Quine's naturalized epistemology

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Preface

The subject of this book is epistemological theory of American philosopher Willard Van Orman Quine, which advocates the view that the problems of knowledge are accessible to objective techniques of inquiry which characterize the methodology of natural science.

It is well known that modern epistemology is a discipline that was left as a legacy by the great French philosopher René Descartes, and it is generally believed that it is a typically philosophical discipline whose problems can be dealt with only by philosophical (speculative) means of inquiry. Recently, however, the idea of naturalization of epistemological inquiry has emerged, and one of its most prominent advocates was Quine. However, the question is to what extent, if at all, the proposal offered by Quine is tenable, as evidenced, apart from numerous criticisms, by significantly different interpretations regarding assumptions on which it should be based.

Namely, three types of interpretations of Quine's call for the reform of epistemological inquiry prevail in contemporary literature: behaviorist, which was largely advocated by Quine, but also coherentist and physicalist, which some of his interpreters argued for. However, while the first two of these options are in my opinion unacceptable because they are unable to provide the necessary autonomy for the epistemological context of inquiry, I will try to show that physicalism is also burdened with difficulties, albeit different ones, which make it an untenable position when it comes to epistemological inquiry. Nevertheless, even before I started writing, I thought that there were valuable insights in Quine's proposal, and that we could learn important lessons from the failure of previous interpretations, both regarding the position that should be taken in its interpretation, and, closely related to this, the possibility of reforming epistemological inquiry in general.

In other words, informed by the weaknesses of Quine's proposal and its interpretations, I will argue that epistemological inquiry can ultimately be approached from one of two mutually

incompatible theoretical positions: the traditional or Cartesian one, and the Kantian one. Given that, as noted above, Quine's proposal was primarily a reaction to Cartesianism, I discuss the possibility of establishing the fundamental level of inquiry such as epistemological to which Quine had to aspire, but in a way that would enable the synthesis of his approach with Kant's view, which is in my opinion the only genuine alternative to the traditional program. Although it implies taking a position that would be a kind of compromise and could not be attributed to Quine (which is why it is uncertain whether he would have supported this interpretation), I believe that, apart from preserving certain naturalistic elements, it is an interpretation that would ultimately satisfy most of the demands that Quine himself has set for epistemological inquiry.

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1. Introduction

American philosopher Willard Van Orman Quine is one of the most significant philosophers of the twentieth century. Reasons for valuing Quine's work lie in the fact that he has reformed the empiricist tradition in philosophy practically on his own. However, apart from being a reformer of a school of philosophy, Quine is also seen by some as a reformer of a discipline whose problems in contemporary philosophy are considered to be among the most important ones, due to their significance and fundamental nature.

In fact, it could be said that after the successful reform of empiricism, Quine took it upon himself to reform epistemology too. However, while there is almost a consensus regarding the former endeavor that Quine has changed the face of a great philosophical tradition for good, when it comes to the latter, assessments of its value among contemporary theorists range from those who completely deny Quine's contribution, to those who believe that his insights are a necessary and long-awaited revelation in the field of epistemological inquiry. However, there are certain regularities in these different views about Quine's reform of epistemology, and one of them is especially important to us.

Namely, when it comes to discussions about the tenability of Quine's proposal, it can be said that among the authors with favorable attitude to it, they have so far mostly concerned speculations about the relationship between ontology and epistemology, or more precisely, empiricism and naturalism in his philosophy. For example, Roger Gibson believes that the main reason why Quine is not seen as a reformer of epistemology is primarily that no effort has been made to realize that naturalism which Quine eventually reached is a more significant position than empiricism he started from, and that it is this doctrine which unites Quine's ideas and makes a systematic whole of his work: "[There are] two sources of misinterpretation of Quine's thought: failure to perceive Quine as a systematic philosopher, and a failure to appreciate the scope of Quine's commitment to naturalism" (Gibson 1988: xvi).

In a word, if we want to see Quine as a true reformer of epistemology, Gibson's advice is to try to interpret his work in a naturalistic vein rather than an empiricist one, as it will be shown in more detail below, or to see it as "a systematic, naturalistic response to the epistemological question of how we acquire our theory of the world." (Ibid., 22).

Although Quine was in one period inclined to this type of interpretation, we shall see that he still stuck, to the greatest extent, to the original idea of reciprocal containment of ontological and epistemological questions; hence it follows that, unlike Gibson, he attached equal importance to empiricist and naturalistic doctrines. However, since I believe that both of these approaches are untenable, as it will be shown below, bearing in mind their shortcomings as well as the demands that Quine himself set more or less explicitly for epistemological inquiry, I argue that this inquiry can be approached only from one of two incompatible theoretical positions: traditional or Cartesian that Quine rebelled against in the first place, and Kantian. In this respect, in the context of the dominant approach in discussions about the tenability of Quine's epistemological project, this should result in empiricist doctrine coming to the fore, though not in such a way that the project would be in agreement with coherentism which is most often associated with it in this case, but with Kant's approach which is, in my opinion, the only real alternative to the traditional program.

In other words, in contrast to the existing interpretations, it will be argued here that Quine's proposal should primarily be a version of the search for *a priori* categories of thought, or, in this case, innate mechanisms of language learning. On the other hand, although I do not believe that the interpretations offered in defense of Quine's epistemological project, including Gibson's, are tenable, in order to show that, I believe that it will be useful to follow Gibson's example and try to see Quine's work in the way he advises – as a systematic whole.

Therefore, before focusing on Quine's proposal for the reform of epistemological inquiry, main topics of his philosophy and the problems arising from it will be presented, starting with the reform of empiricism, and concluding with his arguing for certain naturalistic views that are thought to represent his ultimate position. In this respect, after highlighting the basic assumptions of Quine's naturalism, in the next four chapters his philosophy will be treated basically in the same way as Gibson did – as a kind of evolution of ideas and beliefs, from empiricist to naturalistic ones. The difference is that none of these ideas will be given priority, but they will be

presented in the order in which they emerged, with the aim of relating, whenever possible, the views that follow from them, which may seem divergent and unrelated. Chapter 7 will present basic assumptions on which Quine's reform of epistemology is supposed to rest, with the attempt to determine, as specifically as possible, his place in the history of this discipline. This will involve both referring to some of Quine's most prominent predecessors and comparing his approach to other dominant approaches in epistemology.

Chapter 8 presents best-known criticisms of Quine's proposal for naturalizing epistemology, and I will endeavor to point out some of their limitations, thus indicating the position that will be taken in its defense. However, before embarking on this defense, it will be necessary to present in more detail the prevailing types of interpretation of Quine's proposal by scholars who, generally speaking, had a favorable attitude to it. In this respect, a particular emphasis will be placed on Gibson's interpretation of Quine's project as the most consistently presented one, which will be addressed in chapters 9 and 10, respectively.

Namely, although Gibson points out, like most Quine's defenders, that the so-called genetic project is the best strategy we have for conducting epistemological inquiry, I believe not only that he ignored this project, but I will also try to point out that his and Quine's approach to naturalizing epistemological inquiry rest on fundamentally different assumptions. In this way, not only will one type of interpretation be completely excluded – the one that Gibson argues for – but I will also show that the approach advocated by Quine is much more flexible, although untenable, and that unlike Gibson's, it leaves room for more plausible interpretations compatible with his approach, such as the one that I will offer.

After that, having in mind all the conclusions reached in the meantime, I will proceed with my interpretation of Quine's proposal, trying primarily to relate it to the views that would enable to synthesize it with Kant's approach. Even though it is safe to say that it is unlikely that Quine would support this interpretation, at the very end the attention will be drawn to the fact that there are certain indications in Quine's work in favor of this interpretation of his project of naturalizing epistemology, which is in my opinion the most tenable one.

