, they have resorted to what is known as formalism, i.e. the presentation of theories and hypotheses in a logical-

¹⁰² H. Arendt, *A Vida do Espírito*, Chapter I, pgs 26-27, Relume Dumará, UFRJ, Rio de Janeiro, 1993.

mathematical and computational language (based on numerical relationships and calculations, including symbolic ones) with the aim - and this is justified - of avoiding ambiguities in both the language and the stipulated rules and thus constituting rigorous reasoning. From this point of view, the functioning of our spiritual faculty would be identical to that of machines that calculate and proceed by logical operations. As stated in the entry *Cognitive Science* in the Stanford Encyclopedia of Philosophy, "While theory without experience is empty, experience without theory is blind. To address the crucial questions about the nature of the mind, psychological experiments need to be interpretable within a theoretical framework that posits mental representations and procedures. One of the best ways to develop theoretical frameworks is to form and test computational models intended to be analogous to mental operations [...] Like cognitivist psychologists, neuroscientists often conduct controlled experiments, but their observations are very different, since neuroscientists are directly concerned with the nature of the brain. With non-human subjects, researchers can insert electrodes and record the firing of individual neurons. With humans, for whom this technique would be too invasive, it is now common to use magnetic and positron scanning devices to observe what is happening in different parts of the brain while people are doing various mental tasks. For example, brain scans have identified the regions of the brain involved in mental imagery and word interpretation. Additional evidence about brain function is gathered by observing the performance of people whose brains have been damaged. A stroke, for example, in a part of the brain dedicated to language, can produce deficits such as the inability to utter sentences. Like cognitive psychology, neuroscience is often theoretical and experimental, and the development of theory is usually aided by the development of computer models of the behaviour of groups of neurons".¹⁰³

On this basis, some experts (such as Antonio Damasio) believe that if a complete description of sensation-brain-behaviour could be created, it would define consciousness and thus spiritual activity itself. Other researchers believe that such a description would be insufficient, and that a deeper biological

¹⁰³ Edward N. Zalta; Uri Nodelman (eds.), Cognitive Science, *Stanford Encyclopedia of Philosophy*, Stanford: Stanford University, 1995.

understanding of the elementary nerve networks within the brain regions and the subcellular functioning of the neurons themselves is indispensable.

To me, in particular, it seems that this scientific pretence (that of neuroscientists, neurologists and cognitive psychologists) and that of some philosophers could be compared to the following situation: asking an architect to fully describe the materials used, the building techniques and forms, and the spatial relationships of Christian chapels, churches, monasteries and abbeys (from the earliest ones, such as the Domus ecclesia of Doura Europos in present-day Syria, or the church of Aquaba in Jordan) and later on, the Romanesque, Gothic and Renaissance styles and, using only this set of data, judged the reasons for the rise and expansion, the theological foundations, the rituals, the controversies and heresies, as well as the religious and moral meanings of Catholicism to be satisfactorily explained in their physical descriptions. It would be naïve, if not downright bad faith or stupidity, to believe that the physical sites and material shelters of a religion contained within them the entire modus essendi and the profound manifestatio (explicitness) of the faith.

From another point of view, it is absolutely common and undeniable (a truism, therefore) to say that, among the mental states of consciousness, we can come across the *desire to carry out an action*, whatever it may be, *the enthusiasm* of an achievement, the *amazement* of a discovery or an unusual presence, the *anger* of an unsuccessful attempt, the *expectation* of an outcome, the *sadness* of an event or even an *absorbed and distracted* look during a walk. Sometimes we are in doubt, sometimes we wonder, and almost always we are sure of what is happening around us. These are mental states or spiritual phenomena that don't exist in any machines or robots, which have electronic circuits; things that are therefore exclusively physical or material.

Still in John Searle's arguments,¹⁰⁴ computers are built and programmed to manipulate "symbols", "algorithms", but it is people and not computers or programmes that understand that the symbols typed or displayed describe numbers and operations to be carried out. In the usual vocabulary of linguistic studies, the term "syntax" refers to the formal relationships that interconnect the

¹⁰⁴ J. Searle, *A Redescoberta da Mente* (The Rediscovery of the Mind), pg 26, Martins Fontes, São Paulo, 2006.

constituents of sentences (relationships of order, agreement, subordination), giving language a structure. The term 'semantics' is used to refer, in a linguistic system, to the meaning of words and the meaningful interpretation of sentences and statements. However, as computers can never "understand" (by their definition) the programmes embedded in them, they only carry out 'syntactic' processing of data manipulation and transmission, but not true "semantic" processing, and therefore intellectual and cognitive processing.

In other words, the formal structure of communication does not in itself mean or lead to an intimate understanding of the meaning contained in the information. For according to the philosopher, consciousness is not reducible to physical phenomena, although it depends on them: "consciousness is a mental, and therefore physical, property of the brain, in the sense that liquidity is a property of systems of molecules... The fact that a characteristic is mental does not imply that it is not physical, the fact that a characteristic is physical does not imply that it is not mental".¹⁰⁵

Therefore, to conclude that the current sciences of cognition have demonstrated the absolute certainty of materialist monism (that all natural and cultural phenomena are exclusively physical or corporeal) and refuted ontological dualism contains nothing of evident or definitive. Firstly, because two of the distinguishing marks of mental activities and processes are intentionality and consciousness, and these are not manifest in the functional descriptions of materialist monism. Secondly, the thesis that thought depends on the brain is not incompatible with the dialectical coexistence and complementarity of both phenomena.

In the words of Jean-Didier Vincent, "You don't become a real man with a brain weighing 800 grams. But at the same time - and this is the counterbalance to what I've just said - a man who is aphasic, totally paralysed, who has lost more than a quarter of his brain, who is only a shadow of himself, so to speak, is still a man. So, in this transformation of man, there is naturally a product of our genes, a product of evolution, but there is also something that is of the order of mystery and that takes place at the level of the *psyche* (I am one of the rare

¹⁰⁵ Ibidem, opus. cit, pgs 35-51.

neurobiologists to use this word). I say *psyche* because nobody understands Greek any more; if I said 'soul' I'd probably lose my neurobiologist's licence".¹⁰⁶

The mystery to which the scientist refers can be glimpsed in the comparison of brains. If all the brains of the Cro-Magnon lineage, which is ours, have the same physical-chemical and biological structure, the same number of neurons, the same encephalisation coefficient (7.44), the same 1. 400 cubic centimetres in volume and weighing between 1.3 and 1.5 kilos (these data contain small individual variations), and the same 23 pairs of chromosomes. How can we explain the enormous differences in culture, language, intellectual, artistic and scientific creations, structures and social relations between peoples and generations, between historical periods, as well as the diversity of talents, intellectual and cognitive abilities between people in general and even within the same family, who carry the same genome?

