

**THE RELATIONSHIP BETWEEN REALITY AND KNOWLEDGE IN
SKEPTICISM:
FIT OR NOT FIT INTO PHILOSOPHICAL CONSTRUCTIVISM¹**

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This is the animal that doesn't exist.
But they didn't know it and dared nonetheless
to love its transformations, its bearing, its gait
so much that in the tranquil gaze of light, it lived.

Really it never was. Out of their love they made it,
this pure creature. They always saved a space.
And in that place, empty and set aside,
it lightly raised its head and scarcely needed to be.

They fed it no corn,
only the possibility that it might exist –
which gave the beast such strength,
it bore a horn upon his forehead. Just one horn.

It came to a virgin, all white,
and was in the silver mirror and in her.

Rainer Maria Rilke, *Sonnets to Orpheus*

Abstract: The issue is not the realism or non-realism in the theories defended but rather the mesh that each theory should contribute to the theory of knowledge or the epistemic problem of truth. In other words, the possibility or impossibility of acquiring knowledge from reality and the matter of whether any such knowledge is safe or true. The fundamental aspect of knowledge is its functionality; knowledge does not correspond with reality but rather fits in with it or not. Scientists and human beings are faced with the world around them and need a theory that can be used and that fits in order to overcome it.

Keywords: Skepticism, Realism, non-realism, philosophical constructivism, knowledge, truth.

Resumen: El problema no es defender como teoría el realismo o el no-realismo, sino la malla que cada teoría aporta a la teoría del conocimiento o al problema epistémico de la verdad. En otras palabras, hablamos de la posibilidad o imposibilidad de adquirir conocimiento de la realidad y de la cuestión de si dicho conocimiento es seguro o verdadero. El aspecto fundamental del conocimiento es su funcionalidad; El conocimiento no se corresponde con la realidad, sino que encaja con ella o no. Los científicos y los seres humanos se enfrentan al mundo que los rodea y necesitan una teoría que se pueda utilizar y que se ajuste para superarla.

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Palabras clave: Escepticismo, Realismo, No-realismo, constructivismo filosófico, conocimiento, verdad.

1 Introduction

Realism and anti-realism have brought the history of philosophy one of the most passionate and intriguing discussions to the theory of knowledge. The scope and difficulty of a controversy of this type is reflected in the fact that, when speaking of these issues, some authors such as Watzlawick in a book paradoxically entitled *How Real is Real?* begin with a paradoxical principle: “what we call reality is exclusively the result of communication”². This statement puts us in an embarrassing situation as it would logically seem that before studying the topic mentioned above, we should take a look at one of the fundamental issues of philosophy: reality. In short, since it is not the topic of the study, we should start by mentioning that the expressions “it’s real” or “reality” can be understood in four ways:

- a) saying “what it is” or “what is the reality” of something is essentially saying nothing about “something”; in other words, we don’t give that something any features but rather say that it is quantifiable or that it is redundant.
- b) we say “something” is real when we really want to say it’s authentic, genuine, truthful or natural (when we say an apple is real, what we mean is that it’s not made of wax and that you can eat it).
- c) Saying that “something” is real also means saying it’s not apparent, that it’s not virtual or illusional or that it’s not “Just Possible”.
- d) Saying that “something” is real or saying that it’s a reality is the same as saying it exists or is current, present; in other words, the so-called reality in this case is the same as talking about its very existence.

Philosophically, “it’s real” has mainly been understood more as meant in c) and d) than in a) and b). With c), the approach is rather negative and with d), the approach is positive. Most philosophers have understood that the issue of reality is also an issue of how we come into contact with such reality and the most original work by Greek philosophers and Greek wise men (in the case at hand) had to do with considering questions that could be considered reflexive and which would nowadays be classified as what is known as the theory of knowledge.

This contrast between a certain pessimism and a certain epistemic optimism can be considered the centre of a major debate between scepticism and dogmatism. And, with a bit of acknowledged bias, I would add that in a debate between philosophy itself as the spirit of investigation and critical review and the dogmatism meant by this very philosophy following reflection and investigation has led to the establishment of well-supported doctrine that is rationally teachable.

2 Neither realism nor anti-realism

One classical and incomplete definition of realism (Hessen, 1940, p. 72) states that we understand realism to mean “the epistemic position according to which, there are real things independent of our mind or consciousness”. This position allows various interpretations with the primitive one (historical and psychological) known

² Watzlawick (1979), p. 7.

as ingenuous realism. There is still no influence from any epistemic theory as the objective and the subjective still show no differences and there is no distinction between perception (as the state of awareness) and what is perceived (ontological reality). What is more, this position does not distinguish between things as a whole and the content of the perception.

Different from ingenuous realism, natural realism arose as a response and already includes epistemic theories that distinguish between the content of perception and the perceived object. However, they sustain that objects respond to perceptive content; in other words, “honey is sweet” is understood as a whole and nothing can exist only in our minds.

The third form is critical realism which lies on epistemic thought as it understands that not all the properties and qualities of the things we perceive actually arise when certain external stimuli act on our sense organs. These qualities are not objective but rather subjective although certain causal elements must be assumed in the things produced by those qualities and not others.