2. Basics of Quine's naturalism

Bearing in mind the explanatory power that a philosophical doctrine is supposed to have, empiricism and naturalism are undoubtedly the two most important positions in Quine's philosophy which are closely related to many questions that will be brought up in this book, and which would also enable to adress them most fruitfully. On the other hand, there is a belief among some theorists that these views are mutually incompatible, which, if true, would pose an insurmountable obstacle to this attempt at presenting Quine's philosophy in the way indicated above – as a systematic whole. Nevertheless, while I do not share Gibson's belief that naturalism is the most important or unifying doctrine of Quine's otherwise disparate ideas, I will advocate the view that the thesis of incompatibility does not entail the thesis of discontinuity, and that, despite the tensions, Quine's philosophy can be seen as a relatively coherent and systematic whole. However, in order to demonstrate this, it will be necessary to skip for a moment the problems of empiricism that precede chronologically, and to go directly to epistemology where what is presumed to be the unifying, and according to some (Gibson), the most important doctrine of Quine's 'system' – naturalism – gains its foothold.

2.1. Foundationalism

Naturalism is the view that once Quine adopted it, he never abandoned afterwards, and which in Gibson's opinion best sums up his entire philosophy. However, for Quine it is primarily a "recognition that it is within science itself, and not in some prior philosophy, that reality is to be identified and described" (Quine 1981: 21).

Although it is general, this Quine's attitude was a reaction to a negative situation in his opinion that largely continues to this day, and in which philosophers enjoy a privileged position when it comes to answering what is considered to be the most important epistemological

problem – the problem of validity or justification of our theories about the world. However, since it can already be guessed that Quine intended to discredit any philosophy as a means of giving an answer to the above epistemological problem, the question remains what were the real motives for such a radical reaction, all the more so because epistemology has always been a discipline that only philosophers dealt with, and that the project enabling this privileged position is the same one that is thought to have largely enabled epistemology itself.

Modern epistemology is a discipline that was left as a legacy, in the form in which it is widely accepted, by the great French philosopher Rene Descartes. It primarily deals with questions such as 'What is knowledge?', 'How is knowledge possible?', and 'What should be done to acquire knowledge?'. To answer these questions, Descartes thought that we have to test our beliefs by calling them into doubt. Thus, using modern terminology, he came to the conclusion that beliefs about current sensory states (the so-called basic beliefs) are the only ones that we cannot have any doubt about, and that all our other beliefs should be based on them.

Namely, Descartes thought that for a belief to qualify as knowledge, it has to be either basic (or such that it is not possible to express any coherent doubt about it, nor to refer to other beliefs to justify it), or such that it is ultimately deducible from basic beliefs. Descartes found the basis for this claim in something that would later be called the epistemic priority of sensory experience, which was grounded in the so-called general gap that was supposed to exist between it and things that are the common objects of our knowledge (such as, for example, objects found in space): "To say that things of one sort are 'epistemically prior' or prior in the order of knowledge to things of another sort is to say that things of the first sort are knowable without any things of the second sort being known, but not *vice versa*. (...) There are certain things we could know about our sensory experiences or about how things appear to us even if nothing were known about the existence of any independent objects in space. Those sensory experiences or those facts about the way things appear to us are therefore epistemically prior to facts about the external world" (Stroud 1984: 141).

Therefore, by assuming the existence of a general gap between the content of our sensory states on the one hand, and things that are the common objects of our knowledge on the other, Descartes divided all our beliefs "into two groups: those which need support from others and those which can support others and need no support themselves" (Dancy 1989: 53). Given that

the latter, epistemically prior beliefs constitute epistemological foundations, and the former a superstructure built on these foundations, from Descartes' times onwards, epistemology has essentially remained a project of deducing all our beliefs from the basic ones, or – which comes down to the same thing – "a research program which sets out to show how it is that our beliefs about an external world, about science, about a past and a future, about other minds, etc., can be justified on a base which is restricted to infallible beliefs about our sensory states" (Ibid., 54).

The most important lesson to be learnt from these lines and which is above all Descartes' epistemological legacy, is that our theory of knowledge or epistemological theory should be "logically prior to any empirical knowledge", and that "we should have no confidence in any of our pretheoretical beliefs (...) because we have reason to believe that any of them might be false. The only rational course is thus to reject all beliefs about which we might be mistaken, and rebuild our body of beliefs from the very beginning" (Kornblith 1999: 159). On the other hand, bearing in mind the fundamentality of this project which follows from the thesis that "no empirical belief may be rationally formed without our first having an epistemological theory to guide our belief formation" (Ibid.), Descartes also believed that epistemology has a special place among the disciplines, which is why he granted it the status of 'first philosophy'.

However, since it turns out that we believe in many things that are not and cannot be part of the reports about our sensory states, and given that the consistent application of Descartes' method allows to set such demands which would make any knowledge claim impossible – even those concerning the content of our sensory states – the above situation resulted in skepticism being permanently associated with epistemological inquiry, and the program of (traditional) epistemology or 'first philosophy' becoming a program of more or less witty dealing with the skeptic. Nevertheless, despite such a disappointing result, it is believed that Descartes placed epistemological inquiry on a sound basis, demanding above all certainty and a solid foundation for our beliefs, which is why subsequent generations of epistemologists followed his example. In short, although with bleak prospects of success, they took upon themeselves the task of searching

for this solid foundation, that is, for such an epistemic position that will make at least some of our beliefs justified.[1]

2.2. Quine's attitude towards foundationalism and 'first philosophy'

Thus, the approach proposed by Descartes inevitably affirms speculative philosophical means in answering the question how can our knowledge about the world be rationally justified, primarily because the skepticism that follows from it – to which both our basic beliefs and derived ones are equally susceptible – can only be countered by these means. However, Quine believed that this skepticism, although expected, was largely unjustified.

Namely, while Quine did not deny the importance of the epistemological project in general, in contrast to most of his predecessors and contemporaries, he thought that when it comes to the starting point for evaluating our beliefs about the world, there is really no room for something like 'first philosophy' which presupposes unlimited trust in the method of doubt. In other words, Quine questions the justification of doubts that come from the so-called extra-theoretical position such as the philosophical one, which make us use methods, in order to dispel them, whose true value and results cannot be objectively evaluated or empirically verified. It follows that the only doubts that would be legitimate for Quine are in fact those concerning problems that are solvable at least in principle, which is why they are equal to the doubts we come across in common scientific practice.

In addition, Quine believed that skepticism – even as radical as Cartesian one – was actually an "offshoot of science", justifying this thesis by pointing out that "doubt prompts the theory of knowledge (...) but knowledge, also, was what prompted the doubt" (Quine 1975b: 67). In this

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[1] In fact, Descartes himself came to the conclusion that our basic beliefs can also be doubted, because it is possible to imagine a situation in which, when evaluating them, we are deceived by an evil demon. We will see that these skeptical scenarios concerning basic beliefs later took on different forms, but their essence remained the same, that is, each of them was constructed in order to question truth or justification of beliefs on which we should base all others.

way, he reminds us that doubt is an integral part of any rationally oriented research process, and that to have doubt is by no means a specifically philosophical attitude. Moreover, unlike scientific questions, those raised by philosophical doubts usually have the characteristic that we cannot see how they can be solved at all; that is why, instead of being prompted to 'fabricate fictitious structures', we should try to discover what is within our power, first of all 'how science is in fact developed and learned?'.

Generally speaking, in his call for the naturalization of epistemological inquiry, Quine was primarily guided by the above-mentioned idea that reality should be identified and described within science itself, and not some *a priori* philosophy. In this respect, in order to avoid the adverse effects of unlimited skepticism about our beliefs that ultimately *make them all unjustified*, Quine believed that the problem should be approached in the spirit of scientific method and not philosophical. However, apart from his dissatisfaction with the existing situation, Quine thought that there was a rational basis for his proposal which would fully affirm scientific methods in resolving epistemological disputes. This basis was found in the thesis that the epistemological problem (as he saw it, as an attempt to answer the question of how science really developed and how we acquired it) is in fact scientific, because "[S]cience tells us that our only source of information about the external world is through the impact of light rays and molecules upon our sensory surfaces" (Ibid., 68).

