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Deflationary considerations on Scientific Realism

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Dedication

To my beloved teachers Anestis Akritidis and Philip Kargopoulos.

Declaration

I, Vladimiros Katranidis, confirm that the work presented in this thesis is my own. Where information has been derived from other sources, I confirm that this has been indicated in the thesis.

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Writing an acknowledgment text always creates some kind of awkwardness for the writer because she has to really know those people that actually helped her to accomplish the task she is grateful. For me the difficulty is mainly located in the fact that there are so many people I feel grateful that it is quite difficult to list them all in a few lines.

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Abstract

In this Thesis we shall try to discover the relationship between Scientific Realism and Deflationism. From a deflationary point of view, truth is considered to be some kind of property that has nothing more to say than something very trivial, namely that: “p” is true iff p. That is, there is not any deeper nature and metaphysical framework to have a debate about truth, as long as it is considered to be a property only in an absolutely logical sense. Most scientific realists hold that a correspondence theory of truth is a prerequisite for scientific realism in order to give an adequate account of how scientific theories can convey knowledge for the mind-independent world around us, but the bibliography is not very clear concerning why that is so. An ambition of this study is to clarify the reasons that a scientific realist should endorse on a substantive notion of truth. Our claim here is that, in a first glance, deflationism doesn't pose a crucial threat against scientific realism; the semantic and epistemic theses seem that can be captured by a sophisticated deflationary account of scientific realism, but there are metaphysical issues to address. This account of scientific realism has to be primarily a metaphysical doctrine, in order to incorporate sufficiently the other two components of scientific realism; that is, by addressing them indifferent to scientific realism's metaphysical core. The issue under scrutiny is whether this deflationary account of scientific realism can truly capture the metaphysical component of scientific realism. The ultimate test for this is the resistance against verificationist anti-realism i.e. the anti-realism that has been advanced by Dummett, Putnam and others. It is going to be argued that blocking verificationism requires from the deflationary realist to commit to a non-epistemic account of assertion –since the non-epistemic truth is abandoned– which is grounded on a use theory of meaning. Finally we cast serious doubt on such a potential conflation (Scientific Realism + Deflationism about Truth + Use theory of Meaning) which become even stronger when we reconsider some already articulated objections towards deflationism; it seems that if a deflationary account of scientific realism is indeed possible due to a conceptual shift from non-epistemic truth to non-epistemic assertion it remains helpless towards already articulated arguments in favor of a substantive notion of truth.

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Chapter 1: Introduction

*When old age shall this generation waste,
Thou shalt remain, in midst of other woe
Than ours, a friend to man, to whom thou say'st,
"Beauty is truth, truth beauty,"—that is all
Ye know on earth, and all ye need to know.*

—John Keats, Ode on a grecian urn, 1819

A nice start for someone writing her thesis should be demonstrating her central motivation. It is exactly that motivation that forces her to struggle with a problem and finally say something she considers important. For me, the motivation is focusing on the very tenor of the scientific enterprise –the aim of science– as expressed by Psillos when he published his famous book *Scientific Realism: How science tracks truth*. So we can say that the scientific realist is interested in truth. But here comes the old and perennial Jestig Pilate's question: *What is truth?* It is this question that my thesis is going to address some remarks, as far as it concerns the scientific realism debate, with the ambition to clarify the reasons that a scientific realist should endorse on a substantive notion of truth rather than a deflationary one.

The first introductory chapter presents the fundamental theses of scientific realism and deflationism about truth and summarizes the debate over the nature of truth in relation with scientific realism's questions. Some methodological remarks here are needed according the purpose of the essay and the priority of the questions that are addressed.

The second chapter is concerned with the various ways that deflationism has appeared in the scientific realism debate over the last 40 years, the threats that it posed, and the issues that are -or are not- finally at stake. The first deflationary account which we shall see is Arthur Fine's Natural Ontological Attitude as a thesis towards a non-realist (nor anti-realist either) attitude. The second consideration could be more appropriate to call it potentially-deflationary, and it was supported by Michael Devitt. He proposes that realism is properly an issue of ontology; that is, the semantic or epistemic troubles are actually conceptually independent, and so it is a matter of a different and irrelevant inquiry which notion of truth should the realist endorse. The final deflationary consideration on scientific realism comes from Horwich's minimalism, stating that scientific realism and deflationism are actually compatible. What we shall consider after this historical survey is that a deflationary account of scientific realism can indeed be introduced, and so we shall try to examine the philosophical consequences, which are mainly a matter of metaphysics.

In the third chapter, the discussion will point to the thought experiment that was stated above. If a deflationary account of scientific realism is possible (call it DSR) then it has to resist the verificationist antirealism. It is argued that the only way out of the epistemic boundaries that verificationism places is by holding that there are (can be) unknowable truths. The crucial result here is that the deflationary realist has to commit to a non-epistemic account of assertion in order to have this kind of defence available.

The fourth chapter presents the use-theory of meaning developed by Horwich to support his deflationary project. It is argued that such an account of meaning is of paramount importance in our critique regarding the possibility of a non-epistemic account of assertion, which the deflationary realist needs. Finally, we cast some serious doubts that this conflation (Scientific realism + Deflationism + Use-Theory of Meaning) can really capture the essential sense of scientific realism.

1.1 Scientific Realism

The past one hundred years have been characterized by a rapid and radical interest in the scientific enterprise, leading to some of the most valuable achievements of human history. By constructing successful scientific theories, we have found the most reliable way to answer questions concerning nature and utilize this knowledge for the common good.

Although the success of science cannot be immediately questioned, there has been a lot of discussion through the philosophy of science discipline concerning the various interpretations of the scientific enterprise. One of them is scientific realism which, roughly speaking, deals with three kinds of questions: what is the structure of the world around us, what are scientific theories and how should we understand them, and what sort of knowledge –if any– can we achieve through the scientific practice. Having an answer to such questions depends on the selection among the numerous and conflicting attitudes in which the philosopher of science is engaged. So, to summarize, many of the debate’s current members hold the consensus that scientific realism is outlined in the three theses below (Psillos 2017a: 209-210)

- **The Metaphysical Thesis:** World has a definite and mind-independent structure.
- **The Semantic Thesis:** Scientific theories are truth-conditioned descriptions of their intended domain. Hence, they are capable of being true or false. The theoretical terms featuring in theories have putative factual reference. So if scientific theories are true, the unobservable entities they posit populate the world.
- **The Epistemic Thesis:** Mature and predictively successful scientific theories are well-confirmed and approximately true. So entities posited by them, or, at any rate entities very similar to those posited, inhabit the world.

According to Psillos (Psillos 2017a: 210), scientific realism is itself a species of realism which draws attention to the certain ways that scientific theories contribute to the realist commitment. Being a metaphysical realist implies holding a philosophical stance towards the physical world as conceptually independent of our minds.

However, being a scientific realist further implies that it is our mature and successful scientific theories that can convey knowledge about the mind-independent world and establish in the best way the existence of the unobservable entities that the theories posit.

So each of the three theses above states a distinct, conceptually independent and irreducible aspect of scientific realism, answering specific anti-realistic challenges and forming a well-ordered nexus that fully captures the scientific realist claim. The present thesis deals mainly with the metaphysical claim of the scientific realist, although there are interactions with the other two theses that must be considered.

It is argued that the metaphysical claim of scientific realism is identified with a particular commitment to a world with a definite and mind-independent structure. The challenges that the metaphysical thesis turns to are traditional idealism and verificationist anti-realism. We will further examine the verificationist challenge in the third chapter, but a sketch of the broad picture of the debate could help.

Following Psillos (Psillos 2017a: 211), the claim of the mind-independence of the world can be separated into two parts concerning the way of existence of things.

- *Irreducible existence*: Irreducibly existing means existing that does not depend on the existence of something else; existence in something's own right.
- *Objective existence*: Objectively existing means existing regardless of the epistemic and cognitive conditions which could justify this existence –by means of verification, recognition or knowledge.

Traditional Berkeleyan idealism holds that everything, in the final analysis, is mental. He holds that to exist is to be perceived, so any ordinary object we could approach via our senses is nothing more than an idea imprinted upon them.

«It is evident to any one who takes a survey of the objects of human knowledge, that they are either ideas actually imprinted on the senses, or else such as are perceived by attending to the passions and operations of the mind, or lastly ideas formed by help of memory and imagination, either compounding, dividing, or barely representing those originally perceived in the aforesaid ways.»

(Berkeley 1996: 24)

But it is not the case that all reality is exhausted by the possibly restricted perceptual capabilities of the individual human mind. As he continues,

«[...] the things perceived by sense may be termed external, with regard to their origin, in that they are not generated from within, by the mind itself, but imprinted by a spirit distinct from that which perceives them. Sensible objects may likewise be said to be without the mind, in another sense, namely when they exist in some other mind. Thus when I shut my eyes, the things I saw may still exist, but it must be in another mind.»

(Berkeley 1996: 64)

So it is not one's individual mind that decides whatever exists with respect to perception, but also there are externally perceived ideas. That is, for example, the

unobserved matter which can really exist but is perceived by the superior mind of God. In any case, all the potential matter, either observable or unobservable depends on perception; viz it is mind-dependent because it is mental. Thus “*mind-dependence should be understood as a claim about what exists, that is about what kinds of stuff make up reality*” (Psillos 2017a: 213).

It appears that Berkeley’s idealism is in direct conflict with both the classes of the mind-independent existence. Concerning the irreducible existence, it is evident that an idealist cannot accept it due to the demand for a pathway connecting any perceived element of reality to its mental source in the human mind; hence nothing exists on its own. As for the objective existence, again, the idealist has to question the possibility of one thing’s existence if it is given that there is no way for a thinking substance to perceive it.

We can now recognize that traditional idealism is not compatible with scientific realism, as for the metaphysical thesis and the mind-independence existence, for certain reasons. Verificationist anti-realism, on the other hand, posits a weaker form of mind-dependence. The verificationist does not have any problem with the irreducible existence; as long as we can have a justification practice, viz an epistemic condition that can guarantee that the object can be known to exist, irreducible existence can be adopted. The issue at stake is related to the notion of objective existence, namely whether the notion of objectivity should be tied with a required epistemic condition or not. We will examine further verificationism and potential interactions with deflationary concepts in the third chapter.

1.2 Jesting Pilate

Talking about truth is, in the first place, an arduous task due to the various ways the word “truth” and its derivatives appear in human talk and thought. Many questions can appear in an attempt to delineate truth because one could ask what is it for something to be true, or what is the meaning for something to be true, or what is the nature of the concept of truth and so on. We cannot easily argue that one of these questions is conceptually prior or grounds all others, and start giving some positive answers. It could be much easier and philosophically modest to endorse a negative strategy for the clarification of truth. We will draw the line of this strategy upon the distinction between substantive theories of truth and deflationary truth (specifically the so-called “minimalist” approach).

All of the traditional theories of truth (correspondence, coherence, pragmatism) share a bare minimum consensus; that is, truth’s content is successfully captured by the equivalence schema:

<p> is true if, and only if, p

The angle brackets indicate here an appropriate name-forming or nominalizing device, e.g. quotation marks, or ‘the proposition that ...’, and the occurrences of ‘p’ are replaced with matching declarative sentences to yield instances of the schema.

The key commitment of deflationism about truth is that there is no deeper nature for the concept of truth that goes beyond the (ES) above. Hence, any conversation

posing on the (ES) attributes such as correspondence with reality, coherence with a network of beliefs and the rest, in fact *inflates* metaphysically the concept of truth. From a deflationary perspective the common mistake that the rest philosophers of truth share is to assume that truth has indeed a nature of the kind that they might find out about and develop theories of (ibid).

These remarks can fit deflationism in a broad sense; although as someone gets better insight, she could realize that deflationism works better as a label for a class of various accounts about truth sharing the same core of thought, i.e. the elimination of futile metaphysical weight. The particular species of deflationism that this thesis deals with is Horwich's minimalism. The minimalist version of deflationism is considered to be the stronger among other deflationary accounts, accepting many of the standard inflationary presuppositions without, though, the ultimate one; that truth has a substantive nature. So now we can delve into minimalism about truth in further detail.

Minimalist truth

The minimalist account of truth endorsed by Paul Horwich goes along with the deflationary idea that truth has not any underlying nature. Horwich's minimalism is a propositional species of deflationism (Horwich 1998: 6), viz it proposes a certain understanding of the (ES) and its functional use. As he puts it "[minimalism] contains no more than what is expressed by uncontroversial instances of the equivalence schema" (ibid). So, for the sake of accuracy, the equivalence schema for the minimalist is formed as:

(ES) The proposition that p is true if and only if p,

where we are inclined to accept – and probably without vacillation – the schema above, along with all the successful instances of it as an adequate explanation of the concept of truth. For Horwich this is the core of the minimalist account of truth; viz that (ES) can be used as a device to form generalizations over propositions which we could never be able to form elsewhere and this is merely the reason one should favor the truth inquiry. Let us consider for example the following,

(1) Whatever Vlad said is true.

So this expression states infinite number of instantiations such as,

(1a) If Vlad said that snow is white, then snow is white.

(1b) If Vlad said that sugar is saulty, then sugar is saulty.

...