The three forms of realism could already be found in ancient Greek thought. Ingenuous realism is the majority position of pre-Socratic philosophers (starting with Thales and Anaximander) and it is what Socrates called “research into nature” in the biography Plato attributed to him in *Phaedo*³. This period ends with Democritus who took a jump towards critical realism (or scientific realism, as it is known today) upon warning that there are only atoms and emptiness and the quantitative and qualitative properties added by our senses. Despite its success in history, this realism never won the battle of knowledge as it was replaced with natural realism due to the great influence of Aristotle because, unlike Democritus, Aristotle defended that the perceived properties of things co-exist and also adjust to things irrespective of the conscience perceiving or knowing them.

There is no doubt that realism is an issue and it is hardly exaggerative to state that realism is characterized differently depending on the author discussing it and that this is quite the challenge for those who seek to learn what it is. Thus, the issue of realism or anti-realism is such a controversial matter that a brief essay will never satisfy the debate between the realists and anti-realists. In fact, it must be underlined that it is nearly impossible to speak of realism without coining an adjective for it in order to understand what exactly it is: scientific, metaphysical, critical, colourful, direct, *in rebus*, ingenuous, internal, Scotistic, moral, natural, perceptual, representative, etc. Therefore, it would be impossible to accept or reject realism in all fields; one can be a realist or an anti-realist in a selective manner⁴. One can be a realist as concerns the day-to-day and macroscopic yet an anti-realist in all things moral or aesthetic.

Furthermore, in the current philosophical scene, nearly everyone is a realist or an anti-realist. One very famous yet hardly convincing survey answered by a sample of 931 circulating around the Internet on what philosophers believe shows that 42.7% believe the world is comprised of a totality of objects that are independent of the mind and that the truth is a sort of relationship of correspondence or correlation between words or mental signs and things or ensembles of external things (externalists or realists) while 26.4% believe that it only makes sense to consider worldly objects from within a theory or description (internalists or non-realists) and 30.8% believe neither idea. Moreover, 75.1% of philosophers say they are scientific realists as opposed to the 11.6% who say they

³ Plato, *Phaedo*, 97B-99B. Something more than experiencing what's natural is needed to reach the truth as explained by Socrates with *deúteros plôus*, the second journey or voyage in the search for the true cause (99 D).

⁴ Williams (1996), p. 205-11.

believe in scientific anti-realism. With respect to the external world, 81.6% accept non-sceptical realism whereas 4% accept idealism and 9.6% accept scepticism.

Amidst this cataract of realist optimism, *The Cambridge Dictionary of Philosophy* (1995) states that metaphysical realism in all of its three parts, (a) there are real objects, (b) they exist independently of our experience or our knowledge of them, and (c) they have properties and enter into relations independently of the concepts with which we understand them or of the language with which we describe them, is shared by common sense, the sciences, and most philosophers. So, who would dare be a non-realist? The problem is that a bit further down, the very same dictionary states that the chief objection to it is that we can form no conception of real objects since any such conception must rest on the concepts we already have and on our language and experience. Finished.

In other words, the difficulties realists have, not to mention anti-realists, in convincing us and demonstrating their position beyond any doubt are so accused they cannot be ignored. Additionally, among these deficiencies in meaning, the Stanford Dictionary, in its entry Scientific Realism (April 2011), states that despite all the difficulties and differences in the meanings of Realism, a general recipe for realism is widely shared: “our best scientific theories give true or *approximately true* descriptions of observable and unobservable aspects of a mind-independent world”. It would seem that we have not progressed much since the first discussions in Greek thought with the academic sceptics who spoke of what is reasonable (*eulogon*) or plausible (*pithanon*), as criteria of truth.

3 The root of the problem

With such a vague definition, the real problem with the issue explored in this article can be understood. The issue is not the realism or non-realism in the theories defended but rather the mesh that each theory should contribute to the theory of knowledge or the epistemic problem of truth. In other words, the possibility or impossibility of acquiring knowledge from reality and the matter of whether any such knowledge is safe or true: that is the issue occupying the minds of today’s philosophers just as it did the minds of Plato, the Stoics and the sceptics. One problem that already surfaced in Greek thought upon delving into the root of the question and as Putnam observed⁵, there has not been a single philosopher from the pre-Socratics to Kant who was not a metaphysical realist in one way or another. In other words, the basic issue did not focus on what things are exactly out there but rather on whether we could know which things were out there and how we could know that these things were the truth.