In other words, Quine starts from the thesis (which will be discussed in more detail later) that the source of all our knowledge is the proximal stimulus on the surfaces of our sensory receptors that we receive from the external world. Since philosophical doctrines, including Descartes', should satisfy this initial condition just as any other cognitive content, then philosophy does not have a privileged place as Descartes thought, but Quine sees it in continuity with other types of inquiry: "The philosopher's task differs from others (...) in detail, but in no such drastic way as those suppose who imagine for the philosopher a vantage point outside the conceptual scheme he takes in charge. There is no such cosmic exile" (Quine 1960: 275-276).

Therefore, by denying that philosophers have 'a vantage point' from which they evaluate our theories or conceptual schemes, and by highlighting the thesis that our only source of information about the world is what we receive through our senses, instead of asking how we can know that our science is true or justified, Quine primarily asks 'how, stimulated in these ways,

we evolve an elaborate and useful science, and why does the resulting science work so well?' (see, Quine 1975b: 68). In his view, these would be "genuine questions", and "no feigning of doubt is needed to appreciate them. They are scientific questions about a species of primates, and they are open to investigation in natural science, the very science whose acquisition is being investigated" (Ibid.).

Generally speaking, on these assumptions Quine bases his arguments for rejecting foundationalism, that is, for the theses that will be the foundation of his project: that "epistemology is best looked upon (...) as an enterprise within natural science", as well as that, therefore, "Cartesian doubt is not the way to begin" (Ibid.). However, before getting into the details of this project, it should be noted that this turn in the approach significantly changes the subject itself. In other words, since it does not seem obvious that there is an important connection between the traditional project of finding a solid foundation for our beliefs, and discovering how science really developed and how we acquired it, it seems uncertain *whether, by redefining its subject, Quine remains within the framework of epistemological theory or abandons it.*

Although I argue, as I will try to show, that there is a connection or at least similarity between these projects, Quine's reaction is undoubtedly a major departure from the program of traditional epistemology. Also, it should be noted that this kind of naturalism blocks the way to Quine's empiricism, that is, it is not clear how any of Quine's empiricist theses, given that they are also non-naturalistic, could fit into a theory that rejects any philosophy. In other words, since I have argued above that Quine's work is a systematic whole, it should be shown what is the connection between empiricism and the view that science, and not some *a priori* philosophy is the place where we should identify reality; because, if taken seriously – and there is no doubt that Quine did so – this thesis discredits the means of any philosophy as adequate for giving answers to epistemological questions, including the one to which its most important proponent belonged.

However, we should not forget that Quine was not only a proponent of the empiricist tradition, but also its great reformer. This implies that, despite his unfavorable evaluation of philosophical doctrines as a consequence of his naturalism, there may still be some continuity between Quine's version of empiricism and naturalism, and if we discover it, this would enable us to highlight the naturalistic tendencies in Quine's empiricism, or the empiricist ones in his naturalism. Therefore, after a brief excursion into Quine's naturalism, let us get back to the

original idea of chronological presentation of his ideas, starting with the first major project that Quine undertook in his productive career – the reform of empiricism.

3. Quine's reform of empiricism

It is commonly thought that Quine based his reform of empiricism on the view known as holism, even though, as we shall see, it was not particularly novel. Generally speaking, holism implies the thesis that meaning is not something that can be attributed separately to parts or individual sentences, but only to the whole theory or language. However, there are at least two paths to this point of view, and although these paths intersect at certain points, Quine took only one of them.

As indicated above, holistic tendencies in philosophy were known long before Quine's time, and the development of a version of holism, commonly known as semantic holism, can be traced consistently from Frege and early Wittgenstein, to Quine. In other words, in Quine's view, the germ of (semantic) holism was already in Frege's works in which, in his words, Frege rejected "the impossible term-by-term empiricism of Locke and Hume" and realized that "the statement, rather than the term" is "the unit accountable to an empiricist critique" (Quine 1951: 39). This was followed by Russell's insights and, above all, the insights of early Wittgenstein that drew on Frege's work concerning some key points. Thus, the conditions were created to abandon the statement as the smallest unit of meaning, and to establish the thesis advocated by Quine, that "[T]he unit of empirical significance is the whole of science" (Ibid.).

However, this path to holism through extending the principle introduced by Frege, dividing linguistic expressions into saturated and unsaturated, was not the one that Quine himself took. Namely, Quine primarily argued for epistemological holism, which is evident in the fact that his views on this issue are largely a consequence of the criticism of traditional empiricist philosophy and the positivists' attempt to base the science about the external world on immediate experience.

3.1. Dogmas of empiricism

Quine presented the most important theses related to the reform of empiricism in his early, but probably the most well-known paper "Two dogmas of empiricism". However, before going into the details of Quine's reform, it should be said right away that what Quine identified as dogmas were actually the basic principles of the empiricist project of reducing our knowledge to reports about sensory impressions.

Namely, Quine believed that empiricism as he found it was burdened with certain prejudices that he considered to be ungrounded, and that these prejudices were really responsible for the constant failure of empiricists in their main goal – to answer the (epistemological) question 'How is it possible to base the science about the external world on immediate experience by purely logical means?'. On the other hand, since he himself did not believe that this project could be carried out – nor that giving up the above prejudices would change anything in this respect – it can be said that Quine's reform was motivated not so much by this failure, but by the fact that even after realizing it, empiricists failed to improve their position significantly. Quine found the reasons for this precisely in sticking to certain beliefs which, being dogmatic, blocked the way to what he considered to be the real problems that a sound philosophical program, or empiricism without dogmas, should deal with: "Modern empiricism has been conditioned in large part by two dogmas. One is a belief in some fundamental cleavege between truths which are *analytic*, or grounded in meanings independently of matters of fact, and truth which are *synthetic*, or grounded in fact. The other dogma is *reductionism*: the belief that each meaningful statement is equivalent to some logical construct upon terms which refer to immediate experience" (Ibid., 20).

In the above article, Quine first precisely identified these dogmas, and then subjected them to a criticism from which the old empiricist tradition never fully recovered. With respect to the first one, Quine was primarily interested in criticizing the idea that statements are divided into two groups: those whose truth depends on experience (synthetic), and those whose truth is independent of it (analytic). As regards the second one, he criticized the empiricist thesis that

individual statements have their own empirical content and are, therefore, subject to independent confirmation or refutation.

Although the holism advocated by Quine is closely related to the elimination of both these assumptions, as it will be shown below, the example of the second one makes it more conspicuous. Namely, just like the thesis of semantic holism is that the smallest unit of meaning is not a sentence, but the whole language or theory, the hypothesis that Quine started from was that "meaning is something born primarily not by parts but by the whole theory, since the whole theory is the only thing that has its own observational consequences" (Dancy 1989: 94). This version of holism differs from the semantic one insofar as its origin is linked to a criticism of the empiricist program of reducing all our knowledge to reports about immediate experience.

Namely, in line with the second dogma, empiricists believed that individual statements can be subjected to the test of experience, which would confirm them if it corresponds to them, and refute them if it does not. On the other hand, although Quine does not deny that the method of verification by experience is the foundation of every rationally oriented research program – and that the empiricist principle that sensory evidence is the only evidence for science is still valid – his starting point is that sentences or "statements about the external world face the tribunal of sense experience not individually but only as a corporate body" (Quine 1951: 38).

Thus, Quine's opposition to the second dogma was a reaction to the thesis that individual statements (primarily synthetic one) have their own empirical content or a set of empirical consequences, and it was based on the idea that meaning is above all "a matter of observational consequences, and such consequences belong to theories and not to sentences" (Dancy 1989: 93). On the other hand, although analytic statements have no observational consequences, if we accept the view that there is a close connection between these ideas, then the rejection of the first dogma, or the assumed difference between analytic and synthetic statements seems reasonable, because "as long as it is taken to be significant in general to speak of the confirmation and infirmation of a statement, it seems significant to speak also of a limiting kind of statement which is vacuously confirmed, *ipso facto*, come what may" (Quine 1951: 38).