Demonstrating this strategy, the minimalist makes explicit that a concept of truth is certainly of need. Because it is contradictory to the use of our language to form long conjunctions of the form [(1a) & (1b) & ...] whenever we would like to express a proposition like (1). However, we have no reason to require any substantive element as far as (ES) can form neutral generalizations where truth performs merely as logical property exhibiting only its common presence in every instantiation of each generalization and nothing more. Hence he doesn't hesitate to declare that –according to the question of the nature of truth– truth has no underlying nature

at all (Horwich 1998: 125). So minimalists accept that truth is a property (Horwich 1998: 5, Williams 1986: 240) but a property without any nature; that is, there are no worldly truth conditions for the propositions sharing the truth-property and, consequently, the basis for its application is merely insubstantive; exhausted by its assertibility. Horwich's minimalist truth has more ambitions, though, than clarifying the issue of the nature –if any– of truth. In fact he recognizes five different tasks than an adequate account of truth has to undertake (Horwich 1998: 36).

1. A theory of the function of the truth predicate;
2. A theory of what it is for someone to understand the word 'true' ;
3. A theory of the meaning of the word 'true';
4. A theory of what it is to have, or grasp, the concept of truth;
5. A theory of truth itself.

As indicate above, there is an issue towards the functionality of truth (1), some issues towards its conceptual/semantic facets (2-4) and the issue towards truth's nature (5). The conceptual/semantic aspects of minimalist truth will be examined further on the fourth chapter. What we can conclude for now is that minimalism offers a concept of truth which seems to be –and for the sake of the argument let us suppose that indeed is– functionally sufficient and metaphysically lighter than a correspondence theory adversary. Following Eklund (Eklund 2019: 632-633) we can summarize the minimalist claims into three kinds:

- (i) *Exhaustion*: What truth is, is exhausted by some schema (ES)
- (ii) *Expressive device*: 'Truth' is just an expressive device, used for mimicking infinite disjunctions and conjunctions.
- (iii) *Not a substantive property*: Truth in a property in a merely logical sense. It does not have a nature of the kind that other, ordinary properties have.

Hoping that this introduction to minimalism is sufficient we can address some significant questions that are not discussed yet; what is the motivation to endorse minimalism –or deflationism as well? What are the consequences for scientific realism?

1.3 Deflating Scientific Realism

«[...] if we take science seriously and if we take scientific theories as true, or approximately true, are we thereby committed to a certain way to understand the deep structure of the world? Are we committed to substantive accounts of causation, laws, necessity, properties and other key metaphysical categories? Or are deflationary accounts good enough?»

(Psillos 2017b: 32)

Psillos' question above sets one dilemma that has a key role for the issues at stake of this essay. He calls us to examine whether the commitment in literal understanding of science urge someone to commit to concepts with significant metaphysical

content or this is something she could avoid. And if we can have a positive answer to this question, rendering the potential elimination of metaphysical content as a matter of option, is it so evident that this is the best way to choose?

Following David we can recognize two basic motivations towards deflationary truth and one systematic (David 1994: 53-60).

1. Failure of the substantive accounts of truth –namely, correspondence– + distaste for ontological Platonism.
2. No need for a substantive theory of truth –namely, correspondence.
3. Eliminative Physicalism.

The first two motivations share common ground; deflationism about truth emerge as an alternative of correspondence due to correspondence's lack of adequacy or, to start from scratch, questioning the need for a correspondence theory of truth. It is argued that the ontology posited by the correspondence theory supporters (i.e propositions, facts, states of affairs and the like) is maximalistic and serves only the internal purposes that correspondence theory itself established; regarding the pursuit of the truth enterprise, this ontology have no explanatory value. As David puts it,

«They are merely integral parts of the fiction. They are invented to connect true and false sentences to the denizens of the fictional ontological realm. [...] The deflationist will readily admit that the correspondence theorist's inventions can be related to each other in various ways; they can even be interdefined to create the semblance of a theory. But he will insist that all there really is to the whole structure are sentences¹, truth, and falsehood. The rest is hot air.»

(David 1994: 54)

The third systematic motivation for a deflationist is eliminative physicalism. David (ibid.) recognizes certain links that urge the supporter of a strong account of physicalism to engage deflationism. Nevertheless, this goes beyond the purpose of the current study which deals with the potential coexistence of scientific realism and deflationism² and so we will not examine further the last motivation.

Regarding the first two considerations it is evident to point up that they invoke as key element correspondence's metaphysical assumptions which are considered superfluous or bizarre for truth. However, it is evident that the deflationist incline to an Ockham's-razor-like methodology having the aspirational goal to reduce the framework of inquiry into a less metaphysically concerned level.

What is at stake for the scientific realism debate is whether this Ockham's-razor-like method towards metaphysics of truth can harm its mind-independence claim.

¹David deals with a particular disquotationalist account of deflationism holding that the appropriate truth bearers for disquotationalists are sentences. For the purpose of this thesis –dealing with the minimalist branch– we will consider the above quote as applied to propositions instead of sentences without harming the core content of David's passage.

²It is argued (Psillos 2005) that physicalism is an issue independent of the scientific realism's debate. Following Psillos, there is no immediate need for the scientific realist to commit in physicalism and non-Humean accounts for metaphysics of science.

So in the next chapter we will examine the two major deflationary approaches on the scientific realism debate defended by Fine, Horwich and Devitt. Yet, Fine's deflationary attitude didn't intend to accommodate scientific realism, while the other one did; Fine's primary aim was an attempt to go beyond the realism debate rejecting both realism and anti-realism as unnatural stances towards science.

1.4 Some methodological remarks

Before proceeding to the main part of the thesis we should declare some methodological remarks. This thesis is dealing with scientific realism, i.e it belongs to the philosophy of science discipline. If we are right to argue that deflationism and scientific realism cannot coexist, a reasonable question emerges: *so which standpoint are we forced to abandon?* Strictly speaking there are three options:

(SSR) ~~Deflationism~~ + Scientific Realism = Scientific Realism + Substantive Truth

(DV) ~~Scientific Realism~~ + Deflationism = Verificationism + Deflationary Truth

(SV) ~~Deflationism~~ + ~~Scientific Realism~~ = Verificationism + Substantive Truth

The second of the three options is an inadmissible conclusion given that verificationism ties truth with epistemic conditions of human perception in favor of a substantive –yet not correspondence– epistemic theory of truth. There are two options left: (SSR) which is a shorthand of “Substantive Scientific Realism” –the understanding of Scientific Realism that this thesis defends– against (SV) denoting “Substantive Verificationism”, which is identified with the familiar verificationist anti-realism.

The kernel of the question stresses which of the two above philosophical attitudes seems more plausible to defend given that, in any case, a substantive notion of truth is available. It is evident that any choice here could be arraigned of being biased by one's philosophical idiosyncrasy towards the metaphysical realism's debate. Seems that the debate can't end here and it's obvious that the present thesis has no such ambition. Yet, we have good theoretical grounds to block the deflationary oriented Ockham's-razor-like methodology towards metaphysics truth and demand substantial framework for the investigation of scientific realism for some certain reasons.

Chapter 2: How much space for Deflationism?

2.1 Challenging Substantive Truth: 2 Strategies

In this chapter we are about to introduce the two major deflationary threats that occurred in the scientific realism's debate the past 40 years. We will recognize that a deflationary account of scientific realism is possible with respect to some specific philosophical commitments and finally it will be argued that the core issue for DSR is the regulation of some metaphysical consequences.

In 1984 Arthur Fine published his well-known "Natural Ontological Attitude" and a sequel "And not Antirealism either". Six years later, at 1990, Paul Horwich published "Truth", an overview of his minimalist account for truth, and the next year Michael Devitt's "Realism and Truth" had been released as well. All of the philosophers named here converged in articulating a common threat for scientific realism, viz deflationary considerations³, although each of them had in fact different philosophical motivations. Let us start with Fine's *Natural Ontological Attitude* (call it NOA).

2.2 The *neutrality* strategy

Arthur Fine's significant work that has considerable interest for this thesis concerns his so-called *third alternative* towards the debate between realism and anti-realism in science. He provocatively pronounces that "Realism is dead" (Fine 1986: 112) due to the undoubtedly conflicting philosophical stances of many of the cutting-edge science leading characters. According to Fine, philosophical interpretations of science is a hitch that anyone who endorse scientific practice does not respect at all, as long as science keeps going forward while the philosophical debate seems that has collapsed into a stagnant and infertile discourse. The fact that both realists and anti-realist seem confident to use the results of scientific practice for their particular projects urges him to introduce a *core position* governing the debate. The core position that Fine identifies as the bare minimum of the realist's and anti-realist's consensus towards scientific practice will help him draw a line aiming to purify science from both of these unnatural stances; he defends a *neutral*

³Deflationary considerations on scientific realism have been supported by other philosophers as well (Giere 1988: 81; Smith 1998; Leeds 2007). Yet, we consider these two strategies to have a systematic motivation posing a systematic threat for scientific realism.

alternative.

«Let us say, then, that both realist and antirealist accept the results of scientific investigations as “true”, on par with more homely truths. (I realize that some antirealists would rather use a different word, but no matter.) And call this acceptance of scientific truths the “core position.” What distinguishes realists from antirealists, then, is what they add onto this core position.»

(Fine 1986a: 128)

One’s reasonable concern is in what understanding of truth is Fine committed to, that he has no hesitation to accommodate both empirical adequacy –as an empirical constructivist would prefer– and correspondence with reality –as the realist favors– under the word “truth”. Seems like he is applying his core position’s principle meaning that whatever realists and anti-realists add onto the core position regarding the concept of truth, they still is an acceptance mechanism we all share for some familiar and undoubted standards; one concept of truth *already in use*.

«[A] distinctive feature of NOA that separates it from similar views currently in the air is NOA’s stubborn refusal to amplify the concept of truth by providing a theory or analysis (or even a metaphorical picture). Rather, NOA recognises in ‘truth’ a concept already in use and agrees to abide by the standards rules of usage.»

(Fine 1986a: 133)

There has been some interpretative work on Fine’s sense of truth⁴ converging to understand NOA as a “thoroughly deflationist” strategy (Fine 1986b: 167, 172, 177). Among NOA’s aims we can underline the discountenance it places for someone to pursue a particular understanding of truth, existence and so on. It goes, then, hand in hand with the deflationary demand stating that the investigation of truth’s deeper nature is futile. Though, it may be naive critique to evaluate Fine’s motivation for an *already-in-use* notion of truth as a deflationary one; he himself manifests that the issue at stake for NOA is a plain notheory which goes even further than Horwich’s minimalism.

As Psillos points out (Psillos 2005a: 226) Fine’s approach towards truth faces significant ambiguity and invokes two attitudes:

- *The negative attitude:* There is a clear *already-in-use* concept of truth in science that realist and anti-realist theories perform an illegitimate move by trying to add some interpretative gloss to it.
- *The positive attitude:* There is established trust in scientific practice and its results should be conceived as “true”. Though the concept of truth has no deeper nature; instead its content is exhausted by the minimalist account.

Along with the detailed analysis above we have to consider some crucial questions: *Is NOA’s neutral stance successful? Is it neutral however?* A first problem for NOA emerges by both realist and anti-realist philosophers wondering what exactly renders NOA incompatible with their own philosophical stances be they realistic or not (van Fraassen 1985: 246; Musgrave 1989: 383; Devitt 1991: 45; Psillos

⁴See Psillos 2005a: 222-227

2005a: 220-250). This is a problem which has to be taken into account chiefly because it is at odds with NOA's primary aim; that is, establishing a third neutral option available to those who are not willing to inflate the scientific practice with any unnatural stance.

To demonstrate NOA's inadequacy we can see in further detail Psillos' defence of realism delineating its most noteworthy weaknesses. First, he argues that if NOA is right then the negative attitude, i.e. the *already-in-use* notion of truth, gives us the ground to block verificationist anti-realism. This stems from the fact that eventually the core position's statements can't be shared to both members of the debate as it was opposed to be. The modern verificationist anti-realism has a certain stance towards theoretical assertions which differs significantly from the reductive empiricist's view; the anti-realists are no longer adamant about ontological economy, the potential for transforming theoretical discourse into observational discourse, or the abolition of theoretical discourse –projects that reductive empiricism advocates–. They would even concur that electrons exist, for example (Psillos 20015: xx). For the verificationist where there is no possibility of acquiring knowledge there are gaps of reality. Theoretical assertions are expressing potential states of affairs and so –if those state of affairs do not comply with our verification standards– they can be considered as lacking truth-value, as opposed to the realist who takes theoretical assertions at face-value. That is, the *already-in-use* concept of truth can't be held from both sides of the debate; the realist takes the theoretical assertions to be truth-valued –and precisely true– whereas verificationism allows that not all theoretical assertions are truth-valuable.

If so, then it is evident that “the realists' alleged inflation of the concept of truth ‘already in use’ is more of a call to take science literally than anything else” (Psillos 2005a: 228); hence the core position is not concerned on truth at all. Given this, Psillos interprets the *already-in-use* concept of truth as best captured by a correspondence theory of truth.

«In sum, the realist ‘correspondence’ account of truth is nothing but a summary of the claim that statements are true whenever the entities being referred to have the properties, or stand in the relations, being referred to. If this line is right, then the realist ‘correspondence’ theory merely explicates the concept of truth involved in Fine’s suggestion that we ‘treat truth in the usual referential way so that a sentence (or a statement) is true just in case the entities referred to stand in the referred-to relation’ (1986a: 130).»

(Psillos 2005a: 236)

Thus, inasmuch as the NOAer seems to conceive theoretical assertions of science over the unobservables as bearing a truth value, evidently she is forced to engage certain ontological stances towards them; therefore the NOAer holds an utterly realist stance, far from the desired neutralized one.