Of all the great questions in Greek philosophy, the first that arose historically speaking has to do with what exists and, obviously, with physics (*phýsis*). Tomás Calvo said it better than I could when stating that philosophy did not originally arise as an “ontology” but rather as “research into nature” (*perì phýseos historía*) where the central idea of this form of philosophy is the notion of *phýsis*, along with the verb *gígnomai* (come to be, become, be made)⁶. However, after Parmenides and up to Aristotelianism, the core of the most universal and most problematic philosophical questions was considered in Greek thought as “ontology” because

⁵ Putnam (1988), p. 65

⁶ Calvo warns that, in principle, it is best to remember two circumstances of this verb. 1. *all uses are admitted* for the verb *eimi* (existential absolute, “come into existence” as well as the predicative use “come to be something”); everything that can be relayed by the verb *eimi* is relayed by the verb *gígnomai* although the latter offers a nuance not offered by *eimi* “the idea or nuance of becoming, being made. 2. In the tradition of *perì phýseos*, both verbs peacefully co-exist and there is no conflict between them. Cf. Calvo (2007), p. 162.

although fire, air and water (in a pre-Socratic sense) are (*éstin*) all the elements generated, water is water, fire is fire and air is air and nothing else. This simply means that any reflection upon **reality** as such (in other words, about the elements that are generated), upon **language** as concerns what it says or is capable of saying or telling of reality and about **the truth** as a fundamental relationship between this and that was eventually approached from the perspective of the verb “to be” (*eimí*), and the participle *ón/óntos* in the different forms and uses.

Mulling over “what is” (*ón/ontos*) also means mulling over what is classified in Greek thought as a complementary attitude “what is real” or “what is true” or even the more complex “what it is being what it is”. Not only the traditional hypertrophy of the verb “to be” (ontologically) versus the oldest and most natural use of the verb *gígnomai* (come to be, become, be made) already appeared here but also the two most philosophical features of the verb *eimí*, permanence and presence as would be often mentioned by Parmenides⁷. Hence, “what is” (*ón/ousía*) paradoxically became the key to criticizing “ideally” all concepts that oppose what we see around us and refers to the apparent world in which our daily lives play out. Thus, “become” (genesis), what appears, what changes and transforms rose to challenge the immobile, perfect and round “be”. By that time “what is real” and “what is apparent” would enter a dialectic battle in Greek thought, the echoes of which still survive and continue generating controversy (quantum mechanics versus scientific realism).

Despite the importance the verb to be may have, only a minimal tradition that began with Parmenides has been able to back the idea that, according to the scholastic sentence “be” or “what is” is the first object of the intellect” and, therefore, must be the privileged motto of all philosophical theorization. Aristotle and the entire subsequent doxographical tradition accepted the Parmenidean suggestion and forgot it all at once: “In fact, since he believes that besides “what is”, there is absolutely nothing about “what is not”, he thinks there is only one thing, what is, and nothing more”⁸. Cited by Simplicius, Theophrastus also contributed the following: “That which is beyond what is, is what is not; yet what is not is nothing as what is, is one”⁹. On the inexistence of what is not, the conclusion is that what there is is what is; hence its unicity and then its unity and, finally, its immobility.

Aristotle’s and his commentators’ conviction that philosophy cannot speak of anything but “*what is*” focused Parmenidean philosophy on what was nothing but a corollary (only v. 6 of frag. VII appears), the predicate of unity, which forced Melissus (for unrelated reasons¹⁰) to correct the Parmenidean ontology of finiteness. Thus, if we heed to the senses, Melissus mediated, we only perceive changing things or continuous movement in a world of appearances comprising a contradictory and deceptive world where the movement of what is predominates what is not. Therefore, Melissus’s essential proposal would radically establish an unequivocal, non-Parmenidean separation between appearance (sensible) and being (intelligible): *the plurality perceived in the sensible world is of erroneous appearance whereas the act of apprehension in being due to thought justly invalidates such becoming*. Thus, the reason for an activity shall be what determines the reality while passive sensitivity leads to error. The idea of *man as an observer who perceives* would be sacrificed with the idea of *man that seems to constitute or organize reality without heeding*

⁷ Cf. Calvo (2007), p. 162-3.

⁸ Aristotle, *Metaf.*, A 5, 986b 29.

⁹ Simplicius, *Phys.*, 115, 11: DK 28 A 28. *Tò parà tò òn ouk ón` tò ouk òn ouden` Hènára tò ón,*

¹⁰ Román (1993), p. 179-93.

to the data from the senses¹¹. And this is what shall be emphasized here and will be consequential for later constructivism.

Along these same lines, when interpreting the Poem of Parmenides, Sextus Empiricus interprets the cart pulled by two mares as the cart of the human spirit; the maidens preceding the cart as sensations (what Parmenides himself mentioned when saying that it was accelerated by two wheels which are the ears with which we receive all sounds) while intelligence and reason replace these mistaken senses as dawn comes and while she (reason) confidently apprehends things: “with intelligence firmly understanding things”¹². Based on this passage, Sextus concluded that Parmenides recommended not relying on the senses but rather reason: “And, finally, he clearly concludes that one must not heed to the senses, but rather reason”¹³.