The statements that Quine speaks of here are so-called analytic statements, and statements of logic and mathematics are most often taken as paradigmatic examples of them.

Namely, there has been a tendency in philosophy, especially since Kant, to divide propositions into *a priori* and *a posteriori*, or in some cases, into necessary and contingent truths. In the empiricist tradition, this idea found expression through adopting the distinction between analytic and synthetic statements. In a word, empiricists assumed "that the truth of a statement is somehow analyzable into a linguistic component and a factual component", and "that in some statements the factual component should be null; and these are the analytic statements" (Ibid., 34). However, 'although *a priori* it seems reasonable', Quine believed that "a boundary between analytic and synthetic statements simply has not been drawn", and that the view that "there is such a distinction to be drawn at all is an unempirical dogma of empiricists, a metaphysical article of faith" (Ibid.).

3.2. Carnap and logical postivists

Thus, the empiricist project of reducing our knowledge to statements about sensory impressions was based on two closely related theses, which were, in Quine's view, insufficiently justified. Despite this, positivists did not give up their program or adherence to the theses that were at its foundation. The first of them, as noted above, referred to the fact that all truths can be divided into synthetic and analytic, while the second emphasized the assumption "that each statement, taken in isolation from its fellows, can admit of confirmation or infirmation" (Ibid., 38).[2]

Quine's introduction of holism was thus supposed to eliminate both of these theses, but in line with the idea that they are connected, I have briefly pointed to it through the second one. However, there is good reason for opting for this approach, because apart from the fact that the

[2] The empiricists' adherence to these theses should not be particularly surprising, because to give them up would imply to give up the project of rational reduction of science to reports about sensory impressions, since it was founded on them. However, it is significant that Quine believed that it did not necessarily mean giving up empiricism in general. In this respect, Quine's greatest merit in this context that enabled him, as we shall see, to reform the old and methodologically obsolete empiricist program, was probably that he was the first to realize that it 'cannot be fixed from within'.

first assumption is more fundamental to the empiricist project (as it will be shown below), it has also proved to be more vital and resistant to criticism than the second. This is evidenced by the fact, *inter alia*, that while some empiricists were willing to consider statements holistically (Neurath) rather than individually, almost none of them questioned the fact that, apart from the statements whose truth depends on experience, there are also those which are, in Quine's words, confirmed 'come what may'. This was also the case in Rudolf Carnap's work, which is commonly thought to be the peak of the empiricist project of rational reconstruction of knowledge, even though he significantly modified his view over time and adopted certain holistic assumptions.

Thus, by adopting certain holistic and pragmatist assumptions, Carnap's later position implied a significant departure from the original program of logical positivists; however, Carnap believed that it was still not only possible, but crucial to make a distinction between two components in inquiry – analytic principles and synthetic (factual) truths. Although in Carnap's case this distinction acquired a slightly different content, thanks to the above modification of his view, it was still a version of the original distinction analytic/synthetic that Quine opposed, and which was adopted by all positivists considering it to be of immeasurable importance for their inquiry. Therefore, in order to determine why it was significant, before moving on to Carnap's program in more detail, it is necessary to sketch the original program of logical positivists that was in its background.

Namely, in the beginnings of the positivist program, the above analytic principles were still just statements, but it was believed that, due to their specific character, they could be used in a way that would enable to initiate several important projects in philosophy. Although the awareness of these projects was at least as old as the tradition they continued, positivists thought they had an important advantage over the empiricists of the past. In a word, they had symbolic logic developed at the end of the nineteenth century, which enabled, in their view, both to draw the demarcation line between meaningful and meaningless statements in general, as well as rational reconstruction of knowledge based on statements about sense data.

Hence, logical positivists put symbolic logic in the center of their examinations, and the most important reason for such a treatment was that by using it, it was possible to formulate formal languages in order to translate statements about the external world into statements about sense

data. However, first it was necessary to make a distinction between meaningful and meaningless concepts in general. This was done relatively easily, because as soon as the program "which recognizes only sense perception and the analytic principles of logic as sources of knowledge" (Reichenbach 1949: 310) was established, only those concepts whose statements meet this requirement were considered meaningful or legitimate, i.e. which constitute "axiomatic system which is given empirical meaning by definitions which hook up primitive terms in the formal language with observables in the world" (Misak 1995: 56).

However, this view had significant implications not only for science – whose domain it narrowed down significantly – but also for philosophy itself. Namely, just like the disciplines such as history, sociology, psychology, etc. were declared to be pseudo-scientific, it was thought that if philosophy was to survive, it would have to be somehow connected with empirical sciences. In fact, logical positivists believed that by demarcating meaningful from cognitively meaningless concepts, they managed, *inter alia*, to reform philosophy; for when we consistently apply a method that recognizes as meaningful only statements of empirical sciences and analytical principles, all that remains for philosophy is really a logical analysis of the concepts of empirical sciences: "Philosophy is not a theory or a body of statements which purport to be true. Rather, it is a *method* for clarifying our statements" (Carnap 1959: 77).

However, this was by no means a small feat, and it was more than enough in positivists' view to carry out their second project which was really philosophical. It is a project of rational reconstruction of knowledge using the above-mentioned formal languages, where non-observational or hypothetical statements of science would be gradually reduced to observational or statements about sensory evidence. The most ambitious of these is the above Carnap's project which was supposed to show how "all our meaningful concepts are logically constructed from the basis of unanalyzed and unprocessed perceptual data" (Misak 1995: 58).[3]

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[3] Thus, although the two great projects of logical positivists were closely related, they could not be reduced to one. In other words, despite what has been noted above, their domains are not coextensive because the project of rational reconstruction of knowledge was directly dependent on the project of demarcation of the meaningful from the meaningless, because the domain of the meaningful, in order for the project to be possible at all, had to go beyond the domain of the scientific or empirical. It was this 'surplus of meaning' that got included in the reformed philosophy, and it consisted in the logical analysis of the concepts of empirical sciences.

Namely, logical positivists, including Rudolf Carnap, believed that statements, generally speaking, "can be divided into two classes, those that are strongly verifiable and those that are not strongly verifiable themselves but are confirmable and disconfirmable by appeal to the strongly verifiable ones" (Dancy 1989: 88). Verifiable statements or, in line with positivist terminology, strongly confirmable ones were, in addition to analytical statements, so-called observational statements patterned on Descartes' basic statements. In other words, positivists adopted the thesis that, apart from analytic statements, there is another set of statements resistant to revision that play the role of untouchable statements on which we base and based on which we verify all other empirical statements.[4]

By adopting this thesis, Carnap undertook the task of translating, using only the means of symbolic logic, all non-observational or hypothetical statements into observational statements or statements we use to talk about our sensations. However, it soon became apparent that "much of our supposedly given knowledge of sense data in fact depends on what we know about the physical world" (Hylton 2010: 86) which also meant that sense data had no special status as Carnap and positivists believed, or that there are no untouchable, basic observational statements that would unambiguously decide the acceptability of non-observational ones. In a word, it turned out that "observational framework itself can be set up in various ways and that there is likewise a multiplicity of available logics" (Creath 2008: 19) which led to the breakdown of the original project of logical positivists, and forced Carnap to modify his views significantly.

Driven by the pressures that followed the insight that there is no universal language which we could use to unambiguously speak about our impressions (sensations), Carnap developed a view that the truth of non-observational synthetic statements no longer depended on whether they could be reduced to observational statements or statements about sensory evidence, but above all on the adopted linguistic framework. In other words, instead of referring to sensory evidence, Carnap will later refer to the adopted linguistic framework which becomes the final arbiter that "settles the acceptability of some sentences within it" (Ibid., 20). However, since these

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[4] Apart from being evidence of Descartes' influence on the later generations of philosophers, this is also confirmation of something extremely important here which will come to the fore below, and that is just how closely connected are the two projects that Quine opposed: logical empiricism and classical foundationalism.

frameworks are made up of different languages or linguistic conventions, he was forced to give up the notion of analytical principles as "the unique and unchanging core of our knowledge", and to speak of them as "postulates of meaning that connect non-observational terms with observational circumstances, thus leaning more and more towards linguistic conventionalism and relativism" (Lazović 2007: 18-19).