As indicated, NOA's criticism is tough and a way out seems out of reach for the NOAer. It appears that Fine invites into engaging one sense of neutrality towards philosophical interpretations of science that has perfect compliance with the realistic interpretation, though not with the verificationist anti-realism's one. Nonetheless, NOA did not pose the threat which we consider crucial for scientific realism, viz a refined account of deflationary scientific realism that does not collapse into realism

from its own motivation. In the next section it will be addressed what we consider as being at stake concerning the potential compatibility of deflationism with scientific realism; a version of deflationary attitude which is immune in NOA's problems, mainly because it does not endorse the discussion with such a quasi- or anti-philosophical attitude favoring a quite ambiguous concept of an *already-in-use* truth, but also for its essentially diverse motivation; incorporating scientific realism instead of turning it down.

2.3 The *indifference* strategy

Although NOA has deflationism in its heart we saw that this was not enough for someone to incorporate the content shared by both realist and anti-realist in its core position without ending up realist after all. Although, there is also another way that deflationism got involved in the scientific realism debate. That is, according to some philosophers, scientific realism can be in fact compatible with minimalistic truth (Horwich 1998: 52; Devitt 2005: 4). For the minimalist, realist's need for a correspondence theory is taken to be largely a psychological matter, viz an intuition, which minimalism fully captures with less metaphysical commitments. The minimalist here can get some help from a certain understanding of realism that renders the issue of realism primarily an ontological matter (Devitt 1997); ergo, the mind-independent world cannot be defended by epistemic and semantic considerations; it is merely a doctrine laying out the ontological furniture of the world. We will deem this combination as a sophisticated form of deflationary scientific realism: DSR. A remarkable key-point for DSR is that both Horwich's and Devitt's work converge in an *indifferent* attitude towards the interaction between metaphysics and the concept of truth.

It is an issue under discussion for many philosophers if a thesis for realism or anti-realism is even tenable; instead it may be some sort of an interminable dispute towards an not genuine problem. Inclination to this way of thinking may be a result of the fact that members of the same camp, be the realists or not, diverge so much in their philosophical standpoints that they can't even have consensus if they actually belong to the same camp⁵. A way out from such an imbroglio would be drawing specific lines in articulating the realist direction; this is what philosophers do anyway. And a crucial issue here is whether settling the realist inquiry requires any consideration in epistemic or semantic tenor. A line of thought that the present thesis regards as of great interest assumes that the question of realism is genuine, although it does not have any correlation with embracing a specific theory of truth (Horwich 1998: 56; Devitt 1997: 3-4).

This account of realism is defended by Devitt in a wider attempt to argue for a naturalistic triptych: endorse an empirical metaphysics that entails corresponding naturalized epistemology and semantics. He introduces five maxims for this:

- **Maxim 1:** *In considering realism, distinguish the constitutive and evidential issues.*
- **Maxim 2:** *Distinguish the metaphysical (ontological) issue of realism from any*

⁵See Horwich 1998: 53-54

semantic issue.

- **Maxim 3:** *Settle the realism issue before any epistemic or semantic issue.*
- **Maxim 4:** *In considering the semantic issue, don't take truth for granted.*
- **Maxim 5:** *Distinguish the issue of correspondence truth from any epistemic issue.*

Devitt is a realist. That is, he wants to demonstrate the mind-independent structure of the world, but let us delve into the sort of independency he embraces. He singles out two elements as its most important features for an approximation of realism: *independence dimension* and *existence dimension*.

The first one consists in two requirements concerning “*how to exist*”: *independent existence* and *non-mentality*. What Devitt underlines is that the independent existence of an object does not rest on the object's knowability; rather it lies on the fact that it is not constructed upon our constantly altering epistemic and referential capabilities. If specific epistemic conditions as above are invoked in one's attempt to grasp an object this is a matter of epistemology and therefore of no interest for the object's metaphysical-ontological status. Although, this condition is necessary but not sufficient for attributing *objective existence* to an object; what is also required is being non-mental. For there can be mental objects (ideas) which can exist independently of one's belief for their existence i.e. regard the claim of *independent existence*⁶.

The second one deals with demonstrating the existence of whatever should be taken to exist; hence, it declares “*what exists*”. To have an adequate realist account of what exists it is necessary to accommodate the ordinary common-sense objects along with the unobservables entities posited by science. If they are not accepted both, one is open to become either an idealist or a sort of scientific anti-realist of the instrumentalist legacy.

In the light of the above, Devitt forms the realistic commitments as the following maxim-like statements with respect to the two of the essential dimensions mentioned (Devitt 1997: 24-25):

Realism: *Tokens of most current common-sense and scientific physical types objectively exists independently of the mental.*

Common-sense Realism: *Tokens of most current observable common-sense and scientific physical types objectively exists independently of the mental.*

⁶To make this clear, Devitt introduces two theses and then rejects both of them (Devitt 1997: 15):

1. Incorrigibility thesis: A person cannot be wrong about his mental states.
2. Self-intimation thesis: A person cannot be ignorant about his mental states.

Thus, a person can embrace judgements upon her mental experiences which she could evaluate wrong or even be absolutely ignorant of them. This makes Devitt confident enough to regard the existence of mental objects –mental states, ideas and so on– completely distinct from the beliefs one holds for their existence.

Scientific Realism: *Tokens of most current unobservable scientific physical types objectively exists independently of the mental.*

Being a realist means commitment to the ontology concerning the observables as well as the science-indicated unobservables; these claims are captured by the **Common-sense Realism** and **Scientific Realism** respectively, which, taken together, define **Realism** abstaining from addressing epistemic or semantic issues.

2.4 Semantic and Epistemic theses: fine for DSR

As sketched in the previous section a *minimal* metaphysics is available for the deflationist. In fact, Horwich does embrace a similar point of view towards the *indifferent* attitude, as far it concerns the interaction of the realism dispute with truth theories. Although, the indicated *indifference* resulted in different pathways as to the appropriate understanding of truth; Devitt prefers a correspondence theory, while Horwich thinks that truth is not a substantive concept at all.

It is evident that Horwich and Devitt hold different agendas; yet, we can see that their stances towards scientific realism are not conflicting at all (Psillos 2000: 711-712; Devitt 2005: 102-103). Horwich pronounces the plausibility of a sophisticated deflationary account of scientific realism, meanwhile Devitt's account of realism offers the tools for such an account. All the above are enough to construct the deflationary version of scientific realism that we are going to deal with. We identify it with what we call so far "DSR".

DSR should hold solely the metaphysical thesis of scientific realism. Evidently, the semantic and epistemological theses should be distinguished and independent from DSR's heart, yet they must be captured in terms of the introduced deflationary framework. Devitt has made some remarkable points towards such an attempt. He argues that no conception of truth entails realism, nor the converse. Apropos the direct entailment it is noted that, in the first place, when one is committed to a specific notion of truth it is not guaranteed that she will apply it to the appropriate realistic ontology e.g. the non-mental; that is, the existential dimension of realism, and consequently the realist thesis itself, is not secured. Secondly, the supposed notion of truth may be an epistemic one leaving the door open for a verificationist-motivated ontology that does not engage with the independence dimension of realism. Hence, even though no theory of truth can entail realism, some theories of truth potentially entail anti-realism. As for the converse, i.e. that commitment to realism does not entail commitment to any conception of truth, Devitt's response lie on the semantic-eliminativist type of realism embraced by Quine; he holds that Quinean scepticism over semantics is hard to be debunked inside a physicalist framework.

One could think that, given there are no semantic considerations indicated by the statement of realism, adding one true proposition to this could modify it into semantically significant, rendering it sufficient for the entailment of a concept of truth. This is not the case for Devitt: the case of semantic eliminativism demonstrates again that explanatory truth is not in need at all. Hence, a non-explanatory deflationary concept of truth may form a special situation here:

«Though correspondence truth should have no role in stating realism, disquotational truth may have, for disquotational truth may have a role in stating any theory. This role can be completely trivial: instead of asserting ‘T’, assert “‘T’ is true’. Even where the role is not trivial, it does not make the theory in any way semantic».

(Devitt 1988: 201)

It is possible, then, to offer a deflationary-motivated formulation of the scientific realist’s semantics; we consider the following statement to define a deflationary quasi-semantic thesis for DSR akin to the semantic thesis introduced by Psillos.

The last worry for the DSRist is to manifest that the deflation of truth does not harm the epistemic thesis of scientific realism. It has to be stressed what is it for the epistemic optimism to shift from approximately true theories in a correspondent way into deflationary approximately true theories. What could be a matter of dispute here for the scientific and the DSRist is how can one be epistemic optimist whereas the ascription of truth to a proposition informs her merely that a trivial equivalence holds? The deflationist would respond by prompting that the prime significance of deflationary truth is forming generalisations over propositions; hence, to the extent that we are interested in the scientific enterprise, deflationary truth preserves a function of truth which is crucial; given a mature and successful scientific theory T it can be asserted:

(1) What T implies is true.

So there can be an potentially infinite number of implications of the form:

(2) If T implies that there are electrons, then there are electrons.

(3) If T implies that there are unicorns, then there are unicorns.

(4) If T implies that snow is pink, then snow is pink.

Given (1), all of the above (2)-(4) equivalences hold trivially. Their validity does not rely at all on the existence of electrons, of unicorns and the colour of snow. Be one realist or anti-realist does not play any role in understanding the legality of the above propositions in the deflationary way. Consequently one has no reason to question the knowledge produced by a scientific theory T if T is true, as long as this knowledge forms two sets of instances of the (ES): the instances where the equivalence schema is valid due to the truth of both parts and the instances where the equivalence schema is valid due to the falsity of both parts. Then we can say that only the first group indicates the positive epistemic contribution of T to our knowledge, because the second group is consisted of implications with false hypotheses, thus they hold true trivially. In any case, one can be optimist about the produced scientific knowledge because she can recognize the truth of certain instances of the (ES), where both parts are true statements of T, just by appealing to the worldly states of affairs. Simply because the world is such and such a scientific theory which complies with our description is true, and the converse as well. Hence, once again, the difference between a realist and an anti-realist rests on questioning if knowledge for the existence of facts is exhausted by our epistemic means and capabilities to grasp it, or not. And this is a concern which ultimately leads us back

to metaphysical considerations reinforcing our opinion that for DSR the epistemic -and semantic- issues are 1) conceptually independent from the metaphysical, 2) subordinate to DSR's formulation and 3) capable of been captured by DSR.

As Horwich put it:

«The difference between a realist and an antirealist, in a nutshell, is that the realist decides on reflection that there is actually no difficulty here—so our ordinary ideas about what we know can stand; whereas the anti-realist decides, on the contrary, that the alleged conflict is genuine and that it has certain ramifications for what we can take ourselves to know».

(Horwich 1998: 55)

Hence, this question cannot be addressed by semantic considerations anyway. The only requirement for a deflationist to secure the epistemic optimism is merely by holding that our ordinary ideas about what we know stand and this is not an illegitimate move.

In this section we tried to argue that Horwich's and Devitt's work, despite serving different agendas, share some points which are enough to construct the sophisticated version of scientific realism tied with minimalist truth. This conception of scientific realism is primarily a metaphysical doctrine; so the epistemic and semantic thesis of scientific realism as Psillos introduced them still exist in modified versions, but have only subordinate role for DSR. We saw that, from a deflationist point of view, subscribing to the metaphysical thesis of scientific realism does not oblige someone to accept its semantic or the epistemic thesis; it is a matter of choice. Thus, at first glance, the full scientific realist triptych can be captured without committing to any substantive concept of truth. Evidently, we can summarize DSR into the three theses below:

- **The Metaphysical Thesis***: *Tokens of most current common-sense and scientific physical types objectively exist independently of the mental.*
- **The Semantic Thesis***: *Scientific theories are (deflationary) truth-conditioned descriptions of their intended domain. Hence, they are capable of being (deflationary) true or false. The theoretical terms featuring in theories have putative factual reference. So if scientific theories are (deflationary) true, the unobservable entities they posit populate the world.*
- **The Epistemic Thesis***: *Mature and predictively successful scientific theories are well-confirmed and approximately (deflationary) true. So entities posited by them, or, at any rate entities very similar to those posited, inhabit the world.*

The metaphysical claim of DSR is chosen here to be exactly Devitt's statement of **Realism** because DSR is at first structured with respect to this understanding of realism. In fact, DSR's essential claim is hardly exhausted on this statement. An observation here is that both **Metaphysical thesis** and **Metaphysical thesis*** do not invoke semantic or epistemic considerations as regards their expressive dynamics. Although, scientific realism as understood by Psillos requires a non-epistemic correspondence concept of truth as essential in the formulation of the scientific realist nexus, while Devitt's account argues for an indifferent attitude. Before proceeding in the investigation of DSR it has to be clarified that DSR's **Metaphysical thesis*** captures the world's mind independence claim no less than Psillos' counterpart. This means that Devitt's analysis can accommodate the so-called *possibility of divergence*, viz., *“the possibility of a gap between what there is in the world and what is issued (or licensed) as existing by a suitable (even ideal) set of epistemic practices and*

conditions.” (Psillos 2017a: 210). Evidently, there are good grounds to argue for this; Despite Devitt’s indifference about semantic considerations for realism, an epistemic account of truth would involve no commitment to the objectivity of reality as captured by his *independence dimension*. We consider this sufficient for rendering **Metaphysical Thesis*** an adequate modification of Psillos’ counterpart.