Sextus’s attitude is comprehensible as he was interpreting Parmenides, perhaps through platonic influence through the excluding disjunction of senses-reason. Such was the case that this Empiricist could not understand how at the end of the Poem and after describing the mortals’ opinions as “false”, they would be considered and, therefore, he deleted the two corresponding verses and inserted what he believed to be more legitimate. This interpretation would lead to the acceptance of the traditional distinction between the being that represents the true world and appearance that symbolizes the world of erroneous physical phenomena. The first would be found through *nóos*, reason, and the second through the senses, *aisthéseis*; thus considering Parmenides as the initiator of pure thought and the *nóos* as the beginning of “purely” intellectual representations. Thus, man would have two powers of knowledge: “intellect” through which *the essence of things* is known and the senses through which we would perceive the world of phenomena. Hence, there is a tendency to support this thesis by believing that knowledge of what is “similar” is taken as “similar” to understand the phenomenal world through the senses and the world of thought through reason¹⁴. According to Sextus, the first attempt at converting reason into the arbitrator of reality appears with Parmenides. This reason has its own laws and inner demands as the outer ones are all erroneous. The denial of becoming supported by sensible experience derives from the affirmation that reason is knowledgeable of reality. In opposition to the unique, immobile and eternal being which is reached through reason, the senses would only be capable of capturing movement, change and imperfect multiplicity.

Sextus’s exposition in reference to the problem of appearance/truth which was of such concern to the sceptics is comprehensible. According to this interpretation, Parmenides began attacking the senses as a source of erroneous knowledge so as to overrate reason¹⁵. However, this affirmation is a great trap, as

¹¹ This idea which highlights the primacy of reason over perception in Melissus seems interesting although we do not share Zafropulo’s extension to all Greek thought, Cf. Zafropulo (1950), p. 247-8, and much less agree with the parallelism drawn by this author between this Greek attitude and Kant’s posture in *Critique of Pure Reason*, which, according to him, could have been written by a 5th century BC Greek.

¹² Sextus, *M* 7.113-4.

¹³ Sextus, *M* 7.114.

¹⁴ We have not found a single definitive example in Parmenides’s analysis of the feasibility of this interpretation. Thus, no absolute evidence appears in the Poem that offers any hint of a radical position between intellectual knowledge, on the one hand, and sensitive knowledge, on the other. Cf. Gigon (1944), p. 259 and Calvo (1977), p. 252-3.

¹⁵ It is interesting to see how Heraclitus is interpreted in the same way. According to Sextus, the one from Ephesus is also responsible for certain criticism of the senses as a source of knowledge in saying, to this end, that man is made of two faculties to reach knowledge: sensation and reason. Sensation is not worthy of trust while reason is assumed as the criterion. That is why Heraclitus would be condemning sensation upon stating: “Eyes and ears are bad witnesses to men having barbarian souls”. Sextus, *M* 7.126: DK 22 B 107. According to Sextus, this is the same as stating that trusting in irrational senses is barbaric, Sextus, 7.126-127. One can see here how Sextus is quick to interpret Heraclitus’s text by referring to the pair of

would quickly be sensed by Democritus: we cannot destroy the knowledge offered by the senses as whether we like it or not, it is the only possible basis for the certainty of reason: *mistrust of the senses will do nothing but lead to the loss of reason*¹⁶. Interestingly enough, the affirmation that the senses never reveal anything about the “true being”; in other words, about the real essence of things, would become one of the most widely used arguments by the sceptics to deny the possibility of knowing reality because *when we rule out the channels through which we approach reality, it shall remain indeterminate in view of the impossibility of the knowledge thereof*.

In short, the need imposed by Melissus’s system that true knowledge is only obtained through logos or through demonstrative reason¹⁷would become one of the most commonly used arguments for the sceptics to doubt knowledge in general. Although it is true that this glimpse into Eleaticist scepticism (at least as concerns the senses) was philosophically sterile as it was metaphysically, not epistemologically rooted; it did initiate the line the very same ancient sceptics would later fully acknowledge. Thus, in an odd play on destiny, *the most dogmatic philosophers would initiate the line taken by the most anti-dogmatic*.

4 The question of the relationship between knowledge and reality

Scepticism, therefore, created doubts about the correlation between knowledge and the reality to which it supposedly referred. Doubts arose as to the connection and correlation of truth and reality due to the impossibility of creating adequate criteria of truth to verify the truth of one against the truth of another. For Sextus, the first to deny the existence of criteria as a guide to truth and who was capable of distinguishing what was truth from what was false with respect to reality was Xenophanes which led to suspending any judgements of the knowledge of reality.

Sextus Empiricus referred to Xenophanes several times.¹⁸ In *M* 7.49, he underlines the problem of truth and the necessary criteria for distinguishing it and affirms that some thinkers believed that such criteria could be found in what is rational, others in non-rational evidence and still others found truth in both. Nonetheless, Sextus warns that the question is not *which* criteria should be used but rather *whether such criteria exists or may exist*. Hence, there were not only authors who believed in such criteria but also others, including Xenophanes, who denied the very existence of any such criteria. This is why Empiricists say, as concerns Xenophanes’s criteria, that things are inapprehensible (πάντα ακατάληπτα)

opposites: sensation “versus” reason. Here, one must recall the epicurean criticism from many authors, including Pyrrho, questioning the capacity of the senses for knowledge as, according to Epicurus, there cannot be knowledge without the data provided by the senses.