Hence, although he had to abandon some of the elementary principles of logical positivism because they proved to be untenable, Carnap still believed that this would not thwart him in his attempt at rational reconstruction of knowledge. In other words, despite being forced to abandon certain reductionist pretensions, Carnap was still in a position to believe that the positivist project of rational reconstruction of knowledge was possible (albeit relative to the linguistic framework), and all that was required was to preserve the thesis that it is fundamentally divided into two domains – the domain of analytical principles on the one hand, and synthetic truths on the other. Thus, distinction analytic/synthetic was replaced by another one, the distinction between internal and external questions.

However, that this is a version of the original distinction is shown by the fact that, despite their potential plurality, each of the linguistic frameworks could in principle provide, at least from its limited perspective, a conclusive answer to questions such as 'What there is?', or 'Which sentences or statements about the world are legitimate and which are not?'. In this way, although relativized and changeable, the linguistic framework becomes "a replacement for the traditional notion of the *a priori*" (Creath 2008: 20) as evidenced by Carnap's view that the questions concerning it, or the so-called external questions would be those whose justification or truth – as in the case of analytic statements – would be impossible to question.[5] On the other hand, the status of synthetic statements or truths would remain more or less unchanged, i.e. they would be ordinary statements about the world or about what there is, only this knowledge would be 'internal' because it would be acquired "using adopted testing procedures against the background of accepted principles of the given linguistic framework" (Lazović 2007: 21).

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[5] Carnap found the main reason for this in the thesis that, unlike internal, external questions are really pseudo-questions, i.e. they are meaningless, as it will be discussed in more detail below.

3.3. Quine's methodological monism and holism

Therefore, despite relativism and conventionalism reflected in the possibility of adopting different linguistic frameworks, where "none of the frameworks is uniquely correct, but any could be used as long as one is clear about which is being used and about what its rules are" (Creath 2008: 19), Carnap has essentially reasserted the position characteristic of the entire positivist tradition. It is the position of methodological dualism which makes a distinction, instead of synthetic and analytical truths, between two types of belief revision – internal and external.

However, Quine believed that this distinction, just like the original one, was largely forced, and that Carnap's recourse to linguistic relativism did not solve the problem; this is primarily because it presupposes that language about sense data – which would be the adopted observational framework in Carnap's work – is different from language about physical objects. But, since it is one and the same language according to Quine, he believed that there is no basis for distinguishing external from internal questions, and therefore, no basis for advocating any kind of dualism in methodology.[6]

In other words, unlike Carnap, Quine advocated "methodological monism and a more consistent and comprehensive holism" (Lazović 2007: 22) which could be reached, in his view, only by abandoning the above dogmas, primarily the distinction analytic/synthetic. However, since he believed that the criticism which would lead to this abandonment could not be carried out from within, i.e. by using the existing means of the logical positivist program, with respect to

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[6] Apart from this, there was another major problem with Carnap's program which consisted in the fact that the languages he used did not match the real needs of the language of science: "[Carnap sets out to] devise, in explicit terms, a general measure of the degree to which a statement of evidence may be said to confirm a hypothesis. Since what is sought is a numerical function of pairs of *statements*, the formulation must be relative to the language in which the statements are couched. The author chooses a simple language, poor in power of expression, thereby reducing the proportions of his problem (…). Extension to a language of serious proportions involves problems concerning which there is no glimmering of hope" (Quine 1990: 400).

the reform of the empiricist tradition in philosophy, it could be said that Quine's position was external to it. In short, what made Quine's criticism constructive were certain assumptions that he brought to empiricism, if not naturalistic, then certainly pragmatist ones.

In fact, although Quine never lost his faith in the basic empiricist principle that 'sensory evidence is the only evidence for science', he believed that the empiricists' search for an absolute conceptual framework as a reflection of reality was doomed to fail because it was guided by realistic standards according to which our knowledge would have to fully correspond to our impressions in order to be justified. Since, in addition to other problems this would entail, it would discredit a wealth of knowledge that is well-founded according to other, primarily pragmatic criteria, Quine thought that the ultimate goal of empiricists is a 'pointless task', arguing that "our standard for appraising basic changes of conceptual scheme must be, not a realistic standard of correspondence to reality, but a pragmatic standard" (Quine 1980: 79). However, it may be noted that all this is still very close to Carnap's view which we have summarized above.

Namely, as part of his logical empiricist program of rational reconstruction of knowledge, Carnap first tried to translate statements we use to talk about the physical world into statements we use to talk about our sensations. However, as he was soon faced with difficulties whose elimination went beyond the means of the original positivist program, he was forced to distance himself from it in some important points, getting closer to pragmatism. Thus, abandoning the positivist idea that sentences must correspond to a reality independent of us in order to be justified, he adopted the so-called principle of tolerance according to which their acceptance is primarily conditioned by the choice of language, and these choices are not guided by theoretical, but pragmatic reasons: "Theories are just different linguistic frameworks which we use to talk about objects, and as more or less convenient ways of talking about these objects, they are not subject to theoretical but only pragmatic evaluation" (Lazović 2007: 20).[7]

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[7] This entails another important consequence that is entirely in the spirit of pragmatism, that philosophical questions for Carnap "are really 'practical' questions to be resolved by the adoption of this or that linguistic framework for talking about reality. Philosophy deals with words or linguistic frameworks for understanding reality, not with reality itself. It is a 'second-order'' or 'meta-scientific' investigation" (Stroud 1984: 212).

Thus, Carnap adopted certain views that were akin to Quine's demand that the standard of evaluating basic changes in the conceptual framework must be not a realistic standard of correspondence to reality, but a pragmatic standard of utility. However, he still maintained the view that there was an important distinction between philosophy and other kinds of inquiry that Quine denied, thinking that the belief in the supposed difference between synthetic and analytic statements was ultimately responsible for it.

What led Quine to this view, apart from the belief that the positivist project would ultimately fail, was the idea that all our beliefs are in fact subject to the same type of revision, and that there are no privileged areas of knowledge that would require a special revision or be exempt from it. In the holistic picture offered by Quine, these areas form a connected whole, so there is no hierarchy of them as Carnap assumed distinguishing between two types of revision of beliefs, and therefore, there is no reason to advocate any dualism in methodology.

In a word, Quine sees the totality of our knowledge as a field, with statements more resistant to changes or analytical statements in the center, and synthetic ones at the periphery; however, this does not mean that analytical statements would have a special status due to their position, because not only did Quine believe that changes in a part of the system would have consequences for the system as a whole, he also left open the possibility that they could lead to "readjustments in the interior of the field", and therefore – although this is unlikely – to a revision of analytical statements: "The totality of our so-called knowledge or beliefs, from the most casual matters of geography and history to the profoundest laws of atomic physics or even of pure mathematics and logic, is a man made fabric which impinges on experience only along the edges (...). A conflict with experience at the periphery occasions readjustments in the interior of the field. (...). No particular experiences are linked with any particular statements in the interior of the field, except indirectly through considerations of equilibrium affecting the field as a whole. If this view is right, it is misleading to speak of empirical content of an individual statement – especially if it be a statement at all remote from the experiential periphery of the field. Furthermore it becomes folly to seek a boundary between synthetic statements, which hold contingently on experience, and analytic statements which hold come what may. Any statement can be held true come what may, if we make drastic enough adjustments elsewhere in the system" (Quine 1951: 39-40).