Chapter 3: The challenge of Verificationism against DSR

The previous chapter is concerned around the space that scientific realism has for deflationism. The first deflationary threat examined was NOA. Criticism against NOA had been so harsh that is not still considered to be a critical issue for the scientific realism debate. Nevertheless, the valuable message for someone who gets into the NOA-motivated discussion is that Fine's stance has determined for both sides of the debate the limits of disagreement and manifested the significance of the philosophy as a useful interpretative means for the scientific enterprise, despite the fact it largely questioned it. The second horn of deflationism is filling correspondence's shoes; we attempted to illustrate a refined account of scientific realism that subscribes in a metaphysically thinner concept of truth. Yet, it was argued that the deflationist need some help for this move; the bargain for deflating the concept of truth is rendering scientific realism to be chiefly a metaphysical doctrine stating the mind-independence of the world. Given –not just for the sake of the argument– that the semantic and epistemic theses are fully captured by the deflationary truth, DSR has only metaphysical challenges to address. In this chapter we will introduce verificationist anti-realism and evaluate the defence of DSR against it. It will be argued that the DSRist is obliged to make a decisive conceptual shift in order to cope with verificationism⁷.

3.1 Verificationism

At odds with Scientific Realism

In the introductory chapter of the present thesis it was manifested that the metaphysical thesis of scientific realism deals with the anti-realist claim of mind-dependence existence. It was argued that Berkeleyan idealism is at odds with both ways of existing that the realist commits to: *irreducible existence* and *objective existence*. Yet, there is a more sophisticated account of mind-dependence which does not focus on what types of objects exist. Its main interest is directed on delineating the appropriate conditions which are sufficient for legitimate commitment to the existence of whatever inhabits the worlds; doing this it can resist the kind of mind-independence claim as posited by idealism no less than the scientific realist.

⁷A significant part of this direction's criticism against DSR is owed to Karitzis & Psillos unpublished manuscript. Despite it never published, the paper gives critical insight regarding the main argument that is going to be defended in the present chapter i.e the relation of minimalist truth with mere assertion.

We call this species of anti-realism *verificationist* and we identify it with the line of thought embraced by Michael Dummett and Hilary Putnam. The decisive difference of verificationist anti-realism with traditional idealism is centered on the fact that verificationist do not challenge the realist's *irreducible existence* and deal solely with the concept of objectivity. For the verificationist an epistemic condition such as Dummett's warranted assertibility, Putnam's rational acceptability, Rescher's cognisability-in-principle, is closely associated with any sense of objectivity can be pursued; that is, the ultimate objective criterion which is going to evaluate the correctness of our conceptualizations cannot be epistemic-free, hence cannot rely on the world's mind-independent existence. At the same time, the verificationist can accept the existence of all ordinary material objects, even the unobservable objects that are posited by the most mature and successful scientific theories, as long as there is a good justification practice guaranteeing their existence.

Summarizing the essence of the verificationist thought, as far as it concerns scientific realism, we can see that it directly conflicts with the realist attitude which is tied with the respect of the *possibility of divergence* thesis. The *possibility of divergence* entails that, although it is an open issue if our epistemic means and capabilities can indeed be sufficient for knowing whatever there exists, we should respect the possibility that there may be things which cannot be licenced to exist even if we could endorse an ideal investigation. Given that, it is clear that the scientific realist does not dismiss the verificationist scenario where anything that exists in the world is captured by an ideal epistemic theory; rather, she questions the case that if an ideal epistemic theory describes the world in certain ways that implies that the world really is as the theory describes. Both the scientific realist and the verificationist seem to endorse an empirical investigation of the world making a good use of our epistemic means and conceptualizations and they would be both happy if this enterprise comes to an end with a complete agreement between the physical nature's content and the description of it by our ideal epistemic means. Nevertheless, they would not agree about its source; is it the world's structure that renders our ideal epistemic theory correct or is it the correctness of our epistemic theory that guarantees that the world is as described by the theory? Respecting the *possibility of divergence* means going for the first, while the verificationist would choose the second. Thus, for the scientific realist the mind-independence of the world "*should be understood as logical or conceptual independence: what the world is like does not logically or conceptually depend on the epistemic means and conceptualizations used to get to know it*" and this understanding is best expressed by the *possibility of divergence* thesis (Psillos 2017a: 219-220).

Some truth-talk analysis would be welcome here. What is significant for verificationism is that the *possibility of divergence* is *a priori* precluded; it is argued that, without any help from experience, there has to be a logical-conceptual link between what exist and what is licenced to exist through a legitimate justification procedure. This move is available for the verificationist due to the concept of truth she subscribes; an epistemic one. Besides, this is probably the prime motivation for Dummett's verificationist programme. For Dummett the truth-talk is about stating facts. To make a true statement is to state a fact; and to explore the kinds of facts that obtain and what constitutes their holding good is to say what reality consists in (Dummett 2006: 2-3). This illustrates the way in which Dummett recognizes the

role of truth for the issue of realism: he holds that “our metaphysics is therefore to be determined by our semantic theory” (Dummett 2006: 15). It is, then, important to examine what are the key features of a verificationist semantic theory; doing this we can have an broader image of some deeper philosophical admissions that verificationism holds and what way the epistemic element establish its significance to give substance to a theory of truth or meaning.

Briefly put, a verificationist semantic theory states that when one uses statements of a specific natural language, the capability of grasping their meaning lies in the user’s acquirement of the statements’ assertibility conditions; hence a justification practice is necessary here. As Psillos put it,

«[...] what a competent speaker knows when she knows a language is the assertibility conditions of its statements; i.e. conditions that are not “transcendental” but linked to the knowledge she manifests by her actual use of the language. Grasping the assertibility conditions of a statement amounts to recognising whether she is justified to assert that a statement is true».

(Psillos 2001: 90)

Dummet’s proof-theoretic semantics manifests that way its conflict with an other significant tradition of semantic approach to the natural languages, namely the truth-conditional one, associated highly with Donald Davidson’s work. The verificationist calls the realist to replace the realist-motivated truth-conditions with assertibility conditions and the realist-motivated non-epistemic concept of truth with the epistemically bounded notion of warranted assertibility. The element securing the “warranty” here is linked with the proof-theoretic validity and according to Dummett, his anti-realist philosophical stance is mutually feedbacked with his intuitionistic attitude towards logic (Schroeder-Heister 2018). That is, in a verificationist perspective, the property of truth is subscribed to warranted assertible statements, i.e statements that one has sufficient epistemic reason to accept. Yet, a statement’s holding of warranted assertibility does not entail that its negation is not warranted assertible as well; this illustrates verificationist’s human-oriented notion of truth, by challenging the possibility of worldly constant warranted assertions i.e. rejecting the possibility of realist type evidence-transcendent truth-conditions .

The purpose of this part of the essay is to manifest the incompatibility of verificationism and scientific realism in a brief, yet no naive way in order to argue that verificationism is a well-ordered “direct” challenge for the scientific realist i.e. that there is no way of reconciling them. The issue at stake rests on the sense of objectivity one is willing to adopt; if the presentation of verificationism till here succeeds in its purpose, the reader should have understood the links associating this dispute over the way of existing with delineating the nature of truth; the verificationist prefers an epistemic one, while the scientific realist argues for a non-epistemic. Although, it has to be examined if there are considerations rendering scientific realism’s main claims as captured by verificationism. This would mean that the stated conflict may not be “direct” as characterized above. Namely, we will examine the possibility of a verificationist account for scientific realism as illustrated via some implicit insights by Dummett and Putnam, and defended in a more accurate form by Wright in his “*Truth and Objectivity*” (Wright 1994),

Reconciliation with Scientific Realism (?)

Scientific Realism states that its three theses are necessary and sufficient for forming a proper realist account with respect to science; each of them argues against certain types of anti-realism and at the same time it is argued to be conceptually distinct and irreducible. The scientific realist, same way with the verificationist anti-realism, struggles for an empirical survey of the world making a good use of our epistemic and theoretical means. Yet, they cannot have an agreement for the deeper structure of the world as long as they cannot have an agreement on the proper notion of truth. The scientific realist insists in arguing for the *possibility of divergence*, the thesis that address the need for a non-epistemic account of truth. Although, there has been some discussion if there can be some compromise between the two camps without crucial philosophical cost; that is, a verificationist account of scientific realism. There is a critical question here; let us take for granted that from a verificationist standpoint much of the scientific realist's claims can be acquired: does this account express properly scientific realism? That is, what if the *possibility of divergence* can be eliminated without any cost? Hence, what is at stake here is not whether the scientific realist's metaphysics, i.e. the mind-independence claim, are sufficient for a *proper* or *genuine* account scientific realism; this may be completely possible. Rather, it is questioned if the mind-independence claim is necessary for the *proper* scientific realism.

Dummett's work provides some cues towards a verificationist account of scientific realism. These cues originate from his view towards the unobservable entities posited by science.

«The urge to get behind the phenomena and find out how things are in themselves remains with us: it is one of the motivations of science. And science has certainly taught us much about how things are in themselves, including much that forms, for many who know little about science and care little about it, the background of their perception of the world».

(Dummett 2006: 93)

Putting it that way, Dummett recognizes that there is a part of reality that lies beyond the phenomena, as long as it can be in principle verified; besides, this is consistent with the positive verificationist attitude towards the *irreducible existence*. This manifests that there is one way that a verificationist can accept a great part of –if not all– the ontological furniture of the world as posited by mature scientific theories, as long as the theoretical claims invoking such entities are in principle verifiable. After all, what distinguishes here the scientific realist from the verificationist is a stance towards the truth of theoretical claims of science: the verificationist arraigns the scientific realist for being willing to accept evidence-transcendent truths about unobservable entities without requiring any justification-epistemic warranty. This forms the way of Dummett's declination of the mind-independence claim: due to a strict evidence-based justification practice. Yet, he does not regard himself inclined to dismiss the epistemic optimism or the literally understanding of verifiable theoretical statements of science. Similar account was embraced by Putnam as well, although his justification practice intended to accommodate a more robust sense of truth; instead of Dummett's warranted assertibility which is constrained on the given evidence at any given time, he proposes an idealized justification practice; i.e.

a justification practice that can guarantee a truth-property which is held in a rigid way, not depending on social-originated factors that come and go (Psillos 2017a: 219).

Wright's ideas towards our issues comes from a quite different motivation. He finds the debate between realism and anti-realism obscure; it seems impossible to track the crucial matter of dispute between the two camps –if any– and consequently that raises the question how the debate can proceed without some critical reconsiderations. So, he intends to introduce a novel appeal to this dispute; a framework where realism –or anti-realism as well– goes together with a specific given area of discourse where the truth aptitude is not taken for granted for every of these areas of discourse. Furthermore, Wright presents several considerations on the notion of truth; he agrees with deflationism as to the metaphysically lightweight status of a proper conception of truth, yet he reject deflationism.

According to Wright, one who defends a deflationary view must accept that the truth predicate plays a normative role in the procedure of forming claims; that is, the consideration that "p" is true implies that we have reason to approve p. On the other hand, a proposition is warranted assertible if certain informational state provides a reason, that epistemically justifies our viewing of the proposition as a claim. Yet, Wright argues that it is not necessarily the case that the sets of warranted assertible claims and deflationary truths are isomorphically related; there can be warranted assertible claims that are not true i.e. do not satisfy the (ES). Hence, if an informational state is neutral with respect to some proposition, then neither that proposition nor its negation is warranted assertible; consequently neither of them can be true if truth is warranted assertibility. If Wright is correct, then the deflationists must accept that "truth" and "warranted assertibility" are potentially extensionally divergent predicates, and thus do not play the same normative role. There should be a norm of truth which is distinguished from warranted assertibility and this separate norm, he claims, lies just in the accepted instances of the (ES). Eventually he draws the conclusion that “no room could then remain for the contention that "true" is only grammatically a predicate, whose role is not to attribute a substantial characteristic” (Wright 1994: 18) .

As for the truth predicate features, he holds that “a truth predicate is one which satisfies a small set of basic principles –most centrally, certain platitudes linking truth with assertion and negation”, yet “they are insufficient to motivate an intuitive realism about a discourse in which such a predicate applies” (Wright 1994: 174). In the contemporary bibliography Wright's conception of truth is considered to be a pluralistic one; that is, the plausibility of each truth-theory candidate differs with respect to the given area of discourse. Nonetheless, what can be shared for all areas of discourse is that a merely minimal⁸ conception of truth cannot be tolerated; for Wright the default notion of truth is metaphysically lightweight –satisfying only some intuitive platitudes guaranteeing that the given area of discourse is truth-apt– but not deflationary and as long as it cannot stand for any area of discourse by its own, the realist should show in what degree it should be inflated with respect to the given domain and in what way to manage this inflation.

⁸Here the word “minimal” should not be confused with Horwich's minimalism. It is used as a description of Wright's metaphysically lightweight, yet inflationary conception of truth.

What about Wright's views towards the scientific realism domain of discourse? An issue at stake here concerns the relationship between scientific realism's metaphysics and the concept of truth. Wright holds that the mind-independence claim of scientific realism is not necessarily at odds with an appropriate epistemically constrained concept of truth. He thinks that if one is committed to scientific realism, then she can accept without any glimpse of inconsistency (1) that the theoretical assertions of science truthfully represent worldly states of affairs and (2) that we have epistemic access to those states of affairs. According to Wright, these two claims do not contradict at all with semantic anti-realism, as it is usually supposed to; he does not identify semantic anti-realism with the thesis that the content of reality converges with the limits of an ideal human inquiry i.e. that there can be aspects of reality which are not apt of humanly intelligible representation. This becomes more clear if, following Wright, one understands semantic anti-realism as a thesis primarily concerned on the detectability of worldly states of affairs: the preciseness of any representation should be in principle detectable in order to grasp the representation's content. In other words, what Wright argues for is, as Psillos puts it, that "there is no in principle undetectable truth" (Psillos 2000: 710). With respect to this understanding of semantic anti-realism, Wright argues that the world can indeed have a structure which is independent of our representations and at the same time any truth about worldly states of affairs is in principle detectable. This line of thought indicates that the scientific realist has no justification to reject semantic anti-realism on the basis of a supposed entailment to an epistemic bounded reality, because evidently this entailment is an outcome of a misconception. If there is no mistake here, an epistemic account of truth can honour scientific realism no less than a non-epistemic one.