If we adopt the view that spiritual activity does not explain and is not the cause of human language, then neither can physical structure (the respiratory, phonatory and articulatory systems, the latter consisting of the pharynx, tongue, teeth, palate, nose and lips) explain either the diversity of languages or the production of meaning through arbitrary signs or signifiers of discourse.

Even Rousseau, if he could still live or return today, would still hold to his opinion, expressed in the first part of his *Discourse on the Origin and Foundations of Inequality Among Men*: "Man experiences the same impression (as animals), but he recognises himself as free to acquiesce or resist; and it is above all this freedom that shows itself as the spirituality of his soul; for physics explains in some way the mechanism of the senses and ideas, but in the power to will, or to choose, and in the feeling of this power, we find nothing but purely spiritual acts, which are in no way explained by the laws of mechanics".¹⁰⁷

I believe it is more obvious, both because of long human experience and because of more recent neurological, biological and psychiatric studies, to adopt here, for the relationship between spirit and matter, the Germanic concept of

¹⁰⁶ Pascal Pico, Michel Serres e J.D. Vincent, *Qu'est-ce-que l'humain?*, Le Pommier/Cité des Sciences et de l'Industrie, Paris, 2003.

¹⁰⁷ Jean-Jacques Rousseau, *Discours sur l'origine et les fondements de l'inegalité parmi les hommes*, Première Partie, pg. 28, Les Echos du Maquis, Paris, 2011.

ineinander, used by Husserl and part of phenomenology. In other words, literally, "one entity within another", or imbricate, involve, in order to emphasise that, in the animal sphere, a developed and objective brain structure has allowed the appearance of another entity linked to it, of a subjective and differentiated order, which is the spirit (consciousness and intentionality), different in its way of being, in its functions and interactions with the world. I would only be convinced of the pure materiality of the spirit if a scientist showed me the perfect sequence of neuronal connections or mathematical algorithms that gave the explicit result of the exceptional and practically unsurpassable talents of Michelangelo, Mozart or Tolstoy, or even the feelings of selflessness and the virtues of justice and temperance that some men express and practise.

V. A Few Words About Death

There are at least two unavoidable phenomena that human beings tend to talk about without having any personal experience and without the possibility of describing them in their entirety: God and death. Therefore, they are both truly indefinable phenomena, a definition being understood as a linguistic synthesis capable of stating the main evidence, characteristics and giving meaning to the observed phenomenon. And being indefinable, they are, for the same reason, indescribable (I can't describe all of divine power, its attributes and extension, nor my own death) and not entirely cognisable. Even so, much has been said and many ideas have been expressed about them since time immemorial.

From François-Xavier Bichat's brief and precise definition, we realise that, on the one hand, "life is the set of functions that resist death"¹⁰⁸ and we could only add that what is alive contains an inner and an outer whole and that this totality tries to reproduce itself and oppose its inevitable dissolution in the face of time and what is external to it. In other and better words, Cicero refers to this characteristic inclination: "From the moment an animate being is born (for that is where we must begin), it spontaneously has an attachment to itself, the mission to preserve itself, as well as what is appropriate for the conservation of its state; and, on the contrary, to distance itself from annihilation and everything that can lead to annihilation".¹⁰⁹

¹⁰⁸ Marie François Xavier Bichat, *Recherches physiologiques sur la vie et la mort*, artigo I, pgs. 1 e 2, Victor Masson et Charpentier, Paris, 1852. "La vie est l'ensemble des fonctions qui résistent à la mort... Les corps inorganiques agissent sans cesse sur eux; eux-mêmes exercent les uns sur les autres une action continuelle; bientôt ils succomberaient s'ils n'avaient en eux un principe permanent de réaction. Ce principe est celui de la vie; inconnu dans sa nature, il ne peut être apprécié que par ses phénomènes: or, le plus général de ces phénomènes est cette alternative habituelle d'action de la part des corps extérieurs et de réaction de la part du corps vivant, alternative dont les proportions varient suivant l'âge".

¹⁰⁹ Marcus Tullius Cicero, *De finibus bonorum et malorum*, liber III, sectio 16: "Id ita esse sic probant, quod ante, quam voluptas aut dolor attigerit, salutaria appetant parvi aspernenturque contraria, quod non fieret, nisi statum suum diligerent, interitum timerent. Fieri autem non posset ut appeterent aliquid, nisi sensum haberent sui eoque se diligerent. ex quo intellegi debet principium ductum esse a se diligendo".
As Anaximander (quoted by Simplicius) initially reminds us, "the unlimited is the principle of things that are [...] That from which generation proceeds by things that are, is also to which they return under the effect of corruption, according to necessity; for they reciprocally pay punishment to each other for their injustice, according to the order of time".¹¹⁰ In other words, coming into the world from no one knows where, and returning to that place is a necessity, according to the irrevocable clause of time.

For Epicurus, death is nothing, and about nothingness, we can say nothing: "Accustom yourself to thinking that death is nothing to us. For all good and evil resides in sensation, and death is the privation of feeling... [it] eliminates the desire for immortality".¹¹¹ In the same vein as his master, Lucretius observes: "Death, therefore, is nothing to us and touches us not at all, since the substance of the spirit is mortal. And just as we feel no pain when the Carthaginians rushed from all sides to do battle, when the universe, shaken by the tumult of war, trembled with horror under the high vaults of heaven, and all men were in anxious doubt as to which of the two would have dominion over land and sea, in the same way, when we don't exist, when there is a separation of body and spirit, whose union forms our individuality, we too, who will not exist, will not be able to have anything happen to us or impress our sensibilities, even if the earth mixes with the sea and the sea with the sky".¹¹²

If it is impossible for us to grasp and absorb the totality and infinity that are present in the idea of God (in other words, his intrinsic incomprehensibility, due to his magnitude, power and because he is outside of time), it is also impossible for us to know that which is radically opposed to life (if there is anything to know), in other words, the absolute negation or annihilation that comes with death. As Christ, when he became Man, said in conversation with his Father: "There is something about time that troubles me / time belongs to humans, you created it for them".¹¹³ This is precisely why death can be a suffering for the neighbour who

¹¹⁰ Anaximandro apud H.A. Diels, op. cit., B I.

¹¹¹ Epicuro, *Carta a Meneceu*, pgs. 141-142, Alianza Editorial, Clásicos de Grecia y Roma, Madrid, 2008

¹¹² Lucrécio, *De rerum natura*, Livro III, pg. 165, Coleção Os Pensadores, Abril Cultural, São Paulo, 1985.

¹¹³ Mario Luzi, *La Passione, Via Crucis al Colosseo*, Introduzione, pg. 11, Garzanti, Milano, 2007.

remains alive, but not for the one who has become insensitive and for whom the world has simultaneously died.