¹⁶ Democritus is right in raising the dilemma that any type of rational knowledge that mistrusts the testimony of the senses is condemned to failure. To this end, Galen cites a hardly soothing text by Democritus in which the mistreated senses bitterly accuse reason for destroying them yet warn that its destiny is linked to their own: “*Oh miserable reason! Taking your certainty (your surety) from us to destroy us? Our falls shall be your perdition*”, Galen, *De medic. empir.*, 1259, 8: DK 68 B 125.

¹⁷ As already observed, there is rigorous need in Melissus to exclude all values inherent to *dokounta*, the truth cannot come from an examination of that which is empirical as the multiple is contradictory, Cf. Calogero (1977), p. 95, note 16 and the pages mentioned by Reinhardt (1985), p. 71-3.

¹⁸ For example, six passages from *Outlines of Pyrrhonism*, Cf. Sextus, *PH*, 1.223-5; 2.18; 3.30, 3.218. Another two from book I of *Mathematicians*. Sextus, *M* 1.257, 1.289. Five from book VII: Sextus, *M* 7.14, 7.48, 7.49, 7.53 and 7.110. One from book VIII: Sextus *M* 8.326. Two from book IX: V, *M* 9.193 and 9.361. And, finally, another two from book X: Sextus, *M* 10.313 and 10.314. However, the passages do not coincide as some reflect him as a skeptic as concerns the knowledge of things and other as a dogmatic as concerns his theology.

because as much as we consider and attempt to understand *what* exactly is reality, we will never know if what we know is actually truth.¹⁹

In Sextus's interpretation of this fragment, there is radical precision in affirming that, for Xenophanes, there *never* was nor will be a man who has certain knowledge about the gods and about all the things I speak of and, thus, there will only be opinion and guessing²⁰. I find it interesting to highlight at this point that if something can be seen (*eidōs*), it must have been there before the eyes can stop at that something, that it must have existed before any perceiver sees it or experiences it in some way. Xenophanes had already established a conceptual or scenographic framework where metaphysical realism²¹ was not just an epistemic position among others yet the only position possible. After that, Greek epistemology would simply slide over the rails and could only derail with help from scepticism. As observed by Maturana (one of the greatest authorities on philosophical constructivism), "the a priori assumption that objective knowledge constitutes a description of that which is known...begs the questions What is it to know? and How do we know?"²². People have been trying to answer this for more than 25 centuries. And it cannot be said that quantum mechanics, for example, has now resolved the problem; I would say it has actually added to it. So, the real question is whether we can continue living without needing to open up the box to discover whether the cat is alive or dead, as paradoxically suggested by Schrodinger.

If it is assumed that knowledge reflects or should reflect reality, traditional epistemology creates a dilemma that is as inevitable as irresolvable. If knowledge must be a description or image of the world as such, we need true criteria that proves our images or descriptions of the world are correct or true with respect to the world: scepticism makes a killing here. The antagonism between reality-truth and appearance-error, which began back with Xenophanes and continued with Pyrrho and Sextus when discussion perception, is the cornerstone of all theory of knowledge. The unanswerable question of whether or to what extent any image transmitted by our senses may correspond to objective reality was widely studied by Sextus with the example of the apple, which would see great subsequent success: "Possibly, then, we also, having only the five senses, perceive only such of the apple's qualities as we are capable of grasping; and possibly it may possess other underlying qualities which affect other senses, although we, not being endowed with those senses, fail to grasp the sensations which come through them."²³

¹⁹ Sextus, *M* 7.49: DK 21 B 34 [after *kai tò mèn*]. This text corresponding to the four famous versus by Xenophanes is cited and commented repeatedly by Sextus on three occasions *M* 7.49, 7.110 and 8.326. And the well-known phrase *dókos d'epi pási tétuktai* is cited separately in *PH* 2.18.

²⁰ Cf. Fränkel (1925), p. 174-92. The interpretation of fragment B 34 by Xenophanes has been subject to a rather turbulent history. In a now classical study, Fränkel attempted to offer his own in clarifying the structure of the fragment by deleting the Socratic-Platonic interpretation, on the one hand, and the excessively skeptic tone, on the other, which he affirmed had been received from Sextus. Both interpretations are equally plausible yet also equally unverifiable. Following these notes by Fränkel, the original structure of the fragment would be: he who approaches the *saphés* (the obvious) is missing full knowledge of that which has been reached; in other words, it is still not true knowledge. There is no certain evidence that we absolutely know what we know. That is why *dóza* (opinion) extends to all things. The only thing we have are suspicions. We can be close to the truth, yet we cannot be convinced of such irrespective of any reasons for justifying or believing we are close to the truth. There is no doubt that the tone in this interpretation by Fränkel also alludes to a bit of skepticism as any sure knowledge becomes a doubtful opinion in view of the impossibility to know the truth.

²¹ This is why Putnam states that the theory that affirms the truth is correspondence and is the most natural and, thus, it is impossible to find any philosopher before Kant who did not uphold a truth-correspondence theory, cf. Putnam (1988), p. 65.

²² Maturana (1970), p. 2.

²³ Sextus, *PH* 1.97.