Indicating that there is no harm for the metaphysics of scientific realism to endorse an epistemic notion of truth, Wright goes further suggesting that, evidently only such a concept of truth seems plausible to accommodate the scientific realist's claim of epistemic optimism. Yet, it has been illustrated that, in the verificationist way of thinking, there can be quite different philosophical implications with respect to the interpretation of its basic tenet: The idea of the convergence between world's content and the description of world's content by an appropriate epistemic theory – an appropriate investigation. The differences lie on the nature of this investigation which one takes for granted. As we saw in the previous paragraph, Wright leaves the possibility for a part of reality to be unsuitable for humanly intelligible representation, i.e. he advances an idealized account of investigation where the worldly states of affairs and actual human investigation may not coincide, but it is guaranteed that worldly states of affairs do coincide with an idealized account of human investigation. This idealized account exhausts the complete set of all worldly facts –not only the representables– and is expressed with a robust justification practice called *superassertibility*. Following Wright's definition:

«A statement is superassertible if some actually accessible state of information – a state of information which this world, constituted as it is, would generate in a suitably receptive, investigating subject – justifies its assertion, and then will continue to do so no matter how enlarged upon or improved».

(Wright 1996 :865)

Wright's definition demonstrates explicitly superassertibility's robustness; being a statement superassertible means that the evidence in favor of the statement renders it true independently of any new information which could be acquired. Hence, there is an amount of evidence that can guarantee a statement's superassertibility and any addition beyond this evidence is merely superfluous for the statements good holding. Although, Wright argues that superassertibility's function is not the same in every area of discourse. Specifically, it is not clear if superassertibility can satisfy all the basic platitudes of truth, so that it can count as a truth-predicate, if the domain of discourse takes truth as non-epistemic. On the other hand, for the domains of discourse where truth is taken to be evidentially constrained, superassertibility can count for a truth-predicate. In other words, superassertibility here can be seen as an ultimate criterion with respect to which one can argue in favor –or against– the realistic attitude of a certain domain of discourse, or as Wright himself puts it: “one appropriate channel for the development of realist intuition about a region of discourse is via argument that truth there cannot satisfactorily be construed as superassertibility” (ibid).

Therefore, the question of the reconciliation between scientific realism and verificationism evidently depends on whether superassertibility can count for truth in this domain. The criteria for deciding if a certain domain of discourse endorses a non-epistemic account of truth are the four below, generating four corresponding requirements for the scientific realist's defence against verificationism (Psillos 2000: 710-711):

1. *Extensional comparison*: It is required that non-epistemic truth and superassertibility are extensionally divergent concepts; that is, there can be superassertible propositions which are not non-epistemically-true, or the converse.
2. *The Cognitive Command*: It is required that non-epistemic truth secures a desirable sense of objectivity, i.e. dealing in a merely theoretical way with an issue inside certain a domain of discourse, there should be solid convergence of opinion; diverging from the proper opinion can be explained solely as a rational failure –not as a matter of option.
3. *The Euthyphro Contrast*: It is required that the non-epistemic truth of any proposition entails its superassertibility, not the converse.
4. *The width of cosmological role*: It is required that non-epistemic truth should contribute to the explanation of things other than our beliefs about the subject matter in question; therefore non-epistemic truth need to have a *wide* cosmological role.

Wright's framework does not posit a single challenge for the scientific realist. If scientific realism is right considering verificationism as an opposing philosophical attitude, it has to response to this reconciliation strategy; only with an adequate response it can be secured that scientific realism postulates a genuine alternative to verificationist anti-realism. It is obvious that the scientific realist need not take Wright's criteria for granted and if she does, it should not be a trivial task for the scientific realist to manifest the satisfaction of the four requirements. The present thesis cannot deal in detail with such an issue, but we can see that from the scientific realist's perspective, Wright's challenge does not seem irresistible at all:

«[...] the very features of the truth-predicate implicated in the assertoric theoretical discourse in science are such that it satisfies all criteria that Wright himself has suggested as pointing towards the operation (or implication) of a (realist-style) concept of truth in a discourse. If this conjecture is right (and it needs a lot of careful thought to be substantiated), then the realist aspiration to modesty ipso facto implicates a substantive non-epistemic conception of truth».

(Psillos 2000: 711)

3.2 Unknowable truths as a way out

What does the unknowability of a truth has to do with our issues? First of all, talking about *unknowability* needs some clarification. One can start by taking a look back to the objects that the anti-realist is concerned along with the way she is concerned on them. There are common-sense observable objects that are accepted to exist due to their direct ability to be grasped by our perception means. There are some unobservable entities posited by mature and successful scientific theories which are taken to be existent due to their ability to be highly verified by our conceptualizations and our epistemic means. The dispute concerns if the above two kinds of existence finally exhaust any potential way of existing; the realist would insist that we cannot exclude the possibility of a remaining leftover part of objects that cannot be epistemically accessible to us, even if someone could endorse an ideal inquiry. It is with respect to this third leftover part that we will refer to *unknowability* here; that is, we are concerned on *in principle unknowable* propositions. We will see that, as well as verificationism is indeed incompatible with scientific realism, the defence of each philosophical stance depends on the epistemic status of truth one is committed. The verificationist would defend an epistemic notion of truth, yet a scientific realist would go for a non-epistemic one. Putting it like this, it is profound that what is ultimately at stake is the direction of dependence of the Euthyphro Contrast: Is reality the source of our proper epistemic theory's correctness, or the converse? The scientific realist has a way out of this problem:

«The upshot of the discussion so far is this. We do not take realism too far if we think of mind-independence in terms of some descriptions that facts should satisfy (or in terms of some characteristic that they may possess). To describe the facts as physical (or material) or as non-mental does not help us block certain types of anti-realism and certain ways to compromise the mind-independence of the world. In all its generality, the claim of mind-independence cannot properly circumscribe realism from anti-realism without reference to a non-epistemic conception of truth».

(Karitzis & Psillos 2005: 5)

What Karitzis & Psillos points out here is that the non-epistemic character of truth is *necessary* and *sufficient* for an adequate defence of the mind-independence claim of the scientific realist; as long as the issue at stake is the *objective existence* claim, i.e. the way of existing independently of epistemic and cognitive conditions which could justify this existence, an epistemic account of truth would lack to honour it. This illustrates the standard way the scientific realist can compromise

verificationism; arguing for a non-epistemic account of truth, which captures the best way the realist sense of objectivity, hence the mind-independence claim. Even if the verificationist is right to say that a proper epistemic theory depicts world the way it is, the scientific realist is not obliged to subscribe an epistemic notion of truth, because it is a completely different matter of dispute whether the world is the way it is because it is described to be like this by the ideal epistemic theory.

There is a problem here though. Introducing DSR as a weaker account of scientific realism, the non-epistemic account of truth is abandoned for a minimalist one which is neither epistemic nor non-epistemic; truth has no deeper nature at all. In other words, this kind of defence of scientific realism against verificationism, indicated by Karitzis & Psillos above, is viable only if one does not question the substantive character of truth. Though, the present thesis deals exactly with this assumption and we will try to consider the philosophical consequences of challenging the substantive character of truth on the way of DSR –which we consider to be the most modest one.

Taking for granted that truth is not substantive, one could assume that DSR would go for a different way of compromising verificationism; we saw that the strategy of claiming for unknowable truths goes hand in hand with some admissions for the epistemic character of truth, hence holding that truth has no nature at all would render this strategy impossible. Nevertheless, Horwich seems to defend the view that although there are good grounds to accept that the propositions produced by an ideal inquiry must be true, the converse does not hold. For, endorsing an ideal inquiry guarantees only that its outcomes should not be questioned. This leads him to pronounce that “there are truths beyond the reach of even an ideal investigation” (Horwich 1998: 61). Some interpretative work is needed here in order to understand in what way the minimalist can argue in favor of unknowable truths. It is required that a proper understanding should –at least– secure the basic minimalist tenet of the truth’s no-nature. To do this we will step aside the concept of truth in our considerations and focus our interest to the deflationary assertion-making. Karitzis & Psillos has done some important work towards this direction.

They have argued that it is possible to construct a deductive argument which states that if one is committed to DSR she can conclude that there are propositions which can be asserted yet they cannot be known to be true. The first important step to reach this deductive argument is to construct an assertion operator suitable for the deflationist; this operator should at least respect the basic deflationary thesis that one asserts the proposition p if and only if one asserts that the proposition p is true. So let us introduce the following three one-place predicates for assertion, deflationary truth and knowability and an assertion operator which respects the deflationary attitude:

Assertion predicate $A(p)$: *It is asserted that p*

Truth predicate $T(p)$: *the proposition that p is (deflationary) true*

Knowability predicate $K(p)$: *the proposition p is knowable*

Assertion operator relation AOR: $A(p)$ if and only if $A(T(p))$

It is assumed that the AOR respects the deflationary attitude here because it is correct to say that asserting the truth of a proposition is asserting the proposition itself, and the converse as well. For example when a deflationist asserts that “it is true that snow is white”, she can also infer from this that “snow is white” and conversely by asserting that “snow is white” she can also infer that “it is truth that snow is white”; in other words a proper assertion operator could have several features and one of them which is necessary is capturing the (ES).

So, given that we have \mathcal{Q} : “there are truths beyond the reach of even an ideal investigation” (Horwich 1998: 61) and let $p_1, p_2, \dots, p_k, \dots$ be the collection of all true propositions, we can have the following argument:

1. \mathcal{Q} Horwich’s assumption
2. $\mathcal{Q} \leftrightarrow \exists i [p_i \wedge \neg K(p_i)]$ Formulation of Horwich’s passage
3. $\exists i [p_i \wedge \neg K(p_i)]$ From 1 & 2
4. $p_k \wedge \neg K(p_k)$ From 3 & Existential Instantiation
5. $\neg K(p_k)$ From 4
6. $\mathcal{Q} \leftrightarrow [p_k \wedge \neg K(p_k)]$ From 1 & 4
7. $T(\mathcal{Q}) \leftrightarrow [p_k \wedge \neg K(p_k)]$ From 6 & the (ES) for the proposition \mathcal{Q}
8. $T[p_k \wedge \neg K(p_k)] \leftrightarrow [p_k \wedge \neg K(p_k)]$ From 6 & 7
9. $A\{T[p_k \wedge \neg K(p_k)]\} \leftrightarrow A[p_k \wedge \neg K(p_k)]$ From 8 & the (AOR)
10. $A\{T[p_k \wedge \neg K(p_k)]\}$ From 1, 6, 9 & the fact that Horwich asserts \mathcal{Q}
11. $A[p_k \wedge \neg K(p_k)]$ From 9 & 10
12. $A(p_k) \wedge A[\neg K(p_k)]$ From 11 & given that assertion distributes over conjuncts
13. $A(p_k)$ From 12
14. $A(p_k) \wedge \neg K(p_k)$ From 5 & 13
15. $\exists i [A(p_i) \wedge \neg K(p_i)]$ From 14 & Existential Generalization

That is, there are truths which can be asserted yet it is not possible to know them. If the above deductive argument is correct, the conclusion should be merely an assumption which is included in the premises. Hence, once someone holds 1 she is inclined to hold 15 and as long as the argument is deductive, the conclusion has added nothing in our prior knowledge.

3.3 Attributing the (non) epistemic element

As long as the deflationist seems to be, in principle, safe to argue for truths which can be asserted despite they cannot be known, it is interesting to investigate the epistemic character of this deflationary assertion operator. Normally an assertion operator is taken to be epistemic but not sufficient for knowledge; mere assertion of p cannot imply knowledge of p . Something should be added in a mere assertion in order to turn it into knowledge. We saw this in the case of verificationist anti-realism

where one adds some epistemic conditions in order to have warranted assertible propositions. Hence, the assertion operator should be a justified-belief-operator which indeed is not sufficient for knowledge and gives some support for the belief of a justified belief p : the –deflationary– truth of p . The possibility of truths which can be asserted although they can't be known, do not threaten the justified-belief-operator as long as the negation of the knowability of p does not imply negation of being justified to believe p . For example it is not the case that one is not justified to believe that a mathematical conjecture holds, given that it is impossible to know its truth value.

Karitzis & Psillos has worked a lot on these issues. They detect a crucial problem for the deflationist here. What element should one add to the a justified belief in order for it to count as knowledge? The realist would add truth, while the verificationist would go for some suitable epistemic conditions. Either of the two ways are not available for the deflationary realist; the first would contradict with the deflationary attitude towards the no-nature of truth and the second would collapse DSR into verificationist anti-realism.

The DSRist is an epistemic optimist; hence, she opposes skepticism about knowledge and argue in favor of science's success to produce knowledge of the external mind-independent world through our (approximately) true scientific theories. Evidently, this inclines the DSRist to have an assertion operator which is epistemic and sufficient for knowledge, because without such an operator knowledge could be clearly impossible. The problem, noted by Karitzis & Psillos, is that although the deflationary assertion operator behaves similar to a justified-belief-operator there is nothing that can be added to an assertion in order to turn it into knowledge, without contradicting with DSR's core ideas about truth or the mind-independence thesis. The conclusion that $\exists i [A(p_i) \wedge \neg K(p_i)]$ shows that the assertion operator can't be an epistemic basis sufficient for knowledge on pain of contradiction.