The scientific deepening of the functioning of our cells and organs, as well as the development of physiological intervention techniques (biological engineering with stem cells, for example) has led certain hasty spirits to project human immortality. Not only personal survival, but that of the species, which would become capable of populating other planets in new systems and almost infinite galaxies. In such thinking, more hopeful than feasible, more mystical or messianic than rigorously logical-rational, human fragility and perishing would be extinguished to give way to an exceptional power and eternity, which is "the complete and at the same time perfect possession of an unlimited life", as Boethius refers to it in his *The Consolation of Philosophy*, without forgetting to add, alluding to what is of a material nature: "every being that lives the present in time comes from the past and moves towards the future [...] and one can only live the present moment, transitory and fleeting... He who is subject to the law of time... cannot be conceived as an eternal being".¹¹⁴

Ultimately, a highly technological civilization, including medical achievements, predominantly skeptical about religious redemption and continually dismissing opportunities for entertainment, makes it more difficult to accept death and come into contact with it, since most people die in hospitals and many are taken to morgues.

Elder and more nuanced than this dubious techno-scientific confidence was the idea of palingenesis, of a continuous rebirth (according to Heraclitus, the Pythagoreans and the Stoics) or eternal return (*ewige Wiederkunft*), as Nietzsche called it. In other words, the beings and events of the world must disappear in order to be reborn in an identical way, which leads us to a strange circle of repetitions, as if the universe expanded and contracted indefinitely with the same elements once produced at the beginning. Milan Kundera was horrified by such a possibility in his novel *The Unbearable Lightness of Being*: "to think that one day everything will repeat itself as it was experienced and that such a repetition will continue to repeat itself indefinitely! What does this senseless myth mean?

¹¹⁴ Boécio, A Consoloção da Filosofia, Livro V, v. 11, pg. 150, Martins Fontes, São Paulo, 1988.

[...] There is an infinite difference between a Robespierre who appeared only once in history and a Robespierre who would return eternally to cut off the heads of the French".¹¹⁵

Death, or the "end of presence," however, is a necessary condition for life and even for the simple existence of any and all beings (their destruction, extinction, or transformation), whatever they may be (from physical particles to stellar masses). It is simultaneously the natural horizon and the indispensable end of "being," in the most original and existential sense of the Greek to on - the absolute of that which is there. Or even that which is the thing individually considered (todde ti), the substance, in the words of Aristotle.¹¹⁶ Contrary to what Parmenides supposed, being does not oppose and reject non-being; it is not there without a cause, beginning, and end. This is because existence, whatever it may be, imposes a time on itself, a continuous flow that inevitably brings with it its own transformation and decay. In Heidegger's words, "beings are and are in time... every attitude of Presence (Dasein) must be interpreted from its being, that is, from temporality".¹¹⁷ Without the imperative need for its own change, nothing can exist. Once the arrow is shot, it inevitably projects itself toward its final target. If there is a certain probability that nothing will come from nothing, it is absolutely certain that, with greater or lesser speed, being moves toward non-being, our "absolute master" in Hegel's expression.

And in this respect, Heidegger is right when he says that if we don't assume death as the horizon of our lives, we will never be authentic, because we won't institute a life worthy of ourselves and the humanity to which we belong. We will remain restricted to everyday needs, to the prosaic tasks that material existence and the world demand of us.

¹¹⁵ M. Kundera, *A Insustentável Leveza do Ser*, pgs. 9 e 10, trad. Teresa Bulhões Carvalho da Fonseca, Companhia das Letras, São Paulo, 2017.

¹¹⁶ Aristotle, *Logic*, Volume I, Section II, Introduction to the Categories, Librarie de Ladrange, Paris, 1844, available at remacle.org/bloodwolf/philosophes - 'Substance... is the individual in itself and cannot serve as an attribute to anything... without the first substances, the rest has neither real existence nor logical existence'.

¹¹⁷ M. Heidegger, *Ser e Tempo*, chapter VI [405], pg 499, Editora Vozes, Petrópolis e Universitária São Francisco, Bragança Paulista, 2015.

VI. Equalities and Differences Among Men

A topic that has always caused fierce and extreme discussions between supporters of one tendency and another, whether philosophical or politicalideological in nature, incapable of situating themselves on the balanced plane of virtue or on the unbiased terrain of truth, is that which refers to equality and differences between men. A subject that easily leads to unfounded deviations: the exalted defenders of insurmountable differences or inequalities tend to adopt arrogant and racist attitudes, which often lead to frankly aggressive and unethical behavior; the champions of radical equality end up excluding from their understanding or worldview the rich variety of nature and biological forms (their complexity and dialectical relationships), as well as human tendencies, characteristics and capacities, which is a desolate type of blindness in the face of what is simply factual.

In his logical observations (which he also called "universal mathematics"), Gottfried Leibniz proposed the principle of identity of the indiscernible, which in turn derives from the principle of reason: in nature there cannot be two things (concrete and individual) that are absolutely similar, because there must be a reason for them to be two and not just one. In short, two entities that are entirely identical in every way would, in fact, constitute a single entity. And a single being is not something diverse, something that can present a perceptible variation or difference.¹¹⁸

Thus, a reasonably attentive observation of our surroundings clearly shows us that human beings, from the point of view of their body constitution and their general physical appearance, are the same because they have the same tissues, as well as the same internal and external organs. Medicine, in turn, has long since proven the uniformity of their physiologies, because otherwise it would not be a science, as much as pharmacology, because otherwise every medicine would have to be exclusive to a given person.

¹¹⁸ Ver Gottfried Wilhelm Leibniz, *Correspondance Leibniz-Clarke*, PUF, Paris, 1957.