4. Quine's empiricism

Therefore, regarding knowledge we have about the world as a system in which "the organizing role of analytical statements (logical principles and semantic postulates) and the empirical content of synthetic statements, combined and in degree, are distributed through all sentences of the given system" (Lazović 2007: 26), Quine concludes that there is no sharp boundary between them, primarily between synthetic and analytic statements. In short, since, according to this view, none of them are exempt from revision, all statements are actually, to a certain extent, synthetic.

Generally speaking, Quine based his demand for introducing holism and methodological monism into empiricism on these assumptions, or in his words, for "blurring of the supposed boundary between speculative metaphysics and natural science" and "shift toward pragmatism" (Quine 1951: 20). However, apart from empiricism converging to pragmatism that Carnap has already initiated, as indicated above, Quine had prominent predecessors in terms of ideas that are closer to the project of erasing the boundary between speculative metaphysics and natural science.

Namely, the thesis that individual non-observation sentences cannot be conclusively verified or conclusively refuted using evidence provided by the senses was a generalization of Pierre Duhem's ideas, a French philosopher who insisted, almost half a century before Quine, that experimental science statements cannot be subjected to empirical verification individually, but only seen in the context of entire physical theory.[8] On the other hand, influenced by some more liberal positivists such as Neurath, Quine developed this view into the position that it would be

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[8] "To seek to separate each of the hypotheses of theoretical physics from the other assumptions upon which this science rests, in order to subject it in isolation to the control of observation, is to pursue a chimera; for the realization and interpretation of no matter what experiment in physics imply adherence to whole set of theoretical propositions" (Duhem 1991: 199-200).

possible to make an untrue statement true, if sufficiently drastic changes were made in other parts of the system.

Thus, Quine was not alone in his intention to "transfer questions about meaning and truth to the whole language or to theory as a system of statements" (Lazović 2007: 26). However, unlike Duhemian holism which the positivists were ready to adopt (at least some of its aspects), holism advocated by Neurath provoked strong opposition among them, primarily because he ignored, as we shall see, the demand that our statements, in order to be justified, must correspond to reality independent of us. Instead, Neurath's suggestion was that they have to be first of all in harmony with already existing set of statements; drawing on him, Quine came up with the idea that *under certain circumstances, any statement can be held true*. However controversial or radical – especially by the positivists' standards – this thesis is of great importance to Quine's view, and it could be said that, together with the thesis that there really are no statements which cannot be revised, it represents one of the most important points of his empiricism.

4.1. Neurath

In the previous chapter, we have seen that the positivists, at least in the beginnings of their program formation, adopted the so-called correspondence standard as a standard for determining the (truth) value of statements, as well as, ultimately, of conceptual frameworks or theories. The adoption of this standard is characteristic of approaches in philosophy which presuppose that reality is independent from our beliefs. On the other hand, our beliefs can be true or false, which depends solely on their relation to the external world, that is, on what it is really like: "When we claim that an empirical statement is true (or false), we imply that it is true (or false) in relation to the world in which we live, and therefore its truth (or falsity) should be determined by non-linguistic reality" (Lazović 1994: 111).

Generally speaking, the positivists believed that our talk about truth only makes sense if we comply with this requirement, which is why they – perhaps more than any other scholars – adopted the above view known as realism. However, in order for their project of rational

reconstruction of knowledge to be possible, it was necessary to identify the ultimate arbiters in determining whether or not our beliefs match the external world. Drawing on the tradition of foundationalism according to which the content of our sensory states is the only thing we cannot doubt, they believed to have found it in reports on our sensory impressions, which thus became, if they corresponded to independent reality, a guarantee of preserving the empirical character of our knowledge.

Namely, the positivists considered basic beliefs to be the basis of our beliefs on which the so-called protocol sentences in the form 'Otto at the particular moment sees a red' report. Apart from their standardized form, these sentences had the advantage of being reports on the content of someone's immediate experience, which is why, according to the positivists, their truth could not be coherently denied. However, not long after the idea of protocol-sentences as infallible and basic was conceived, it was strongly opposed by one of the most prominent representatives of this movement, Otto Neurath. In short, much to surprise of the rest of the positivist camp, Neurath claimed that protocol-sentences do not have any special status either, i.e. they are also "subject to error and revision (questioning), which is why they cannot constitute the required final and absolutely reliable basis of knowledge" (Ibid., 110).

The essence of Neurath's criticism can be summarized by referring to the conclusion from the previous chapter, where it was pointed out that one of the main obstacles to establishing the positivist (reductionist) program was that a great deal of the supposedly given knowledge about sensory impressions really depends on what we already know about the physical world. In other words, since we cannot step outside the framework of our beliefs in order to have an objective, non-theoretical standpoint from which we could test whether or not they correspond to the assumed reality, Neurath concludes that there are no independent facts that could be referred to in the process of justification, and therefore, no statements that would have a special status.[9]

This was one of the earliest, but overall probably the heaviest blows to the positivist conception of knowledge that reduces it to reports on sensory impressions. However, apart from

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[9] Even Moritz Schlick's later attempt to introduce observations in the form 'red here now' instead of protocol sentences did not significantly improve the positivist position, because it turned out that Neurath's criticism affected them as well; see: Neurath, Otto, "Protocol-satze".

criticizing classical foundationalism in epistemology on which this conception is based, Neurath also provided the basis for a completely different epistemological theory. In short, as an alternative to the untenable thesis that statements are justified by comparing them to non-linguistic reality, his proposal was to test each of them in light of other accepted statements.

The epistemological theory that Neurath advocated in this way is the so-called coherentism, and it implies a model of justification "according to which a belief is justified not due to reasons that ultimately come down to some basic beliefs, but due to the fact that it is coherent with the belief system in which it is included" (Ibid., 109). In other words, statements should not be justified by referring to some non-linguistic reality, *but by the possibility of fitting them into an existing system of sentences*. In practice, this would mean that when we come across a statement that cannot be incorporated, we have a choice: either to 'reject a new statement' or to "alter the whole existing system of statements until the new statement can be incorporated" (Neurath 1983b: 66).

However, although the positivists eventually gave up reducing science to reports on sensory impressions, as we have seen above, they refused to adopt the proposed model because they believed that it introduced "arbitrariness into justification that is detrimental to the empirical character of knowledge" (Lazović 1994: 110). Besides, the idea of changing an entire set of statements in order to fit one was extremely unappealing to them because it implied the possibility of a multitude of conceptual frameworks that, although mutually inconsistent, would all be justified only based on their internal cohesion, or the harmony among their parts.[10] In a word, the positivists believed that Neurath's proposal "breaks the desirable relation between justification and truth, thus isolating our beliefs from the real world" (Ibid., 148). Unlike them, however, Quine has accepted Neurath's suggestions arguing that they do not jeopardize the empirical character of knowledge. The question is, then, how Quine managed to reconcile these conflicting tendencies, or to adopt Neurath's coherentism while preserving the thesis on the empirical character of knowledge?

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[10] Although Neurath himself admits that the decision to change an entire set of statements in order to fit one 'is taken with hesitation', it is important to point out that it is completely legitimate in his view, because "justification of a given belief is a relational property, and this relation is reciprocal and includes all other beliefs from a given set" (Lazović 1994: 149).

As it will be shown below, what enabled the synthesis of coherentism and empiricism in Quine's case is a specific type of holism that he advocated, which takes as the smallest unit of meaning not language but theory, or, more specifically, the entire science. Namely, although Quine remained repeatedly vague when speaking of the smallest unit of meaning implied by his holism, I believe that it is extremely important to decide on this issue, and that there are stronger arguments for the thesis that the smallest unit of meaning is not language, but the entire (natural) science. I argue not only that this kind of interpretation is adequate, at least at this point in developing his view (it is, after all, a standard interpretation), but also that its importance lies, *inter alia*, in the fact that it will allow us to confront it with Carnap's view that I believe (although with some reservations) to be advocating the exact opposite position.