In other words, as much as we would like, the only thing we can do is simply compare our perceptions with other perceptions but we may never compare such perceptions with the apple itself²⁴. All of these arguments gnawed at dogmatic philosophers for more than twenty centuries yet the perspective did not improve with Kant but rather got worse as the creator of Critique added another more worrisome argument to that of the apple. In *Prolegomena*, Kant sees space and time as aspects of our way of experimenting, thereby annulling the possibility of knowing things ontologically and, thus, removing them from reality to place them in the sphere of all things phenomenal: “everything which our senses may be given (the outer in space, the inner in time) is only intuited by us as it appears to us, not as it is in itself”²⁵.

This text not only questions the sensorial properties of an apple but also the very condition of the apple as a thing in and of itself. Not only is its smell, sweetness and yellow or reddish colour doubtful but it would be difficult to be certain that an object exists independent of how we experience it. Wouldn't Kant then be falling into manifest idealism? No. Kant does not state that there is nothing outside my thought, as could be affirmed by an apparent idealist. What is more, he confesses that there are bodies outside us; in other words, things we know outside of us and what he says is that our experience cannot teach us nothing of the nature of a thing in and of itself as we only know of its phenomena or the representations that are produced in us²⁶. Putnam offers an example that stresses this question²⁷ and proves that a fact of the matter does not exist, strictly speaking, with respect to the objects in the world meaning it is absurd to think that there is some way where things are in and of themselves irrespective of the respectively chosen conceptual scheme. Thus, he says we should consider a world with only three objects, x_1 , x_2 , x_3 . According to our standard notion of an object, there would be three objects in the world, but if we were Polish logicians who believe the sum of the objects is another object in and of itself, there would not be three objects but rather seven, x_1 , x_2 , x_3 , x_1+x_2 , x_1+x_3 , x_2+x_3 and $x_1+x_2+x_3$. In other words, the number of objects in the world would change depending on our conceptual scheme. Any objectivist of the facts, however, would say that Putnam's example shows there are many descriptions of the world which are also true. Such person would agree that there could be several descriptions for any given spatial-time segment which are equally true whenever they are equally consistent²⁸. *The only obligation would be to remember that not all possible descriptions of the world for a given spatial-time segment are true and that some will be false, depending on the correspondence with what is there. And that is the question open to debate, whether what is there is as easy to establish as the true or false descriptions.*

²⁴ Diogenes Laërtius insists on the same example when speaking of the Modes, Tropes or Aenesidemus and Agrippa's means of knowledge in stating “The third mode is the one that pertains to the differences in sense-perceptual pathways. For instance, an apple strikes sight as yellow, the sense of taste as sweet, and the sense of smell as fragrant. And depending on the difference among mirrors, even the same shape is seen as different shapes. So it follows that what appears is no more this way than some other way”. DL 9.81.

²⁵ Kant, *Prolegomena*, Part one, § 12.

²⁶ “There are things given to us as objects of our senses existing outside us, yet we know nothing of them as they may be in themselves, but are acquainted only with their appearances, that is, with the representations that they produce in us because they affect our senses. Accordingly, I by all means avow that there are bodies outside us, that is, things which, though completely unknown to us as to what they may be in themselves, we know through the representations which their influence on our sensibility provides for us”, *Prolegomena*, Part One §, 13, Note Two.

²⁷ Cf. Searle, 1995, p. 165-166.

²⁸ A system is syntactically consistent when it is impossible to derive a certain expression from it as well as the negation thereof (consistent and non-contradictory) and is semantically consistent if the expressions allow for a model.

5 Philosophical constructivism

Here again, from Pyrrho to today's theoretical physicists, we wonder more and more whether we are discovering the laws of nature or whether, by fine decanting of the theories of research, we are forcing nature to fit into these previously conceived hypotheses. In this context, scepticism has always been a spoilsport and pessimist with respect to the possibilities of knowledge. And, at the bottom of it all, we continue to be metaphysical realists awaiting knowledge that offers a true image of an independent and supposedly real world that is faithful to the truth.

As is known, classical science had made it a mission to investigate the world through objective reality, independent of what is human. This meant that in order to reach such an objective world, that subjectless world had to be far from any subjective contamination meaning it had to be far from the observer as well. However, the 20th century began to destroy this idea when doubts began to multiply as to the possibility of realising this intention. People began to understand that a world in which all subjectivity had been eliminated would be a world which could no longer be observed.

There was an interdependence between the observer and the observed world that began to be the topic of theoretical discourse such as radical constructivism. Based on Einstein's theory of relativity, people began affirming that observations are relative to the observer's point of reference and the Heisenberg's postulation of blurred relations or the uncertainty principle affirmed that an observation influenced what was observed. It all came to head in 1958 with Erwin Schrödinger who, even though the term constructivism had not yet appeared in the market of ideas, stated: "Every man's world picture is and always remains a *construct* of his mind and cannot be proved to have any other existence"²⁹. He is even more conclusive in the wonderful essay *Nature and the Greeks* upon discussing the pride, simplicity and fear of prone scientists when stating, "it is believed they have understood a phenomenon when in all reality they have simply learnt the facts and are describing them."³⁰

Einstein insisted on this same idea, and many scientists agreed with him, upon saying that the human mind is active and that scientific theories are free creations of these same human minds; he was astonished that we could understand the universe through them (creatively, not scientifically). Maturana warned that Einstein's affirmation and astonishment arose of course from his implicit assumption that there was an independent reality which the observer finds and deciphers with explanatory suggestions which, according to Einstein "arise independently of any direct observation with such objective reality"³¹.