From another point of view, modern biology has demonstrated the existence of sexual markers that naturally distinguish the conformations of males and females: chromosomal (XX, XY), gonadal (ovaries and testes) and hormonal (estrogen, progesterone and testosterone). Furthermore, as Bernard Lahire observes, "It is no coincidence that the opposition masculine/feminine [in addition to the positions of the limbs on the right and left] has been joined by a whole series of oppositions that structuralist anthropological research has done much to highlight: up/down, superior/inferior, outside/inside, light/dark, dense/empty, heavy/light, hot/cold, etc." In another passage, Lahire points out: "If we restrict ourselves to recent measurements of men and women aged 18 to 25, collected in 126 countries, the median muscle mass of adult men is systematically higher than that of women (in Western Europe, 86.1 kilos and 69.2 kilos, respectively, for men and women), as is their height (1.80 metres and 1.66 metres, respectively). In addition, men generally have stronger bones, more square jaws and more visible hair, especially on the face, chest, abdomen, legs and back, while women have the same amount of hair, but in the form of downy hair that is therefore much less visible. These characteristics clearly distinguish adult men from children, but objectively bring women closer to children".¹¹⁹

All mentally healthy human beings are still capable of language and symbolic representations and still have identical physical and psychological needs, but they also vary depending on sex, age, innate constitution and also as a result of their characteristic sociocultural forms. At the same time, it is easily noticeable that human beings differ from one another in their temperaments, capacities and abilities, sometimes by a little, sometimes by a lot. As Socrates had already mentioned in a conversation with one of his disciples: "Dear Criton, don't you know that in every occupation, on the one hand there are many mediocre people ($\varphi \alpha u \lambda o \pi o \lambda \lambda o$) and those who have no value; on the other, there are few serious people and those who have value"?¹²⁰ We also know, from personal experience, from past and present reports, from the images and information provided almost non-stop by the mass media, that peoples, nations, their mother tongues, and

 ¹¹⁹ Les Structures fondamentales des sociétés humaines, chapter Partition sexuée et domination masculine, pgs. 754-823, La Découverte, 2023.
¹²⁰ Eutidemo. 307 a.

their cultural habits can be very particular or different from our own, even though we are living in a time of globalisation that tends towards similar practices or homogeneous behaviour (such as the consumption of the same goods and services produced by the same international, private or state-owned companies).

It was in view of these simple and obvious observations that the ancients created the adage quot homines, tot sententiae, that is, as many men are, so many sentences, and that Euripides was able to write in *The Phoenicias*, through the mouth of Eteocles: "If the same were beautiful and wise to all, there would be no ambiguous guarrel among men; / but mortals have no similarity or equal / except in names".¹²¹ Giordano Bruno, in a dialogue between the characters Cesarino and Maricondo, from the work The Heroic Enthousiasts, reminds us that: "There must be artisans, mechanics, farmers, agriculturists, servants, pedestrians,¹²² ignoble, vile, and pedants, because otherwise there would be no philosophers, contemplatives, cultivators of the spirit, masters, captains, nobles and learned, rich and wise, and others who are heroic, like gods. Why should we force ourselves to corrupt the state of nature which has distinguished the universe into things greater and lesser, superior and inferior, illustrious and obscure, worthy and unworthy, not only outside us but also within us, in our own substance, including that which is claimed to be immaterial? As among intelligences,¹²³ some are subject, others pre-eminent, some serve and obey, others command and govern".¹²⁴

And Rousseau, again in his *Discourse on the Origin and Foundations of Inequality Among Men*: "I conceive of two kinds of inequality in the human species; one that I call natural or physical, because it is established by nature, and consists of differences of age, health, bodily strength, and qualities of the mind or soul; another that may be called moral or political inequality, because it

¹²¹ Eurípedes, *As Fenícias*, traduction Jaa Torrano, Revista de Estudos Clássicos, volume 4, nº 2, pg. 131 (500), Rio de Janeiro, 2016.

¹²² That is, those who do not have horses or carts to transport themselves and are therefore modest or poor.

¹²³ Reference to the angelic hierarchy.

¹²⁴ G. Bruno, op. cit., second dialogue of the second part, pg. 727, Editora Perspectiva, São Paulo, 2022.

depends on a kind of convention, and is established, or at least authorized, by the consent of men".¹²⁵

One last personal observation, from Marguerite Yourcenar, in *En Pèlerin et en Étranger*: "These people of the past had their pains. We have ours. Nourished by special thoughts, drawn from the chain of particular circumstances, they have with us only the visceral kinship of the guts or the heart. They resemble us especially in the fact that they are dead, which will also happen to us one day. When these people differ from us, our problems are enough, without us needing to burden ourselves with their problems; when they resemble us, we only need to draw old-fashioned portraits of ourselves. Perhaps we need to descend to the most primitive sensations, to the organic movements of pain and pleasure, to find in each of us states common to all humanity; nevertheless, even when we sleep we differentiate ourselves by our dreams".¹²⁶

From a scientific point of view, that of paleoanthropology and genetics, the variations between human groups are sometimes insignificant, but sometimes marked. For example, the black populations of Africa, India and the Pacific (Australian aborigines) are genetically very diverse from each other, although they carry a significant amount of melanin.

In short, the evolution of hominids, which began with the Australopithecines (or Australoanthropes) around five million years ago until the appearance of the Neanthropes and, especially, *Homo sapiens sapiens*, of the Cro-Magnon lineage (around 70-90 thousand years before our era), presented slow but continuous variations, depending on geographic, social and climatic conditions. In the analysis by André Leroi-Gourhan, "As for the problem of the physical evolution of neanthropes, another aspect to consider has to do not with the material conditions of documentation, but with racial genesis.¹²⁷ The genetic experience acquired with animals allows us to understand certain aspects of racial and individual variation. Two aspects have a preponderant influence on the

¹²⁵ J-J. Rousseau, Discours sur l'origine et le fondement de l'inégalité parmi les hommes, Préface, pg 21, Les Echos du Maquis, 2011.

¹²⁶ M. Yourcenar, *Peregrino e Estrangeiro*, A Improvisação sobre Innsbruck, pg. 44, Edição Livros do Brasil, Lisboa, 1990.

¹²⁷ French language maintains the terms "race and racial" (often in place of ethnicity, ethnic) due to the physical and even family aspects they contain. The word is used, in various French literatures, for a vast community of people and also for a human or animal lineage.

constitution of individual genetic formulas, the combination of which leads to the racial type: isolation and density of subjects [...] It is evident, for example, that the fundamental groups (whites, blacks, yellows) offer such a population surface in terms of their lines of contact that they are in an effective state of isolation from each other, with the fringe of miscegenation constituting only a narrow line on their borders [...] Isolation of low-density groups plays a very important role genetically, and every group of a few thousand individuals, segregated or isolated, tends, in the course of time, to acquire the characteristics of a homogeneous race; This is what explains why the so-called 'pure' races, such as the Ainu, the Bushmen, the Lapps, the Eskimos, the Australians, dear to classical anthropology, correspond to groups that underwent prolonged isolation during which their genetic capital became uniform".¹²⁸

Based on the so-called genetic haplogroups (groups of alleles of a chromosome, such as Y, transmitted by the father), whose mutations allow us to follow the territorial or geographic movements of populations over generations, it is now certain that the first haplogroup -A – is that of *homo sapiens*, originating in Africa around 300 thousand years ago. A second haplogroup – B – emerged around 100 thousand years ago, still in African territory, but today such primary sets are only found among the pygmies of the equatorial area and the Khoisans of southern Africa. Around 70,000 years before our era, when homo sapiens managed to cross from Africa to the Middle East via the Bab el Mandeb Strait, several other haplogroups began to appear – C and D (which conquered the area of present-day Japan), E and F, as the migrations headed towards Central Asia. At this time, on the European continent, Neanderthal man (homo neanderthalensis, descendant of homo ergaster, whose previous arrival is estimated to have been around 600-500 thousand years ago) was almost completely predominant, and their skin was already much lighter, some had light eyes and even red hair. Subsequently, the last major haplogroups developed from 30,000 years ago (from L to T); group I established itself in Europe, group O in East Asia and group Q in Siberia, from where it crossed (everything suggests) to the American continent. Since then, phenotypic differences have

¹²⁸ A. Leroi-Gourhan, Évolution des Types Néanthopiens, *Le Geste et la Parole*, pg. 175 and following, Éditions Albin Michel, 1964.

been consolidated. In short, it is now clear that the whitening of European and Asian populations, as well as the changes in facial features (nose and lips) and hair, occurred over a long period from the Upper Paleolithic to the Neolithic.