4.2. Anti-realist elements of Quine's empiricism

As noted above, there is a close connection between Carnap's and Quine's views, and Quine often pointed out that it was Carnap who inspired them, even when it comes to issues on which they differed significantly. This influence is best reflected in formulating ontological problems as the most important ones, or in their joint attempt to answer the question 'What kinds of things exist?', or "What there is?".

When it comes to Carnap, we have seen that this question for him "made sense only within the accepted linguistic framework, in which there are given criteria and procedures for verifying statements about the existence of objects that assert or deny something in that language"(Lazović 2007: 22). On the other hand, although Quine shared Carnap's belief that "when we adopt a particular theory/conceptual framework/language, we must also accept corresponding ontological commitments, i.e. we have to assume a domain of objects to which our statements will refer" (Ibid., 30), he believed that all objects "have the same very general kind of status", and that "the existence of each is presupposed by a theory which is a human invention; since we accept the relevant portion of each theory, we accept the objects as real" (Hylton 2010: 21).

At first glance, it may seem that there is no significant difference here, and that Quine merely paraphrased Carnap's model of justification when he spoke of theory instead of language. However, this difference is not just terminological, as evidenced by the fact that this change will enable him to establish a universal criterion of ontological commitment. In other words, unlike Carnap, Quine argues that the ontological question or the question 'What there is?' can be answered unambiguously, which is in my view best reflected in the thesis that the problem of justification of conceptual frameworks is not only a pragmatic problem, but also a theoretical one.

Namely, let us recall that, under the influence of criticism such as Neurath's, Carnap accepted that the reduction of our beliefs to reports on sensory impressions is not possible. However, he still advocated the realist idea of correspondence, except that statements, in order to be justified, would have to correspond not to some independent reality, but to an adopted conceptual framework: "To accept the thing world means nothing more than to accept a certain form of language, in other words, to accept rules for forming statements and for testing accepting or rejecting them. The acceptance of the thing language leads on the basis of observation made, also to the acceptance, belief, and assertion of certain statements" (Carnap 1950: 3). However, while justification of statements that refer to the thing world would depend on the adopted linguistic framework, the thesis about reality of this world, in Carnap's view, "cannot be among these statements, because it cannot be formulated in the thing language or, it seems, in any other theoretical language" (Ibid.).

This brings us back to the distinction that Carnap made between two types of questions, external and internal, in line with the analytic/synthetic distinction. However, by abandoning the above distinction, Quine also abandons the obligation to adopt Carnap's model which will have as one of the consequences that the statements for which Carnap claimed to be exempt from the usual verification procedures, can still be approached theoretically. In short, by emphasizing the holistic character of our knowledge about the world, an answer to a question such as the one about reality of the world – which would for Carnap be the so-called external, pseudo-question – would depend, in Quine's view, on what place, if any, such an assumption would have within the system.

It can be observed that this idea is close to Neurath's viewpoint that statements are justified by the system as a whole, i.e. in light of other accepted statements. However, it is particularly important to keep in mind that the system Quine speaks of is not any system whose statements would be in harmony with one another, but quite specifically, the entire (natural) science: "Within natural science there is a continuum of gradations, from the statements which report observations to those say of quantum theory or the theory of relativity. (...) Statements of ontology or even of mathematics and logic form a continuation of this continuum, a continuation which is perhaps yet more remote from observations than are the central principles of quantum theory or relativity. The differences here are in my view differences only in degree and not in kind. Science is a unified structure, and in principle it is the structure as a whole, and not its component statements one by one, that experience confirms or shows to be imperfect" (Quine 1976a: 134).

Therefore, although it can be said that Quine adopts Neurath's model of justification, by pointing out that natural science is the smallest unit of meaning, he simultaneously introduces an important limitation to it. This limitation consists in the demand that in order to be justified, the statements would have to play a role in our dealing with sense experience, apart from the harmony in which they would be with one another. In other words, this would mean that conceptual frameworks could be changed, but only if they would still successfully serve their main purpose of 'predicting future in light of past experiences'. I will try to show that this modification of Neurath's view will have significant implications for Quine both on the ontological and epistemological levels, i.e. it will enable him to give an independent answer to the ontological problem, but also to preserve the empiricist thesis that sensory evidence is the only evidence for science.

Namely, given that they cannot be grounded in an absolute sense, Quine argues that physical objects are real to the extent that they help us deal with sense experience. In other words, since "our talk of external things, our very notion of things, is just a conceptual apparatus that helps us foresee and control the triggering of our sensory receptors" (Quine 1981: 1), those things are added to conceptual frameworks only as "convenient intermediaries – not by definition in terms of experience, but simply as irreducible posits comparable, epistemologically, to the gods of Homer" (Quine 1951: 41).

However, although "in point of epistemological footing the physical objects and the gods differ only in degree and not in kind" (Ibid.), Quine gives priority to physical objects, with the rationale that they are much more suitable intermediaries in the process of organizing the present, as well as in anticipating every future experience. Giving priority to physical objects will enable Quine to reconcile coherentism with empiricism, i.e. to preserve the empiricist claim that the only evidence for science is really sensory evidence, along with the idea that statements are justified by their relation to other statements: "The myth of physical objects is epistemologically superior to most in that it has proved more efficacious than other myths as a device for working a manageable structure into the flux of experience" (Ibid., 41).

4.3. Ontological relativity

As we have seen, Quine believed that the differences between them are only "differences in degree to which they expedite our dealings with sense experiences" (Ibid., 42), so he regarded physical objects, 'small or large', as myths, or more specifically, *posits*: "Everything to which we concede existence is a posit from the standpoint of a description of the theory-building process, and simultaneously real from the standpoint of the theory that is being built" (Quine 1960: 22). However, since the theory that Quine speaks of is at the same time the smallest unit of empirical meaning, in this way he also formulated a universal criterion of ontological commitment. In a word, the entities that we would claim to be real would be only those that "must be counted among values of the variables in order that the statements affirmed in the theory be true" (Quine 1980: 103), with a note that the truth criterion which Quine applies here is not a realistic standard of correspondence to reality, but a pragmatic standard of usefulness (utility).[11]

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[11] Given that this is not about affirming the reality of entities postulated by a scientific theory, nor any particular system of statements, but about an attempt to establish a universal criterion of ontological commitment based on a scientific model, I believe that this standpoint should not be identified with the view that scientific theories and entities they postulate are only convenient instruments for predicting experience, but which have no truth value. In other words, even if it would not be entirely wrong to ascribe an instrumentalist view to Quine as it is usually done, it would be to significantly narrow it at the very least. In short, it seems that it would be most accurate to call it anti-realist, but this will be discussed more later.

Therefore, unlike traditional empiricists who searched for its absolute grounding in sensory impressions, Quine believes that the only thing we can demand from the world is "that it be so structured as to assure the sequences of stimulations that our theory gives us to expect" (Quine 1981: 22). Ultimately, that would be all we can demand from the objects implied by the theory, i.e. they are only intermediaries in the process. However, since in Quine's case there is also a holistic demand that "scientific statements are not separately vulnerable to adverse observation", and that when we come across such observations, "any one of the statements can be adhered (...) by revising others of the statements" (Quine 2008b: 228), there is a problem here similar to the one in Neurath's work. In other words, it can be noted that Quine's view implies a multitude of theories which, although implying different descriptions and objects, would all be justified if they successfully served their main purpose – predicting future in light of past experiences: "If all observable events can be accounted for in one comprehensive scientific theory (...) then we may expect that they can all be accounted for equally in another, conflicting, system of the world" (Ibid.).

We have seen that postulating a multitude of conceptual frameworks was the main reason why Neurath's model of justification was unacceptable to empiricists.[12] However, we have also seen that when Quine speaks of them, he speaks not only in terms of Neurath's categories of harmony and internal cohesion among their constituent parts, but also empiricist categories of sense experience.