It is obvious that if Einstein's implicit assumptions were correct, then his astonishment would also be correct. Realists can continue to push sceptic arguments aside and nullify them for challenging a "healthy" human understanding; however, they continue to be unresolved and, if taken seriously, nothing could be done except withdraw into a certain subjective idealism which involves an inevitable solipsism, a certain belief that a world cannot exist independently of the subject. In other words, an observer does not find any phenomenon which must be explained outside of him; on the contrary, Maturana insists "the observer produces the generative mechanism proposed in an attempt to explain the phenomenon he wishes to explain as an ad hoc proposition, specifically

²⁹ Schrödinger (1958), p. 152.

³⁰ Schrödinger (2006), p. 120-1.

³¹ Maturana (1994), p. 172.

designated with elements from his experience in order to generate it as a consequence of its operation without any other need for justification”³². *Ironically and creatively, he adds that it is metaphorically here where poetry can be found in science.*

This is hard, I know, but we seem to be more certain all the time of what things are not and less of what they are, yet we continue to enjoy some of the uncertainty of knowing what they are. With his formula *verum ipsum factum*, Giambattista Vico defended back in 1710 that the truth of the human being was that which the human being is able to construct and form through action. He was convinced that knowing was doing, generating and creating in contrast to the classical idea that knowledge was a passive attitude of reception³³. Nowadays, philosophical constructivism³⁴ attempts to separate from realism as a traditional form of knowledge of reality and, in doing so, has entered a new paradigm, a new way of connecting knowledge and reality. While the traditional idea of knowledge and the traditional cognitive theories suggested there was nearly iconic correlation between knowledge and the reality responsible for the data we perceive, cognoscitive constructivism is based on a different principle. Knowledge is not the computation of a reality but rather the *computation of the descriptions of a reality*. In other words, when trying to describe a table, realist or anti-realist schools observe the confirmation of their visual sensation that a table is there upon touching it. Constructivism, however, would say that the correlation between the perception of touch and the visual impression allows the generation of an experience that could be described by saying “there’s a table here”.

And this poses a problem which is the fact that descriptions are limited by language. In his proposition 5.6. from the *Tractatus*, Wittgenstein stated: “The limits of my language mean the limits of my world”³⁵, and that would be a weak way of speaking of a certain “truth” about scepticism just as he later states (5.62) “that the world is *my* world, shows itself in the fact that the limits of the language (the language which I understand) mean the limits of *my* world”. There is no end scepticism from this perspective despite a long history of arguments and as Wittgenstein himself says, any attempt only reinforces it. Scepticism must be understood as an epistemic translation of a real difficulty. We must understand and fight against this human impulse and philosophical tendency to connect what we say or think with the great unknown: “reality”.

Moreover, the processes of knowledge do not calculate realities (tables, galaxies or black holes) but rather the descriptions of such entities. And what is more, just as any neurophysiologist would say, the computation of a description in the neuronal plane (an image projected in the retina, for example) would continue to be found in upper planes (unlimited repetition of descriptions) all the way to the definitive description, thus eliminating an unknown which we constantly refer to as “reality”. “Recursive computation is the foundation of all knowledge processes and life itself”³⁶.

Thus, the fundamental aspect of knowledge is its functionality; knowledge does not correspond with reality but rather fits in with it or not. Ernst von Glasersfeld points to the difference between the words match and fit in everyday

³² Maturana (1994), p. 173.

³³ Human knowledge is condemned to scratching the surface of natural reality and, thus, if human truth exists, “it would only be a flat image almost like a painting.” Mondolfo (1971), p. 84.

³⁴ Certain consensus in the humanities and social science seems to have been formed over the last two decades around the idea that knowledge is something that is socially constructed (a concept closely linked to progressive, post-colonial or multicultural positions). This thesis is not so clear in the case of natural science, cf. Boghossian (2009), p. 16-25.

³⁵ Wittgenstein (1981), p. 163.

³⁶ Von Foerster (1988), p. 44-53.

English. A metaphysical realist seeks knowledge that corresponds with reality while a constructivist seeks to fit his theory with what he knows about the world. The fit describes the capacity of the theory, but not of the world. When we say that something “fits” (a key in a lock that opens), this fitting describes the key’s capability and says nothing of the lock. From the radical constructivist point of view, all of us – scientists, philosophers, laymen, school children, animals, indeed any kind of living organism - face our environment as the burglar faces a lock that he has to unlock in order to get at the loot³⁷.