Scientists from the University of Geneva (UNIGE) recently analyzed the distribution of the portion of mitochondrial DNA (from the maternal lineage) inherited from Neanderthals in the genomes of modern humans over the past 40,000 years.¹²⁹ The study indicates that modern humans (homo sapiens sapiens) from Africa began replacing Neanderthals 40,000 years ago in the western part of the Eurasian continent, where Neanderthals had lived for hundreds of thousands of years. The replacement occurred over several millennia, resulting in the integration of Neanderthal DNA into the homo sapiens genome. According to the authors, ""The global expansion of modern humans began before the extinction of Neanderthals. Both species coexisted and interbred, leading to slightly greater introgression (transfer or transmission of genes between populations) in East Asians than in Europeans... We show that the expansion out of Africa resulted in spatial gradients of Neanderthal ancestry that persisted over time. While maintaining the same orientation of the gradient, the expansion of the first Neolithic farmers contributed decisively to reducing Neanderthal introgression in European populations compared to Asian populations. This is due to the fact that Neolithic farmers carried less Neanderthal DNA than the hunter-gatherers of the previous Paleolithic... In the case of sapiens and Neanderthals, the hypothesis is that the further we move away from Africa, the point of origin of Homo sapiens, the greater the proportion of Neanderthal DNA, a population located mainly in Europe".¹³⁰

To test this hypothesis, the authors used a database made available by Harvard Medical School that includes more than 4,000 genomes from individuals who lived in Eurasia over the past 40 millennia. Later, during the Neolithic transition from hunter-gatherer to agricultural lifestyle, between 10,000 and 5,000 years ago, the study shows a decline in the proportion of DNA of Neanderthal origin in the genomes of European populations, resulting in a slightly lower percentage than that of Asian populations (as observed today). This decrease

 ¹²⁹ Past human expansions shaped the spatial pattern of Neanderthal ancestry, Science Advances, Claudio Quilodrán, Jerremy Rio et alii, outubro de 2023.
¹³⁰ Idem.

coincided with the arrival in Europe of the first farmers from Anatolia (western peninsula of Turkey) and the Aegean area, who also carried a lower proportion of DNA of Neanderthal origin than the inhabitants of Europe at the same time. As they mixed with the populations of Europe, the genomes of the Anatolian farmers "diluted" the Neanderthal DNA a little more.

If evolution and displacements led human groups to a differentiation whose main subgroups were initially identified as "races", this concept, as a result of socioeconomic exploitation (slavery), historical genocides, and eugenics trials that were committed in its name, ended up suffering, however, a profound rejection within the scope of the so-called "social sciences".¹³¹

For example, the theory that there are naturally superior races was exposed, as follows, by its most renowned author, Arthur de Gobineau, in the voluminous Essay on the Inequality of the Human Races (the passage is long, but enlightening): "The idea of a native, original, definitive, and permanent inequality between the different races is one of the oldest, most widespread, and most adopted opinions in the world; and, considering the primitive isolation of tribes and peoples, and the seclusion which they all practiced at a more or less remote period, and from which a great number have never emerged, there is no reason to be surprised. With the exception of what has occurred in our modern times, this notion has served as the basis of almost all governmental theories. No people, large or small, has begun without making it their first maxim of state. The system of castes, of nobility, of aristocracy, since they are founded on the prerogatives of birth, has no other origin; and the right of primogeniture, by assuming the pre-excellence of the first-born and his descendants, is likewise derived from it. With this doctrine agree the repulsion of the foreigner, and the superiority which each nation claims for itself over its neighbors. Only as groups mix and merge, already enlarged and civilized, and considering each other in a more benevolent light, as a result of reciprocal utility, does this absolute maxim of racial inequality and hostility among them become split and discussed. Then,

¹³¹ Theodosius Dobzhansky, one of the founders of population genetics and whose work consolidated the modern evolutionary synthesis, always contested the attempt of the social sciences, especially American anthropology, to deny the existence of human races. Race remained a category used by biologists, being a concept that is both biological and social – and its use in biology is far from being reducible to racism.

when the greater number of citizens of the State feel mixed blood running through their veins, this greater number, transforming into a universal and absolute truth what is real only for them, feels called to affirm that all men are equal. A laudable repugnance to oppression, a legitimate horror of the abuse of force, then casts a rather bad varnish over all intelligences, over the memory of the formerly dominant races, which has never failed to justify many accusations, for such is the course of the world. From the declaration against tyranny, one passes to the denial of the natural causes of the superiority that is being insulted; it is declared not only perverse, but usurping; it is denied, and very erroneously, that certain aptitudes are necessarily and fatally the exclusive inheritance of such and such descendants; finally, the more a people is composed of heterogeneous elements, the more pleasure one takes in proclaiming that the most diverse faculties are possessed or can be possessed to the same degree by all fractions of the human species, without exception. This theory, more or less supported by those to whom it concerns, is applied by the mestizo thinkers to all the generations that have appeared, are appearing and will appear on earth, and they end up summing up their feelings in these words, which, like Aeolus' wineskin, contain so many storms: 'All men are brothers!' This is the political axiom. Do you want the scientific axiom? All men, say the defenders of human equality, are endowed with the same intellectual instruments, of the same nature, of the same value, of the same scope. These may not be the words expressed, but at least they contain the meaning. Thus, the Huron's cerebellum contains in germ a spirit very similar to that of the Englishman and the Frenchman! Why, then, in the course of the centuries, did he not discover either the printing press or the steam engine? [...] The usual answer to this difficulty is to emphasize the sovereign influence of the environment. According to this doctrine, an island will not see, in social terms, what a continent will know; in the north, one will not be what one is in the south; the forest will not permit the development of the open plain. The humidity of a swamp will give rise to a civilization that the aridity of the Sahara would infallibly have suffocated. However ingenious these small hypotheses may be, they have facts against them. Despite the wind, the rain, the cold, the heat, the sterility, the abundance of plants, all parts of the world have seen civilization and barbarism flourish side by side and on the same soil. The brutalized fellah burns under the same sun as the powerful priest of Memphis; the learned professor of Berlin teaches under the same inclement sky that once witnessed the miseries of the savage Finn".¹³²

What may disturb the opinions already consolidated and claimed by the social sciences (which normally disregard dissimilar neanthropic evolutions, especially during the Paleolithic period) is that contemporary genetics has come across the fact that its research indicates reasonably important average differences between human groups, without this meaning ideological-cultural discrimination, but rather a simple observation of natural order.