To sum up, there are limited options for the deflationist here. The first is arguing for an epistemic assertion operator which is sufficient for knowledge which leads to contradiction with our formal argument's conclusion. The second is advocating an epistemic assertion operator which is not sufficient for knowledge; in this case the substantive character of truth cannot be challenged because truth is the ultimate necessary element in order to turn justified belief into knowledge – either epistemic or non-epistemic truth–. Both of these options are harmful for the DSRist and evidently she would go for a third one: arguing for a non-epistemic account of assertion. As Karitzis & Psillos puts it:

«Ergo, deflationism can assimilate the claim that there are unknowable truths, but only under a sense of assertion that makes it non-epistemic, i.e., does not link assertion to the satisfaction of some epistemic condition. This non-epistemic account of assertion is the necessary non-epistemic element that renders 'deflationism + "there are unknowable truths"' an adequate articulation of the realist mind independence».

(Karitzis & Psillos 2005: 11)

We are now in position to evaluate the discussion till here. It seems that there is an available way for the deflationist to argue in favor of scientific realism but it implies some important conceptual shifts. These shifts are also drawing the line which separates the substantive forms of realism from the deflationary. It can be recognized that the crucial shift here concerns the metaphysical weight that is carried by the proposition that “there are unknowable truths”. We have seen that the mind independence claim is safeguarded by this proposition and so it is necessary in order to confront verificationism. Yet verificationism can be challenged in two ways, which have already been illustrated but let us clarify this further. The verificationist holds an epistemic notion of truth and an epistemic notion of assertion. The Substantive Scientific Realism as formed by Psillos argues against the epistemic conception of truth while both realists and anti-realists does not question the epistemic character of assertion neither the substantive character of truth. The DSRist on the other hand, argues against the epistemic character of assertion –preferring a non-epistemic one– and at the same time holds that truth is a merely logical property with no deeper metaphysical nature, i.e., challenges truth’s substantive character. Putting it this way, the deflationary account of realism is no less successful than the substantive one, as long as it can capture the mind independence claim to confront verificationism. Albeit, to make this possible without contradicting to the deflationary tenets, the deflationist seems to transmit the metaphysical weight from truth to assertion.

Hence, the deflationist can argue for a metaphysically deflated notion of truth, i.e., a concept of truth without any deeper nature, but this leads her to commit to a deeper nature for the concept of acceptance: a non-epistemic one. So, as far as it concerns truth DSR succeeds to remain metaphysically neutral, but it is a matter of dispute whether the shift of the metaphysical weight from truth to assertion is innocuous. This issue will be discussed in the fourth chapter.

However, the sustainability of DSR seems to be adequate by means of defending the possibility of divergence claim. The current problem for the realist is whether to prefer a deflationary concept of realist instead of a substantive one. The criterion for this choice would be mainly associated with the philosophical implications of the newly introduced non-epistemic account of assertion, if such an account is possible at all. What is at stake here is in what does the acceptance property introduced by Horwich in his use-theory of meaning consists in.

Chapter 4: Reconsidering the costs

According to the previous chapter minimalism can ultimately accommodate scientific realism, if one is ready to reconsider the status of the assertion practice and argue for a non-epistemic account of acceptance. Following this, it is of paramount importance to investigate the proper deflationary way of acceptance which should be held by every competent speaker of a language. But, to have a good starting point let us consider what is it to "understand truth" and why this is an important question for this essay.

At the first introductory chapter of the present thesis (p. 7) we presented five tasks which, according to Horwich, every adequate account of truth has to undertake. It is also stated that a part of them has to do with truth's conceptual/semantic facets, while the others consider issues about truth's deeper nature (truth has no deeper nature at all) and truth's functionality (regards mainly the construction of generalizations over propositions, a logical need). So in this fourth and last chapter of the book we are going to examine the semantic issues of Horwich's minimalistic project which probably will give us the opportunity to examine closely the plausibility of a non-epistemic account of acceptance.

4.1 How (and why) to understand truth?

We should recall that from a minimalist point of view the least tools for the understanding of the notion of truth is just the equivalence schema (ES). Minimalism about truth is a theory containing infinite number of axioms/propositions which, in fact, are all the instances of the (ES). It is then obvious that the (ES) is a key concept for minimalism and according to Horwich (Horwich 1998: 11-12) it is primitive and explanatory fundamental for the use of the truth predicate in natural language. Though, his position includes a novelty towards the traditional theories of truth; he does not try to explain why the instances of the (ES) hold true. Instead, he takes those instances to have a non reductive status, similar to the laws of logic, and having them as a basis he concludes that any substantive investigation of truth is not needed. Truth is just contained in accepting instances of the (ES) and there is nothing more fundamental than this.

Hence, is it the case that truth can be fully understood with no more tools than the (ES)? Horwich himself admits a problem here which was first mentioned by Anil Gupta and it pertains to the interpretation of the equivalence when one accepts instances of the (ES). According to Gupta the two parts of any instance of the (ES) are not always synonymous, that is they do not have the same meaning because it is

not the case that both of them can be understood with appeal to the same concepts. His conclusion here is that “The generalizations involving ‘true’ do not mean the same as the corresponding infinite conjunctions/disjunctions, for again the two do not involve the same conceptual resources” (Gupta 1993: 76). For example, forming the generalization “whatever Vlad says is true” one can notice that to understand the meaning of the latter does not require to understand the meaning of each of the propositions are included in this generalization’s analysis as an infinite conjunction. If this is correct, the minimalist has to admit that the (ES) should be understood in a way which identification of meaning between its two parts is not required. Indeed, Horwich agrees with this point of Gupta adding that this consideration create no harm for the functionality of the minimalist truth however. Maybe Horwich is correct, but probably truth’s functionality was not what is ultimately at stake here. Let us consider the following: if the two parts of an instance of the (ES) do not have the same meaning, then the addition of the expression “is true” next to a proposition p mean something different from merely p . And this leads us to think that the truth predicate does have some contribution in the construction of the meaning of the proposition which is included; a conclusion which manifests a probably substantive analysis of the truth predicate.

Taking the above into account we can locate a serious problem for the minimalist about truth; Dealing with truth needs something more than the (ES) in order to block any glimpse of substantive character in its analysis. Hence, the theory’s infinite axioms/propositions are not enough to accommodate the minimalist story about truth; as sketched above this kind of arguing goes hand in hand with a specific understanding of the equivalence relation, i.e. as material equivalence, and this understanding of the (ES) does not secure the minimalist requirement of an account of truth with no deeper metaphysical nature at all. And this gives some further insight about the structure of minimalism about truth as well.

An interesting consideration here concerns the independence between its purposes. That is, the demand for an account of truth which captures in the best (minimalist) way the use of the truth predicate in natural language appears to be quite different and conceptually independent from the demand of an account of truth which has no deeper metaphysical nature. Because we have already seen that the first part can be accommodated by a substantive notion of truth as well. So we can now see that Horwich has to do some additional work to establish that his conception of truth is preferable towards a substantive one. His account of functionality of truth in natural language based solely in the (ES) needs to be strengthened by an account of understanding, i.e. a theory of meaning, which will be essentially minimalist and at the same time transcend the truth predicate’s mere syntactic role.

Till this part of our investigation we have seen that Horwich has the (ES) as a primitive explanatory resource for understanding of truth and the commitment to DSR seems to imply upon this conception of truth a non-epistemic account of acceptance as well. So, to conclude the above thoughts, if his theory includes all those (infinite) axioms which in fact are the instances of the (ES), it is also necessary to have an adequate account of meaning which could allow us understand which cases of the (ES) are accepted as successful and which are not. If this is right it becomes obvious that the (ES) is not sufficient by its own for the grasping of the concept truth. (ES) must be understood in a way determined by a proper theory of

meaning.

4.2 Minimalist theory of meaning: Regularities in use

It is argued before that commitment to DSR implies some philosophical considerations towards the assertion practise. This kind of issue needs to be included into a more general one; the issue of finding a proper theory of meaning which would be able to construct meaning with a non-truth-referential way. Horwich's proposal towards this challenge is a use-theory of meaning, i.e. a theory of meaning according to which, given a language L, the meaning of a word is determined by its overall use from the competent speakers L. Horwich's ambition here is to develop a usage-based theory of meaning that is distinguished from any attempt to analyze meaning in terms of semantic concepts. If his attempt is successful then he could offer a non-substantive way for the understanding of truth which is necessary for the minimalist project, as it was argued at the previous section.

A first move towards such a theory would be answering to the question of what are the fundamental features for an adequate theory of meaning. According to Horwich (Horwich 2004: 12-14) the problem starts by a crucial misconception about the constraints for an adequate account of meaning. It is not the case that the constraints of adequacy for a proper theory of meaning are really hard to be met, but "the trouble [...] is that they have been misconstrued and wrongly thought to imply certain further adequacy conditions which are indeed difficult (perhaps impossible) to satisfy" (ibid). These constraints are namely:

1. The Understanding Constraint
2. The Relationality Constraint
3. The Representation Constraint
4. The Apriority Constraint
5. The Compositionality Constraint
6. The Normativity Constraint
7. The Use Constraint

Although each one's role in constructing –traditionally– an account of meaning is precisely determined by Horwich, it is not necessary for this essay to analyze each of them further. At this stage our major task is to try to grasp his main point towards the adequacy of a meaning theory and according to Horwich it does not lie on posing all of those (pseudo-) constraints. Namely, the meaning of a word must offer –at least– an explanation of its overall use in a language and, vice versa, it would be possible to grasp the meaning of a word of a specific language only by observing its overall use from the competent speakers of the language. Thus, the construction of the meaning of a word does not include an explanation of why this word means what it means; it is merely justifying the speaker's judgement that it does mean what it means. So the construction of the meaning of the word "dog" cannot offer an explanation of why "dog" means DOG; in other words, the construction of "dog"'s meaning cannot determine "dog"'s extension of application inside the English language and according to Horwich's thought this is not a problem for a theory of meaning.

The previous conclusion stems from Horwich's position towards the Understanding Constraint as well and indicates the way he deals with them in general. For him, to understand a word is to attribute it a meaning which coincides with the word's meaning in the language. This process does not involve in any way the *explicit* knowledge of the word. To use our familiar example, we do not attribute to the word "dog" its meaning due to our explicit knowledge of what "dog" means. Instead, we *implicitly* conclude the word's meaning by considering the use regularities which govern the overall use of the word (Horwich 2004: 8). This illustrates the way that Horwich deals with the first (pseudo-) constraint for the adequacy of a meaning theory, yet at the same time indicates his own position which is mainly focused on arguing in favor of the last constraint. We promised not to analyze further his detailed objections to each of the (pseudo-) constraints, but we refer to this one due to its significance for the understanding of his theory. Yet, to offer a short presentation of them we can recall one passage:

«It is true that those who understand a word need have no explicit knowledge of its use properties; that such properties do not generally relate words to their referents (and certainly not in a uniform way); that they don't provide substantive a priori knowledge; that the theory does not single out, independently of compositionality, which of a complex expression's properties constitutes its meaning; and that use properties are not intrinsically normative. But the constraints of understanding, relationality, representation, a prioricity, compositionality, and normativity are none the less satisfied. And since it also accommodates the Use Constraint just about as well as anything could, it seems to me that the use theory of meaning deserves another chance».

(Horwich 2004: 40)

In order to proceed to the essential tenets of Horwich's theory of meaning let us first give some examples of how can the understanding of a word be produced by its usage, following Horwich's proposal. ↓

red	We are disposed to accept 'that is red' in response to the sort of visual experience normally provoked by a red surface.	perceptual
and	We are disposed to accept the two-way argument schema "p, q // p & q"	inferential
true	We are disposed to provisionally accept every instance of the schema 'the proposition that p is true iff p'	sentential

Hence, what is essentially linked to the understanding of a word is the disposition of the speaker to accept certain sentences; this disposition towards acceptance is governed by certain laws, and in the case of non-ambiguous expressions there exists a single "acceptance regularity" or "acceptance property" which explains all of our uses of the expression. The type of acceptance regularity which is relevant will vary depending on the sort of expression whose meaning is being explained; this is indicated by the third column of the table above.

Horwich manifests the following three principal claims for his use theory of meaning (Horwich 2004: 44):

1. *Meanings are concepts.*

That is, when a word or a phrase is uttered, written or thought, it expresses a concept i.e. an abstract entity from which a certain state of mind is produced. For example when someone states that “snow is white” she expresses her *belief* that snow is white, while the phrase “I need a glass of water” expresses the *desire* of someone for a glass of water, etc.

2. *The overall use of each word stems from its possession of a basic acceptance property.*

This principle introduces the so called “acceptance property”. According to Horwich, for each word w there is a regularity of the form:

(UR): All uses of the term w stem from its possession of the acceptance property $A(x)$.

where $A(x)$ indicates the circumstances in which certain sentences containing w are accepted. It is clear that each word contains of various properties which contribute to the linguistic behaviour of the words in the phrases it appears. The property $A(x)$ is special in the sense that it is the certain property which is responsible for the acceptance of expressions containing w and consequently it has primarily explanatory role for our overall practice of acceptance.

3. *Two words express the same concept in virtue of having the same basic acceptance property.*

In virtue of this claim Horwich concludes that “the meaning property of a word is constituted by its having a certain basic acceptance property” (Horwich 2004: 46). That is, it is not the case that the meaning properties of every expression are *identified* with their use, but somehow they are *constituted* by their use properties; namely, if w expresses the same concept as “red”, i.e. w means red, then the meaning property invoked here is constituted by the use properties of the word “red”. Thus, as long as the property “being red” is constituted by the use property “emitting light of such-and-such a wavelength”, we can end up concluding with a global observation: for each word w it is the use regularities of w that create its use properties and those use properties are finally constituting the meaning of w .