Scientists and human beings are faced with the world around them and need a theory that can be used and that fits (as per Darwinist or Neo-Darwinist theories) in order to overcome it. Constructivism breaks from convention in developing a theory of knowledge where it no longer refers to an “objective” ontological theory but rather refers to the organization of the world through our experiences as Piaget would conclude: intelligence organizes the world by organizing itself³⁸. To this end, what I like about constructivism is its modesty and humility as constructivism is not a description of absolute reality but rather a possible knowledge model where this alleged objectivity is unnecessary. As Woody Allen would say, there is at least one thing where objectivity is lost: “it’s impossible to experience death itself with objectivity and also sing a song”³⁹.

References

- ALLEN, W. 1974. *Como acabar de una vez por todas con la cultura*. Barcelona: Tusquets Editores.
- CALVO, T. 1977. “Truth and *Dóxa* in Parmenides”. *Archiv für Geschichte der Philosophie*, 59, p. 245-260.
- _____. 2007. “De Parménides a Gorgias: El mundo verdadero como fábula”. In: SÁEZ, Higuera & ZÚÑIGA (eds.). *Pensar la nada. Ensayos sobre filosofía y nihilismo*. Granada, p. 159-197.
- CALOGERO, G. 1977. *Studi sull'eleatismo*, Firenze, n.e.
- VON FOERSTER, H. 1988. “Construyendo una realidad”. In: WATZLAWICK, P. (comp.). 1988. *La realidad inventada. ¿Cómo sabemos lo que creemos saber?*. Buenos Aires, Ed. Gedisa.
- FRÄNKEL, H. 1925. "Xenophanesstudien I und II". *Hermes*, p. 174-92.
- VON GLASERFELD, E. 1988. “Introducción al constructivismo radical”. In: WATZLAWICK, P. (comp.). 1988. *La realidad inventada. ¿Cómo sabemos lo que creemos saber?*, Buenos Aires, Ed. Gedisa.
- GIGON, O. 1945. *Der Ursprung der griechischen Philosophie von Hesiod bis Parmenides*. Basel.
- HESSEN, J. 1970. *Teoría del conocimiento*. Madrid: Espasa Calpe.
- KANT, I. 1984. *Prolegómenos*. Madrid: Ed. Sarpe.

³⁷ Von Glasersfeld (1988), p. 23.

³⁸ Piaget (1937), p. 311. The traditional Piagetian idea that a child does not know how to properly disconnect from the course of events or the reality of things or appropriately group objects if not in accordance with the relationships his/her own activity offers (see Wallon, 1980, p.141), would have to be extended to scientific knowledge.

³⁹ Allen (1974), p. 31

- LAURSEN, J. C. (2019). "Ancient Skepticism and Modern Fiction: Some Political Implications", *Elenchos: Rivista di studi sul pensiero antico*, vol. 40, pp. 199-215.
- MATURANA, H. 1970. *Biology of Cognition (Report 9.0)*. Illinois: Biological Computer Laboratory.
- _____. 1994. "La ciencia y la vida cotidiana". In: WATZLAWICK, P. (comp.). 1994. *El ojo del observador. Contribuciones al constructivismo*, Barcelona, Ed. Gedisa.
- MONDOLFO, R. 1971. *Verum Factum. Desde antes de Vico hasta Marx*. Madrid: Siglo veintiuno.
- PIAGET, J. 1937. *La construction du reel chez l'enfant*. Neuchâtel: Delachaux et Niestlé.
- PUTNAM, H. 1988. *Razón, verdad e historia*. Madrid: Ed. Tecnos.
- REINHARDT, K. 1985. *Parmenides*. Frankfurt am Main.
- ROMÁN, R. 1993. "Meliso de Samos: la corrección de la ontología parmenídea y sus inevitables consecuencias escépticas". *Endoxa. Series Filosóficas*, (3), 179-93.
- SCHRÖDINGER, E. 1958. *Mind and Matter*. Cambridge, Cambridge University Press.
- _____. 1983. *Mente y material*. Barcelona: Tusquets.
- _____. 2006. *La naturaleza y los griegos*. Prólogo de Víctor Gómez Pin. Barcelona: Tusquets.
- SEARLE, J. 1995. *The Construction of Social Reality*. New York: The Free Press.
- UNTERSTEINER, M. 1955. "Il problema del conoscere in Senofane". *Sophia*, 23, 1, p. 26-37.
- WALLON, H. 1980. *La evolución psicológica del niño*. Barcelona: Ed. Crítica.
- WATZLAWICK, P. 1979. ¿Es real la realidad? Confusión-desinformación-comunicación. Barcelona: Ed. Herder.
- WATZLAWICK, P. (comp.). 1988. *La realidad inventada. ¿Cómo sabemos lo que creemos saber?*. Buenos Aires: Ed. Gedisa.
- _____. (comp.). (1994), *El ojo del observador. Contribuciones al constructivismo*. Barcelona: Ed. Gedisa.
- WILLIAMS, M. 1996. *Unnatural Doubts. Epistemological Realism and the Basis of Scepticism*. Princeton/New Jersey: Princeton University Press.
- WITTGENSTEIN, L. 1981. *Tractatus Logico-Philosophicus*. Madrid: Alianza Universidad.
- ZAFIROPULO, J. 1950. *L'école Éléate*. Paris.