Since the beginning of the 21st century, genome sequencing and distribution work has made it possible to study SNPs,¹³³ the differences of a single nucleotide in a DNA sequence. As long as a sufficiently large number of SNPs are chosen, whose statistical parameters (FST or Fixation Index Statistics) are informative, it is possible to link a person to a geographic group or biogeographic ancestry (a substitute, for some, for the concept of race). Even for highly mixed populations, such as Brazilians and Mexicans, for example, SNPs can become markers and provide information about the ancestry of individuals. urthermore, CNVRs (number of copies of variable regions), which are distributed in the thousands in the human genome, and which also allow defining the ancestral origin of individuals, can, depending on their position close to or within a gene, have phenotypic consequences on behavior, correspond to variations in vulnerability or resistance to various agents, or even on the capacity to react to or metabolize medicinal products.

Thus, in March 2018, the unsuspected and renowned geneticist David Reich (from a Jewish family) wrote a controversial article, due to the subsequent reactions, in the New York Times, in which he stated that the idea defended by part of the so-called human sciences that inequality is merely a social construct ended up becoming a kind of pseudoscientific orthodoxy. The fact is that advances in DNA sequencing now allow us to measure with exquisite precision

¹³² A. de Gobineau, *Essai sur l'inégalité des races humaines*, tome I, Capítulo V, pgs 64 a 66, Firmin-Didot, Paris, 1853-1855.

¹³³ In genetics, a single-nucleotide polymorphism is a germline substitution of a single nucleotide at a specific position in the genome (cytosine, adenine, thymine, guanine) that is present in a sufficiently large fraction of the population (at least one percent). For example, a G nucleotide present at a specific location in a reference genome may be replaced by an A in a minority of individuals. The two possible nucleotide variations of this SNP—G or A—are called alleles. Wikipedia

the fact that the differences in ancestry that are related to many of today's racial constructs are real. Among other explanations, the scientific researcher argues: "Recent genetic studies have demonstrated differences across populations not just in the genetic determinants of simple traits such as skin color, but also in more complex traits like bodily dimensions and susceptibility to diseases. For example, we now know that genetic factors help explain why northern Europeans are taller on average than southern Europeans, why multiple sclerosis is more common in European-Americans than in African-Americans, and why the reverse is true for end-stage kidney disease... Finding genetics influences in a propensity for disease is one thing, they argue, but looking for some influences on behavior and cognition is another... A recente study led by the economist Daniel Benjamin compiled information on the number of years of education from more than 400,000 people, almost all of whomm were of European ancestry. After controlling for differences in socioeconomic background, he and his colleagues identified 74 genetic variations that are represented in genes known to be important in neuro development, each of which was unmistakably more common in Europeans with more years of education than in Europeans with less years of education. That study was followed by others that found genetic predictors of behavior. One, led by geneticist Danielle Posthuma, studied more than 70,000 people and found genetic variations in more than 20 genes that were predictive of performance on intelligence tests. Is performance on an intelligence test or the number of years of school a person attends shaped by how a person is educated? Of course. But does it measure something that has to do with some aspect of behavior or cognition? Almost certainly. And since all traits influenced by genetics are expected to differ between populations (because the frequencies of genetic variations are rarely exactly the same across populations), genetic influences on behavior and cognition will also differ between populations. You will sometimes hear that any biological differences between populations are likely to be small because humans diverged too recently from their common ancestors for substantial differences to have arisen under the pressure of natural selection. This is not true. The ancestors of East Asians, Europeans, West Africans, and Australians were, until recently, almost completely isolated from each other for

40,000 years or more, which is more than enough time for the forces of evolution to work".¹³⁴

Interestingly, this last statement coincides with André Gourhan's argument, cited above, about the isolation and subsequent prehistoric differentiation between the large white, black and Asian groupings.

Like Reich, the French molecular biologist Bertrand Jordan, director of research at the CNRS (Centre National de la Recherche Scientifique) has recognized our genetic diversity in the most recent biological investigations of the human genome, despite our simultaneous homogeneity. What caused such differences were associated secondary characters, as well as adaptations to the environment by natural selection.¹³⁵

In a study that used the so-called *principal component analysis* (PCA),¹³⁶ in 2008, the genetic distribution of the European population was investigated "through people whose grandparents lived in the same country, in order to eliminate those who had recently migrated (and therefore suppress the admixtures that this could have induced). We then analyzed about 500,000 variable points in the DNA of each of these people (1,387 in the study). So, for each person, we have their profile at 500,000 points in the genome. From there, we can calculate the genetic distance between all these people. And we see that, in most cases, the Spanish and the Portuguese are on one side, the French on the other, the Italians on the other, the Irish on the other, and so on [...] In the human population, which is particularly homogeneous compared to the populations of chimpanzees or gorillas, for example, but which nevertheless presents a certain diversity, if you sequence my DNA and yours in its entirety, you will find a series of differences - about millions. If we limit ourselves to point differences (or Single Nucleotide Polymorphism – SNP) – because there are also differences in small segments that are duplicated or absent in one or the other, but that function in a very similar way – there are a few million points in your DNA

¹³⁴ D. Reich, *How Genetics is Changing Our Understanding of "Race"*, The New York Times, Mar. 23, 2018, avaiable at: https://www.nytimes.com/, acesso em: nov. 2023.

¹³⁵ See B. Jordan, *L'Humanité au pluriel: La Génétique et la question des races*, Éditions Du Seuil, Paris, 2008.