We have, then, a basic property of accepting some sentences containing the terms whose meaning we wish to determine. With these we form generalizations of the type of (UR). To the extent that the meaning of a term depends, in the final analysis, on the acceptance of propositions containing it, we can say that understanding the meaning of an expression constitutes a form of implicit knowledge. And being these regularities implicitly known, it is implied that one can’t have further explanation of them, since they are been held independently of the user’s deliberation.

Nonetheless, it has not yet discussed in which sense does this conception of meaning accommodate the deflationary feature that Horwich would like to attribute. As Horwich admits the “primary purpose [of his theory] is to specify the underlying non-semantic properties of expressions in virtue of which they possess their particular meanings”, in contrast with “those that remain at the semantic level, aiming at

a systematization of familiar meaning facts in terms of theoretical semantic notions” (Horwich 2004: 52). It would be helpful then to have a broader sketch of all possible alternatives towards the nature of semantic properties in order to consider which are compatible with Horwich’s case.

Semantic properties	Semantic Naturalism	Semantic Dualism	Semantic Anti-realism	Semantic Eliminativism
Exist	✓	✓	✓	✗
Fundamental	✗	✓	✗	✗
Reduction	Physical properties	Metaphysically independent	Epistemic properties	Physical properties

The table above offers an illustration of the possible philosophical attitudes towards the nature of semantic properties, although it is hard to say that it is exhaustive. It is possibly easier for the reader to understand the differences among the four different philosophical stances by implicitly identifying “semantic properties” with truth in particular. According to Semantic Naturalism truth (among with other semantic properties) is a genuine property but it not fundamental; that is, it can be reduced to physical properties in a sense that certain naturalistic conditions can be sufficient for certain semantic properties. Semantic dualism on the other hand takes truth to be a genuine and metaphysically independent property i.e. a property that cannot be reduced to natural properties. The third option is to take truth as a genuine property but dependent on epistemic properties; thus, a proposition can have semantic properties, e.g. be true, only in virtue of some appropriate epistemic circumstances. The last option is the one which clearly fits more to Horwich’s conception; according to this, the semantic properties are, in final analysis, reducible into physical ones but the second requirement, i.e. that semantic properties do not exist at all would be disputed by Horwich. As we have seen, minimalism does not imply that semantic properties does not exist or that truth is not a property at all (Horwich 1998: 37) but merely that the only service of the property of truth is purely logical (Horwich 1998: 2). Hence, we will follow Horwich calling his stance towards semantic properties *Semantic Deflationism* in order to get clear distance from pure Semantic Eliminativism as described before⁹; and Semantic Deflationism is roughly the thesis that “truth is captured by the equivalence schema and that the meaning of a word is engendered by its use” (Horwich 2004: 42). We can then have a fifth account which is formulated in the following table:

Semantic properties	Semantic Deflationism
Exist	✓
Fundamental	✗
Reduction	Physical properties

We can now clearly see that the path followed by Horwich consists on the one

⁹Semantic Eliminativism here captures more radical forms of deflationism such as the so called “disquotationalism” according to which the truth predicate is a device of disquotation. A famous philosopher who defended this kind of deflationism was W. V. O. Quine .

hand in reducing truth to a logical type property and on the other hand in formulating a theory of meaning that is constituted on the basis of behavioural and psychological processes. In this way it becomes possible to deal with the issue of understanding in a way that does not presuppose the semantic field as fundamental and its concepts as primary. In the final analysis, a competent speaker of a language understands a word because she uses it the way she uses it in virtue of accepting expressions containing it; and if DSR is right, this account of accepting cannot be an epistemic oriented one.

4.3 Investigating deflationary acceptance

It is remarkable that Horwich's ambition to develop an appropriate account of truth, along with a proper theory of meaning that captures the deflationary attitude towards semantic properties, is attempted in a careful way which does not outrun his supposed minimalist means. Yet, the main purpose of this essay is to show that deflating the concept of truth is simply displacing the essential features of the concept of truth by the concept of acceptance. And finally if one tries to defend an account of scientific realism with respect to Horwich's minimalism about truth and meaning, she would face some worries which focus mainly on the required non-epistemic account of acceptance.

We saw that Horwich's minimalist theory of meaning is based on psychological, behavioural and physical facts and is completely independent from one's ability to follow certain rules and reach on legitimate decisions by rational reflection. Namely, the accepting practice consists in the speaker's – a competent user of the given language– disposition to accept basic use regularities of the relevant terms. In this sense, one can clearly recognize that, indeed, the theory is articulated in such a way that the practice of acceptance does not involve at all any rational reflection; acceptance is guided by the speaker's psychological dispositions, hence a non-epistemic account of acceptance seems possible.

Nonetheless, Karitzis & Psillos have indicated some problems towards this direction; problems that concern specifically some flaws on the possibility of being a scientific realist in a deflationary way, as long as commitment to scientific realism involves a way of *accepting* scientific theories (Karitzis & Psillos 2005: 14-15). They point out that it is impossible for a traditional scientific realist to accept scientific theories and overlook at the same time their theoretical virtues. Hence DSR should acknowledge this feature and clarify an appeal determining how theoretical virtues like consistency, simplicity, empirical adequacy along with others do govern acceptance.

The reference to *acceptance* may be seen ambiguous here. That is, the traditional scientific realist can accept a theory T on the basis of meeting a battery of theoretical virtues such as simplicity, coherence, etc. This kind of acceptance illustrates that something was attributed to T in order to be accepted and the scientific realist would say that namely it is truth that had been attributed to T in light of satisfying certain theoretical virtues. If this is correct then there is a link connecting the satisfaction of theoretical virtues with the attribution of truth which is sufficient for the scientific realist in order to take a theory T to be true, and consequently accepted. In the case

of DSR this line of thought can't be tolerated; T can be accepted in a deflationary way if a link between theoretical virtues and deflationary truth can be established, but in a merely use-theoretic manner. Hence, the traditional scientific realist and the DSRist can agree on the fact that the possession of certain theoretical virtues can attribute truth to a scientific theory (although they would refer to a substantive or a deflationary account of truth respectively) but there remains a problem: how can DSR accommodate the claim that the possession of certain theoretical virtues for T can lead to the –deflationary– truth and acceptance of T and at the same time ground the property of acceptance merely in psychological and behavioural processes? It seems unclear how can such a link be established without making certain metaphysical claims about the world concerning simplicity, coherence and others; i.e. rejecting the core idea of the deflationary approach towards metaphysical questions.

One possible answer could be based on a distinction concerning the role of the theoretical virtues in the sense that their possession can be taken to be either constitutive of truth or constitutive of acceptance, separately. Then there are three possible routes for the connection of the two above roles of theoretical virtues (TV).

(1)	TV Constitutive of T's Truth \implies TV Constitutive of T's Acceptance
(2)	TV Constitutive of T's Acceptance \implies TV Constitutive of T's Truth
(3)	There is no strict implication that truth-constitutive theoretical virtues are also acceptance-constitutive, or the reverse.

Here the option (1) is clearly favored by the traditional scientific realist. It is the possession of truth that leads to the acceptance of the theory, so if the theoretical virtues of T are constitutive of T's truth, then they are also constitutive of its acceptance as well. On the other hand, although Horwich's semantic deflationism provides an account of acceptance of observational statements in virtue of the presence of the relevant observational facts, it is not clear how this appeal can go beyond the observational level. This step is important for an adequate account of scientific realism as long as "the virtues are supposed to close the gap between accepted observational statements and accepted theories" (Karitzis & Psillos 2005: 14). We can easily see that (1) is not available to the DSRist in the sense that it goes against the basic deflationary attitude towards non-epistemic truth. Same goes for (2) as well; if the theoretical virtues which were constitutive of acceptance were also constitutive of truth, then a theory's truth can be preserved in virtue of the possession of certain epistemic features –the relevant theoretical virtues–; but this illustrates an account of truth which in the final analysis is epistemically constrained and cannot be in accordance with the deflationary requirement for metaphysical neutrality. If these thoughts are correct then the DSRist would go for a certain version of (3).

The option (3) states that there is no direct link from the truth of T, based on certain theoretical virtues, to its acceptance with respect to those virtues, nor the reverse. Yet, it remains an open possibility that theoretical virtues can still *indicate* something if it is impossible to establish it. A possible case is that the virtues which are constitutive of acceptance are contingent marks of truth. Nonetheless, it follows that even if we take theoretical virtues to indicate a link with truth, the fact that it remains possible for a virtuous theory to be false implies that truth cannot be equated with acceptance. If then the DSRist accepts T with respect to some theoretical virtues, what exactly has she done if not to accept T as being true?

This is a problem that DSR needs to address: if truth of a scientific theory is not the same thing with the acceptance of the theory then it remains unclear what is the element that establish this distinction. In other words, if DSR is correct here then there must be a gap between accepting that T is true and accepting T; on the other hand minimalism states that accepting the truth of p is not different from merely accepting p. It is important for DSR to specify the content responsible for this gap otherwise it will remain an obscure claim which is intuitively implausible and theoretically untenable.

4.4 Ultimate dilemma: How to choose?

A prime ambition of this essay is to examine whether is it possible to have a deflationary account of scientific realism. Following Horwich and Devitt we saw that such an account is truthfully possible despite the differences with the traditional scientific realism. Nevertheless, a required move for DSR's adequacy is to transfer the metaphysical weight from truth to acceptance, i.e. to provide ourselves with a non-epistemic account of acceptance, while reject the non-epistemic character of truth in favor of a deflationary one; a move which seems to be open for a battery of objections starting with the role of the theoretical virtues in scientific acceptance. The theoretical virtues in science are always an issue that has a central role in the scientific realism debate and can't be ignored from DSR despite the fact that the acceptance practice illustrated by Horwich concerns propositions rather than theories. If the points stressed for the relationship of DSR and theoretical virtues here are correct, the appeal of DSR to the acceptance of theories seems untenable as long as it manifests an excess content of truth over acceptance which is difficult to be specified by the deflationary means. This is a serious problem for the deflationary approach of scientific realism and it stems from its peculiar account of acceptance, i.e. from the required conceptual shift that DSR essentially precludes. Although this problem is remarkable to the extent that concerns the scientific realist debate, namely the way of accepting scientific theories, other considerations concerning the non-epistemic account of acceptance can also been engendered. Thus, this last part of the essay will not focus merely on the issue of whether a non-epistemic account of acceptance is viable but examine if DSR could be preferable over a substantive scientific realism. This forms the second prime ambition of the present thesis.

So we will now present some other major objections against minimalism about truth which have been already articulated in the relevant bibliography in order to have a broader picture for the problems of DSR. Noticeable contributions towards this direction have been made by P. Kitcher and M. Devitt.

Philip Kitcher identifies as a scientific realist; yet he declares that his conception of scientific realism is “a homely doctrine, vested in commonsense appraisals rather than weighty metaphysics” (Kitcher 2002: 347). We can remember here that DSR is established on a strategy we called *indifferent* in the sense that the meta-physical question of realism should be regarded to be independent from semantic and epistemological considerations. Hence, with respect to our declaration of DSR, commitment to realism or anti-realism does not embrace a particular theory of truth. Kitcher’s appeal to the relationship between the problem of truth and the problem of realism is on the contrary; i.e. he claims that a correspondence theory of truth is *required* for scientific realism. To put it differently, for Kitcher a deflationary account of scientific realism is not possible at all.

His main argument in favor of stating scientific realism and deflationary truth impossible to coexist is based on the idea that the correspondence notion of truth¹⁰ is indispensable for what he refers to as the “success-to-truth” rule, which may be stated as follows:

S plays a crucial role in a systematic practice of fine-grained prediction and intervention.

S is approximately true¹¹.

To understand in which way Kitcher regards the correspondence truth as essential for the sufficiency of the success-to-truth rule we should first consider his major motivation against deflationism. The issue at stake is whether there is an explanatory role for truth with regard to the success of a behavior or a scientific theory. For, if one follows Horwich she would then take truth to be a trivial property serving a merely logical need; in this sense truth cannot serve any other non-trivial operation and consequently cannot have any further explanatory role.

There is an indicative example given by Horwich¹² of such a case where the upshot is that “true beliefs engender successful action” and at the same time “all of the facts whose expression involves the truth predicate may be explained [...] by assuming no more about truth than instances of the equivalence schema” (ibid). If Horwich is correct here then the everyday success explanations that are based on true beliefs can always be substituted, without any harm, by explanations that rely on a deflationary notion of truth; i.e. there could be no requirement for a notion of correspondence in order to offer success explanations for behaviors or scientific theories. To take Horwich’s example, there is no need to take into account any “correspondence” between Bill’s belief and the external world in order to explain how his nodding effectively satisfies his need for a beer. Instead, we may simply appeal to the truth of Bill’s belief that he will receive a beer if he nods.

¹⁰It is worth noticing that Kitcher’s appeal to the correspondence theory of truth is articulated (Kitcher 2002) as a unique one calling it *Modest Correspondence Theory*. It is not important for the purpose of the present thesis to offer a detailed view of the differences or innovations between *Modest Correspondence Theory* and the traditional forms of correspondence theories of truth as long as our main interest concerns the issue of the substantive character which is not questioned by Kitcher’s appeal at all.

¹¹Here S denotes a statement.