¹³⁶ John Novembre et. al, *Genes Mirror Geography Within Europe*, Nature, Nov. 6, 2008, avaiable at: https://www.nature.com/, acesso em: nov. 2023.

where there is a different base from the one that will be found, in the same place, in mine. Most of these millions of differences have no effect on our phenotype. And then there are a few, we now think about one or two hundred, that affect genes. But it's not enough that they affect genes, they must also significantly modify the protein that is encoded by the gene. Because, again, not everything in a protein is critical. There are places where you can swap one amino acid for another without changing the function of the protein. There are other places where, on the contrary, there will be changes in properties. The hundred or so really significant genetic differences that can exist between two people are those responsible for the differences in appearance, height, skin color, and metabolic functioning [...] [Finally] 'Species' has a precise meaning, but 'race' is a subdivision within 'species'".¹³⁷

Also in 2018, among other studies, the research "Genomic Analysis of Family Data Reveals Additional Genetic Effects on Intelligence and Personality"¹³⁸ and "The New Genetics of Intelligence"¹³⁹ came to light, showing that a substantial part of not only intellectual capacity but also personality traits also depends on hereditary genetic structures and factors. More recently, paleogeneticist Carles Lalueza-Fox devoted himself to the deep history of inequalities in the work Inequality, a Genetic History, investigating the genetic marks left by migrations and social structures of our ancestors. For him, inequalities are entangled in our genomes, and are key to understanding current ones.¹⁴⁰

If nature created or provided differences, obviously with a view to the very survival of individuals and species, society, in its civil and legal state (*societas civilis*), aims to ensure that violence, conflicts, or opposing interests (mainly socioeconomic ones) give way to the common good, security and peaceful development of individual and group potential. To this end, the law (preferably republican, originating from representative and distinct powers, and not despotic) is indispensable, which reorders living conditions and social relations. It is for this

¹³⁷ Interview given to *Vie des Idées*, an organ of the Collège de France, on February 25, 2014.

¹³⁸ See W. David Hill et al., Genomic Analysis of Family Data Reveals Additional Genetic Effects On Intelligence and Personality, *Molecular Psychiatry Journal – Nature*, Jan. 10, 2018, avaiable at: https://www.nature.com/>.

¹³⁹ See Robert Plomin; Sophie von Stumm, The New Genetics of Intelligence, *Nature Reviews Genetics*, Jan. 8, 2018, avaiable at: https://www.nature.com/>.

¹⁴⁰ C. Lalueza-Fox, *Inequality: A Genetic History*, Cambridge: MIT Press, 2022.

reason that equality is obtained and is the fruit of the law, of a state of law, even if the systems are only customary. Or even that only laws can, in fact, establish equality, since only they provide guarantees and establish mutual rights and obligations. If men, in a state of nature (*status naturalis*), were all equal, good and happy, they would not have created, millennia ago and in almost all places, the State and its laws.

Thus, Rousseau, despite having imagined the hypothesis of the noble savage, could not escape the following observation: "This passage from the state of nature to the civil state produces a very remarkable change in man, replacing instinct with justice in his conduct, and giving his actions the morality they previously lacked. Only then does the voice of duty succeed physical impulse, and right takes the place of appetite, and man, who until then had looked only to himself, is obliged to act according to other principles, and to consult his reason before listening to his inclinations. Although in this state he deprives himself of many advantages derived from nature, he regains others equally great; his faculties are exercised and developed, his ideas are broadened, his feelings are ennobled, his whole soul is elevated to such a height that, if the abuses of this new condition did not degrade him many times below that from which he sprang, he would have to bless incessantly the happy moment which tore him forever, and which, from a stupid and limited animal, made him an intelligent being and a man".¹⁴¹

¹⁴¹ J.-J. Rousseau, *Du Contrat Social ou Principes du Droit Politique*, Chapter VIII, De l'État Civil, Collection Complète des Oeuvres, Genebra, no page number, avaiable at rousseauonline.ch, version 7/10/2012.

VII. The Meanings of Life

Both philosophy and religion deal with the meaning of life because they seek an answer to the same human problems or questions: what is the world? Why are we in it? How should we act? What awaits us with death? A new eternal life (without tribulations) or peaceful oblivion, equally eternal? In other words, both provide an explanation of the origins of things and their ultimate ends.

But philosophy is concerned with other phenomena, only human, and not divine, and it also investigates them in a different way, than that of religion. In general, it seeks to explain, through reason, the general phenomena of the world, which are also everyday things, but not in a particular but universal way. For example, how does knowledge occur and what are the limits? What can we consider as truth? How should people behave in society, that is, what is the use of ethics, morals or law? What are the phenomena of language and art, and what are they for? In short, philosophy would be a construction of knowledge and a search for truths for the benefit of man, if we agree with the Platonic suggestion contained in the *Euthydemus* – to conduct with intelligence and wisdom the goods that we manage to obtain.

"Since we all long to be happy, and since it has become clear that we become so through the use, and the correct use, of things, and that it is knowledge (episteme) that produces correction and good fortune, it is necessary then, it seems, that every man, without exception, take every possible measure to become as wise as possible".¹⁴²

Since its birth among the Greeks, philosophical thought has not sought to solve life's problems, but to understand or elucidate the events of nature and society and, through this means, which is the "love of wisdom", to respond to the natural stupor with which the human spirit or reason faces the things and phenomena it witnesses. And thus, to understand and console the natural anxieties of men, especially with regard to their physical or spiritual suffering and

¹⁴² 281 a, b, c, d, and 282 a.

the fear of the certainty of death. In other words, if philosophy seeks to rationally explain the world, it can also, and for this very reason, be a sobering or distended lenitiv for existence.

The question about the meaning or significance of life can only be asked, initially, by an entity that is aware of itself and of what surrounds it spatially (*cum* + *scientia*). In other words, an entity that thinks and knows that it thinks, that reflects on phenomena – what appears before it, what its perception captures, falling under the action of thought. This entity, man, is entirely original in the midst of the universe because he questions his own nature and destiny. More than just a physical and biological being, he is capable of the most diverse possible behaviors, including disinterested ones, such as compassion or beauty. Or, as Lecomte du Noüy puts it in his work *La Dignité humaine*,¹⁴³ partly repeating Kant and his analysis of aesthetics, he is "the only being that experiences the need to perform useless acts". And no matter how materialistic we are, there is no denying that we only believe or convince ourselves of an absolutely material existence because this is one of the many visions of the spirit, that is, of very concrete feelings, such as passion and disgust, and of abstract thoughts.

For this reason, there are three immediate answers to the question: life has a specific meaning; life has multiple meanings; life has no meaning at all. Whatever the proposed purpose or intent, none of them has ever been fully proven, nor has any of the answers been entirely satisfactory. Consequently, we remain in doubt.

If a person firmly believes that he or she is a creature of God, not by accident, but with a purpose and a future in mind, a second and definitive life, then what we experience here on Earth, materially, is a vestibule, a preparation or a test for eternal and divine life, whether saved or damned. The purpose or perspective is already given in advance and it remains for the person to conduct his or her life in accordance with the canonical and sacred scriptures of the religion adopted, in accordance with the rituals and moral ordinances determined by it.

¹⁴³ Pierre Lecomte du Noüy, *La Dignité humaine*, pg. 101, Édition du Champ-de-Mars, Paris, 1947: "Dans l'échelle des êtres, seul l'homme accomplit des gestes inutiles; il les a inventés, il les a perfectionnés. Ils sont devenus les éléments mêmes de la civilisation et de son orgueil sous la forme d'œuvres d'art, d'idées pures et d'actes traditionnels".

From a religious point of view, one can also have the idea that life is a grace granted by the gods, or simply by nature, to the contemplation of their works, but without this contemplation or experience leading us to another life. In a certain way, this is how the Greeks understood it, clearly separating the eternal world of divine beings from the ephemeral world of human beings. The fact that man attributes dignity to himself does not necessarily imply a destiny beyond the one in which he lives. In short, it would not be a redemptive religion. In this case, one can still imagine that human life would either serve the Gods so that they would be known, or Nature so that it would develop self-awareness.

On the other hand, if a person is a non-believer, an atheist, or an agnostic, then they will have to find or construct a meaning for themselves. In other words, they assume that the universe has no purpose or meaning. Why should it? Isn't the fact or observation of its existence enough? The universe simply is; it is simply there, continually transforming itself. And so are we. It would be an absurd arrogance of reason itself to want to find a meaning for the phenomenon of life. Consciousness itself would bring with it, infused, this "original sin". As Diderot insists in Jacques the Fatalist, the world has no meaning in itself.¹⁴⁴

Those who conceive of existence in this world in this way find themselves faced with a situation that could be said to be more complicated, because it implies freedom of action, but also responsibility for all their actions. In other words, they find themselves in the circumstance of establishing values or principles (although many do not mind this) and objectives to be achieved. This also means that man does not have any predetermined essence or nature. His initial principles and final objectives can be absolutely personalistic, individualistic, or collective, ethical, or communal.

Every human being acts in search of pleasure and, at the same time, tries to avoid pain and suffering. This dual and interdependent condition is common to the entire human race, at all times, and constitutes the initial step in the search for meaning in life. In addition, a more immediate purpose is to survive, just to stay alive for as long as possible (a force or determination called, for example, *conatus* by Spinoza, or *Will*, according to Schopenhauer). This leads many

¹⁴⁴ D. Diderot, *Obras IV – Jacques, o Fatalista, e Seu Amo*, Perspectiva, São Paulo, 2006.

people to accept or live with degrading, absurd, irrational and violent behaviour. In any case, life itself, understood as a miracle, a kind of grace (divine or natural), or even an extremely rare event (think of the prevailing inorganic nature of the universe), would be enough in itself and would already contain all the senses.

Or else its meaning would be placed in a social utopia, exclusively human, that is, one that would be achieved in a society in which life would be the expression of the most perfect harmony, in which the evils of poverty and injustice would disappear, in which fraternity and common well-being would prevail. This idea places its emphasis on a collective meaning, and not on a personalistic or individualistic meaning, assuming that the species is what matters, not the singularly conceived individual.

But I still believe that there are several humanly possible meanings, that is, meanings that depend solely on ourselves on our short journey. Meanings that are dependent on culture, history, and living conditions. For this reason, in Nietzsche's opinion, the Greeks invented not only tragedy, but many of the arts that served as compensation for their tragic vision of life. And the same thing could be said of science, technology, philosophy itself, or political and economic activities. They are like creatures or children who rock us in our sense of abandonment or desolation.

The meaning of life for a Cro-Magnon man (great cave painter) or for a person of antiquity was not the same as that desired by a medieval man, nor by an industrialist or communist militant of the 20th century, nor by a teenager of our times, who experiences and hallucinates with a consumer society, of passing fashions and grandiose and sensual spectacles. Even considering the social conditions of antiquity, or of our colonial history, the meaning of life for a slave was not the same as that desired by a courtier, a prince, a free man of the petite bourgeoisie, a Greek philosopher, a Phoenician navigator or a warrior, be he Tupi, Celtic or Gaul.

Since life can have many meanings, depending on the education received, family, culture, time, opportunities that arise, and daily professional activities, I would like to repeat what has already been said, that is, that among the most commonly sought-after meanings are: generically, happiness, which can be seen as a state of permanent contentment, with oneself and with the world, although Sigmund Freud stated that happiness was never contained in the plans of

Creation.¹⁴⁵ More specifically, love (in its different senses, such as *eros, philia, agape* or *caritas*), knowledge, wealth, power, charity or philanthropy, celebrity.

Two others, which we can also find more rarely: retreat, that is, a life away from one's own world, or the practice of a great historical feat. For example, having fought in a war, having achieved sporting victories, having accomplished a "great feat" worthy of the admiration of one's contemporaries, such as a discovery, a scientific invention, a great work of art. Finally, I would like to draw attention to two other aspects. The first is that the preservation of one's own life and its possibilities for all creatures (because it is an extremely rare or even unique fact in the universe) should be the first meaning we strive for. The second is the fact that there is a very important difference: that between giving meaning to life (which is something individual) and having a life worthy of meaning (which takes us beyond ourselves, to a transcendent life).

A meaningful life is one in which the individual gives himself a direction, a useful purpose, and not only realizes his qualities or attributes but develops them to the highest level, thereby offering a kind of gift to all humanity, that is, making life itself, for any man, in his own time or in any future time, more attractive, enlightening, understandable, or enjoyable to experience. Put another way, as Susan Wolf does, it is "a need, or at least an interest or concern, to be able to see one's life as valuable in a way that can be recognized from a point of view other than one's own [...] The feeling of being occupied with something of independent value, of engaging in an activity that takes one out of oneself, it seems to me, can be thrilling".¹⁴⁶

This life meaningful at the same time for yourself (subjective) and for others (objective) seems to me to contain the best of possible senses. To sum up with the advice of Pythagoras: to pursue and practice what is noble (worthy of respect) and good; what is pleasant, decently, without giving itself to reproaches and slander; and in definitive, what is useful for life in common, that is, for all living beings, zwou, and other conditions of existence, for life as we know it has always

¹⁴⁵ "Man möchte sagen, die Absicht, dass der Mensch 'glucklisch' sei, ist im Plan der

^{&#}x27;Schöpfung' nicht enthalten", *Das Unbehagen in der Kultur*, Internationaler Psychoanalytischer Verlag, Viena, 1930, pg 24.

¹⁴⁶ S. Wolf, Meaning in Life and Why it Matters, *The Tanner Lectures on Human Values*, pgs. 91-93, Princeton University Press, 2007.

shown us a radical interdependence of all beings. Because every living being is characterized by using, modifying and shaping its environment. Man does it on such a scale and so artificially that he may have already put the terrestrial biota on the path of early extinction.