¹²For details see Horwich 1998: 22-23

According to Kitcher there are some flaws in Horwich's construction of the situation here; namely the flaws appear when we reconsider the issue under explanation and the explanation we offer. Kitcher claims that the realist –and especially the scientific realist– does not wish to offer explanations of this sort at all; it seems that Horwich's example succeeds in virtue of its locality and because just a relatively narrow level of the explanation has been explored. Instead, Kitcher proposes that if we want to accommodate explanations in virtue of our homely scientific practice, we should focus more on situations where an agent repeatedly employs a generic representational technique, which gives rise to the instrumental beliefs that direct her behavior. To put it in a nutshell: to the extent that the scientific realist is concerned with explanations of systematic successes, Horwich's appeal has no clear answer.

The success-to-truth rule formulates exactly this need of articulating explanations in virtue of the homely scientific practice and Kitcher concludes that only a kind of correspondence can serve it properly. Nonetheless, one can be more tolerant and allow an account of deflationary scientific realism, as we did, if the scientific realist is ready to advocate semantic deflationism along with a non-epistemic account of assertion. Could this move eliminate the problem stated by Kitcher? At first sight the answer is yes, in the sense that it is demonstrated that correspondence truth is not necessary for the scientific realist, as Kitcher argues. Nevertheless, even if we accept DSR, Kitcher's main point still remains for the deflationist; how the DSRist can accommodate the common scientific practice appealing merely to deflationary means? It is not clear if (or how can) the non-epistemic account of assertion possibly offer a way out to the DSRist here.

Although Kitcher's criticism against deflationism offers some crucial points for our investigation, it is important to notice that his ambition is to state deflationism incompatible with scientific realism which is far than been demonstrated here. Taking the issue from an other perspective, strong criticism against Horwich's project for truth and meaning has been produced by Michael Devitt. It is important to take a close look in his defence of a correspondence notion of truth as long as, contrary to Kitcher, he does not hold that deflationism and scientific realism cannot coexist. Instead he thinks that it is possible to be scientific realist independently of the notion of truth one advocates; thus, for Devitt –and consequently for the DSRist– it is a matter of choice which theory of truth is preferable; he does not question, in principle, the fertility of the program of explaining truth in non-semantic terms.

Following Devitt (Devitt 1991: 273) we can recognize three parts of a deflationary theory of truth:

1. its account of the “logical” or “expressive” role of truth.
2. its account of the nature of truth that enables it to play that role.
3. its claim that there is no more to truth's role or nature than is captured by these accounts.

Devitt correctly says that an essential challenge of deflationism against the substantive character of truth stems from the claim (3). The deflationist holds that the empirical success of scientific hypotheses need not be explained in terms of substantive truth; truth can be helpful in making assertions such as “the theory

that nothing goes faster than light works well because nothing goes faster than light” (Horwich 1998: 49) but this role pertains to a merely deflationary account for the function of truth. The substantivist should reject the idea that (1) and (2) exhaust the function and nature of truth, despite (1) and (2) are not untenable at all. With those considerations we can determine in a first stage an essential feature for the distinction of substantive and deflationary accounts of truth: the establishment of (3).

Yet, Devitt offers a more detailed view as well concerning what makes the difference between the two standpoints towards truth:

«[...] the two theories have opposite focuses. Whereas the focus of the correspondence theory is on the nature and role of truth, the focus of the deflationary theory is on the nature and role of the truth term, for example, of ‘true’. [...] the deflationist has little to say about the metaphysics of truth but much to say about the linguistic role of ‘true’, whereas the correspondence theorist has a lot to say about the metaphysics of truth but little to say about the linguistics of ‘true’».

(Devitt 2001: 580)

Thus it is highlighted here the fact that deflationism places more emphasis on the term of truth than on truth itself; in other words, the deflationist attitude toward the nature of truth can only be discovered through an investigation of the nature and function of the truth term. Let us consider a truth-term like "is true"; for the deflationist this is a tool that allows us to describe things that would otherwise be difficult or impossible. For example, it allows us to condense a long list of conjunctions (or disjunctions) or to declare agreement (or disagreement) with a belief that we are unable to express. These operations of the truth predicate have no explanatory role.

We can recognize an underlying cause for our issue here. Deflationism declares that it is possible and proper to construct a theory of truth which is discharged from metaphysical considerations. Following Devitt we can see that, in order to do this, deflationism looks solely at the truth-term and offers an account which renders the concept of truth to be a trivial property with mere logical-expressive role. But the truth-term should not be the issue; rather, it is the semantic content of the word. In other words, it is not implied that if we can avoid metaphysical issues concerning the truth-term, then the same goes for truth itself, viz the semantic content of the truth-term. It is a matter of decision whether one is willing to focus on the truth-term or on the semantic content of truth and this also illustrates the explanatory priority and the significance of metaphysics for the problem of truth (Devitt 2001: 584).

Thus, deflationism should not be considered a theory of truth at all; rather it should be taken to be a theory of the truth-term. In this sense, the substantivist is not inclined to reject –in fact she should accept– the deflationist’s emphasis on the truth term’s logical role. Devitt’s interpretation for this unusual focus on the truth-term is originated in a nonfactualist commitment of the deflationist towards the truth predicate. That is, “the truth term does not have the standard semantics of a normal predicate. And its role is not to describe sentences; its only role is logical or expressive” (Devitt 2001: 585). This explains why the minimalist about truth is not

unwilling to take the truth of a proposition be a non-eliminable property and at the same time reject any further explanatory role of truth that goes beyond its logical service. Hence, one can be a “realist” about truth (following Devitt’s terminology) and at the same time admit that for some areas there is no reality with an explicable nature and a causal role. Nonfactualism then is a way of talking like a realist whereas give that talk a revisionist interpretation. This form of realism is what Devitt calls “atypical realism”.

Nonetheless, it is not our intention to examine in more detail Devitt’s criticism, nor his defence in favor of correspondence theory here¹³ so we will stop our presentation here. The points stressed above are enough for locating an essential difference between the two theories which, in conjunction with the rest criticism of the present and the previous chapter, forms our total appraisal of DSR. We let these final considerations be articulated in our conclusions below.

¹³For details see (Devitt 2001: 601-605)

Conclusion

This Thesis aimed to investigate the relationship between scientific realism and deflationism about truth. Namely, in the first chapter we presented the three principal claims of scientific realism (1.1) stating that there is an external mind-independent world of which we can effectively gain knowledge through scientific theories. We focused our interest on the metaphysical part of scientific realism as long as the whole essay is concerned mainly on metaphysical issues for the relationship between scientific realism and truth. We saw there that truth is invoked many times in our presentation of scientific realism and hence a question appears: what is truth? So in (1.2) a brief presentation of deflationism about truth is offered; deflationism is considered an important issue for scientific realism because in our judgement a cogitation of the currently available bibliography renders the possibility of a deflationary account of realism truthfully inclusive.

To understand this one consider the ways that deflationism has concerned the scientific realism debate till now. Kitcher's criticism against deflationism (4.4) focus on the explanatory role that a substantive notion of truth plays for the homely scientific practice, a role that cannot be accommodated by a deflationary notion of truth which restricts the explanatory role of truth solely to its logical service. This leads him to regard substantive truth a prerequisite for scientific realism and consequently reject the possibility of a deflationary account of realism. On the other hand, Psillos' criticism (2.2) concerns the deflationary-style attack of Arthur Fine both to realist and anti-realist attitudes; Fine claims that both stances are, in the final analysis, unnatural; i.e. they add excess philosophical content on a core position which is shared by everyone in science and philosophy. On the contrary he proposes a Natural Ontological Attitude which is neutral and in a sense rejects the philosophical interpretation of science. Nonetheless, Psillos has shown that this neutral strategy of Arthur Fine cannot go so far due to its ambiguous concept of truth (Fine refers to it as an already-in-use concept of truth). It is argued that inasmuch as the NOAer seems to conceive theoretical assertions of science over the unobservables as bearing a truth value, evidently she is forced to engage certain ontological stances towards them; therefore the NOAer holds an utterly realist stance, far from the desired neutralized one.

Those criticism are indicative argumentations in favor of the substantive character of truth for scientific realism but admittedly they are not exclusive towards the possibility of a modest account of deflationary scientific realism. Namely, we saw (2.3) that some philosophers have already claimed that a deflationist can be a scientific realist. Delving into Devitt's and Horwich's work it emerges that it is possible to argue that scientific realism is a solely metaphysical doctrine, i.e. a doctrine

determining the ontological furniture of the external world. This move would render traditional scientific realism a stronger account of a modest deflationary account of scientific realism which we called DSR. That is so, because when scientific realism is dissociated from its epistemological and semantic components, any conception of truth is, in principle, available to be held. We supposed (not just for the sake of the argument) that DSR can capture the epistemological and semantic claim of traditional scientific realism as well. If this is correct, a traditional scientific realist differs from the DSRist only in the sense that he advocates a substantive notion of truth which in fact should be of no need, if the deflationary is adequate.

If DSR faces no problems in its definition then it should be tested in defending scientific realism from anti-realist challenges and as long as DSR is primarily a metaphysical doctrine, it should block verificationist anti-realism. Thus in the third chapter we first offer a presentation of verificationist anti-realism (3.1) where we consider the problem that it poses for the metaphysical component of scientific realism (and DSR as well) and examine if this problem is genuine; that is, it is first investigated whether there could be a verificationist account of scientific realism. Our investigation does not provide good reasons for such a conciliation following Psillos' criticism. Briefly put, the verificationist challenge here is whether can DSR defend the claim of the possibility of divergence between what is true and what can be known to be true or differently, whether there can be unknowable truths. Horwich, who is considered an indicative example of DSRist in this essay, indeed declares in his "Truth" that there can be truths that go beyond the limit of even an ideal investigation. Starting from this declaration we provided a deductive argument demonstrating that we can also derive that there are also truths which are asserted although they can't be known. This result forced us to embark on an investigation of the deflationary account of assertion (or acceptance) which eventually ended up in rendering it a non-epistemic concept. It becomes then clear that the DSRist needs to make a critical move in order to block verificationism, viz to shift the non-epistemic element from truth to assertion.

We tried to evaluate this conceptual shift in our fourth chapter. To examine the plausibility and the adequacy of the non-epistemic account of acceptance that DSR needs we took a close look into the use-theory of meaning that Horwich's proposes in conjunction with his minimalist conception of truth (4.1 & 4.2). Horwich's stance towards semantic properties, identified as semantic deflationism, is based on use-regularities; what is essentially linked to the understanding of a word is the disposition of the speaker to accept certain sentences; this disposition towards acceptance is governed by certain laws, and in the case of non-ambiguous expressions there exists a single "acceptance regularity" or "acceptance property" which explains all of our uses of the expression. The path followed by Horwich consists on the one hand in reducing truth to a logical type property and on the other hand in formulating a theory of meaning that is constituted on the basis of behavioural and psychological processes. In this way it becomes possible to deal with the issue of understanding in a way that does not presuppose the semantic field as fundamental and its concepts as primary.

Nonetheless, there are some problems which are indicated for DSR (4.3 & 4.4) and they can be separated in two categories:

1. Problems concerning the non-epistemic account of acceptance (4.3)
2. Problems that the non-epistemic account of acceptance does not solve (4.4)

According to the first category we indicate a problem about the extension of the notion of acceptance as far as scientific theories are concerned. DSR needs to find a way to include in its acceptance-practice the theoretical virtues of scientific theories as well. Yet it comes out in our investigation that there can no direct link from the truth of a scientific theory, based on certain theoretical virtues, to its acceptance with respect to those virtues, nor the reverse. Although, it remains an open possibility that theoretical virtues which are constitutive of acceptance can be contingent marks of truth; so, even if we take theoretical virtues to indicate a link with truth, the fact that it remains possible for a virtuous theory to be false implies that truth cannot be equated with acceptance. To appreciate the importance of this problem for DSR let us consider the second category.

In this second category of problems we can find two criticism against deflationism advocated by Kitcher and Devitt respectively. Kitcher's criticism, as we have already mentioned, focus on the explanatory role of truth that is of need for the accommodation of scientific practice. It is argued that Horwich's deflationary demand that truth has no explanatory role is untenable, because it is grounded on examples that seem to be accidentally valid due to their essential locality. He argues that the merely logical service of truth cannot go very far regarding the systematic practice of fine-grained prediction and intervention that science embodies. We do not follow Kitcher in addressing deflationism incompatible with scientific realism due to the mentioned problem as long as we have indicated a modest account of deflationary scientific realism. On the other hand Devitt's criticism is about the difference between correspondence theory of truth and deflationism which, according to Devitt, reduces to divergence on focus; the former focuses on the nature of the truth-concept, whereas the latter is about the truth-term and its function. He claims that the discussion should be better done in the basis of the metaphysical motivations of the two theories which is a hard task due to the revisionist character of the deflationary attitude.

The reason we intend to see those three criticisms in conjunction is primarily because they create two major problems for DSR; first, the difficulty to incorporate the scientific enterprise and second to provide good theoretical grounds for its adequacy. Those three objections converge in casting serious doubts on whether deflationism is a theory of truth itself (due to Devitt). Besides, the deflationary theory seems to be concentrated mainly in assertion-making than truth-making (Karitzis & Psillos). And to the extent that DSR concerns the scientific enterprise, the deflationary approach has faced big difficulties in establishing its requirement for a truth which is not involved substantively in the scientific explanations (Kitcher, Karitzis & Psillos). Obviously the present thesis does not exhaust the discussion for the (im)plausibility of a deflationary account for scientific realism. Nonetheless, it investigates in which philosophical circumstances can a deflationary account of scientific realism be possible, and it appears that those circumstances are possible but imply untenable philosophical consequences.

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