In a word, Quine supported Neurath's conclusion not based on coherence, but on the fact that even when theories presuppose different entities, they can be empirically equivalent because they imply the same observation conditionals. Quine illustrates this situation, *inter alia*, as follows: "Take some theoretical formulation and select the two of its terms, say 'electron' and 'molecule' (...). Now let us transform our theory formulation merely by switching these two terms throughout. The new theory formulation will be logically incompatible with the old one: it will affirm things about so-called electrons that the others deny. Yet their only difference, the man on

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[12] "Many philosophers who have shown an interest in the coherence theory of truth have disputed the view that the theory offers a definition of truth on the grounds that, taken that way, the theory is manifestly false. It is manifestly false because no matter how tight our account of coherence we shall have to admit that there may be more than one coherent set of propositions" (Dancy 1989: 113).

the street would say, is terminological; the one theory formulation uses the technical terms 'molecule' and 'electron' to name what the other formulation calls 'electron' and 'molecule'. The two formulations express, he would say, the same theory. Someone else might urge, however perversely, that they express very different theories: both of them treat molecules in the same sense but disagree sharply regarding the behavior of molecules, and correspondingly for electrons. Clearly, in any event, the two theoretical formulations are empirically equivalent – that is, they imply the same observation conditionals" (Quine 2008b: 234).

Therefore, even when they presuppose different entities, theories can equally well explain and assimilate given data, so there is no basis for giving priority to one of them over the other. Bearing this fact in mind, Quine believes that when it comes to choosing them, we have no other choice but to opt for 'frank dualism': "Suppose (...) two rival systems of the world (...). Suppose further that we can appreciate their empirical equivalence (...). It is the extreme situation where we would do well to settle for a frank dualism (...). Where there is forever no basis for choosing, then, we may simply rest with both systems and discourse freely in both, using distinctive signs to indicate which game we are playing" (Ibid.).

This Quine's position is known in the literature as ecumenical, and it is opposed to the so-called sectarian viewpoint that even though there are different theories which explain the data equally well, only one of them can be true – the one whose content and structure would reflect the content and structure of reality. However, it is important to keep in mind that the thesis about a multitude of conceptual frameworks, or, in this case, comprehensive theories that are equally supported by empirical evidence is not so much a difficulty for Quine's view as it is a symptom of the fact that theories are not, nor can they be unambiguously determined by the data. In other words, Quine integrated the pluralism objection that the empiricists raised to Neurath's model of justification into his own research program, in which, generally speaking, it is no longer a problem and becomes a phenomenon of underdetermination of theories by empirical evidence. As we shall see, this will make Quine, when speaking of them, speak less in terms of objects that they postulate, and more in terms of language in which statements about them are formulated.[13]

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[13] For example, in answering the question 'What sort of thing is a scientific theory?', instead of speaking of it, as one might expect, as a means of controlling the flux of experience by a manageable structure, Quine now sees it as

The reorientation to studying the language in which theories are formulated was a significant turn in Quine's methodology; this can be illustrated by pointing out that, apart from believing that the question such as 'What there is?' is meaningful only in relation to some background language – because only "background language gives the query sense, if only relative sense" (Quine 1968: 201) – Quine also emphasized that, given the fact that theories are underdetermined by empirical evidence, we "look to bound variables in connection with ontology not in order to know what there is, but in order to know what a given remark or doctrine, ours or someone else's, says there is; and this much is quite properly a problem involving language" (Quine 1948: 35). However, it seems that in order to be in a position to do this, first we have to start with an assumption about objects, and although we cannot do this in an absolute sense, we can do it in a relative sense, i.e. in relation to the language in which a theory of objects is formulated: "[T]alk of subordinated theories and their ontologies *is* meaningful, but only relative to the background theory with its own (...) ontology" (Quine 1968: 202).

Therefore, although "a theory is committed to those and only those entities to which the bound variables of the theory must be capable of referring in order that the affirmations made in the theory be true" (Quine 1948: 33), Quine argues that "there is no absolute sense in speaking of the ontology of a theory" (Quine 1968: 207) but "how one theory of objects is interpretable or reinterpretable in another" (Ibid., 201). This is a situation we would have in the above example of switching the terms 'electron' and 'molecule' in our language, and by switching them wherever they appear, we would get two opposing theories, but theories that we could mutually reinterpret because they would belong to the same conceptual framework, i.e. they would imply the same observation conditionals. However, the underdetermination thesis will also include cases where such reinterpretations are possible only if ontological presuppositions of one theory are projected onto another, a situation in which we would find ourselves whenever determining what a particular doctrine claims to exist would require something that Quine calls radical translation. Then, however, we would no longer be dealing with subordinate, but so-called background theories or languages.

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an idea or 'a complex of ideas the most practical way of coming to grips with is by way of the words that express them. What to look for in the way of theories, then, are the sentences that express them' (see, Quine 1981: 24).

Namely, in Quine's view, the cases of radical translation are characteristic in that they force us to read our own ontological point of view into the language we are translating. The reason for this is that the ontological point of view implied by the language we translate remains inscrutable; to show this, Quine examines the procedure of applied linguist who has the task of translating sentences of a completely unknown language into his mother tongue.

In a word, Quine observes that in such a situation – this would presumably imply contact with indigenous people – the applied linguist would have to rely solely on behavioral evidence, because he would not have any other method at his disposal but the one that involves relating his informants' utterances to directly observable circumstances in which they were stated. However, although it would be possible to obtain an acceptable translation in this way – at least by pragmatic standards – Quine concludes that it would also be possible to obtain a number of other variants and that we could not give priority to any of them over the others.

Quine finds justification for this conclusion in the fact that, relying on evidence that he could have in this situation, i.e. behavioral evidence, the applied linguist can never know with certainty what his informants' utterances really refer to. On the other hand, since it is assumed that he is a member of a culture in which talking about (individuated) physical objects is deeply rooted, it is natural to expect that he would translate an expression that regularly accompanies the appearance of a particular object as the name of a correlated object in his language. However, although this has practical value, it is quite arbitrary in Quine's view and testifies to the fact that, after establishing other correlations, he would actually make a translation or a dictionary that is most in line with his ontological point of view, while the native one would constantly elude him and remain inscrutable: "English general and singular terms, identity, quantification, and the whole bag of ontological tricks may be correlated with elements of the native language in any of various mutually incompatible ways, each compatible with all possible linguistic data, and none preferable to another save as favored by a rationalization of the native language that is simple and natural to us" (Quine 1957: 7).[14]

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[14] It should be said here that, in Quine's view, the thesis about the inscrutability of reference concerns not only the cases that require radical translation, but also those in which we move within the same background theory (language). However, since it is then already implied by the assumption that it is not possible to determine in an absolute sense what the objects of a theory are, it acquires its full meaning in the case of confronting two,

5. Towards naturalism

Therefore, even though the thesis about underdetermination of theories by empirical evidence makes things somewhat complicated, it is crucial to keep in mind that according to Quine's empiricism, the smallest unit of meaning is not theory, but language. However, we should not think that Quine thereby gives up the original idea that it is theory, for we have seen that, apart from presupposing an ontological framework, language also presupposes a particular theoretical or conceptual framework. In a word, although for Quine language is still not natural science, it *is* a theory in any case, i.e. language is the background theory within which "we can show how some subordinate theory, whose universe is some portion of the background universe, can by a reinterpretation be reduced to another subordinate theory whose universe is some lesser portion" (Quine 1968: 202).[15]

However, we have also seen that the underdetermination thesis implies cases when the theory we are interpreting is not subordinated to any background theory, which is why we can speak of

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presumably, completely different conceptual frameworks or background theories, and to determine what one of them claims to exist would be impossible even in a relative sense (unless certain realist assumptions are adopted, as we shall see). Thus, for example, a linguist can never know whether to translate the native expression that regularly accompanies the appearance of a certain object as the name of that object, one of its undetached parts, or its one second stage. The famous example used by Quine is a fictitious term 'gavagai' which is supposed to be uttered in the presence of a rabbit, but – based on all the available evidence – linguist cannot know whether to translate the term as 'rabbit', 'undetached rabbit-part', or 'one second rabbit-stage'. For more detailed information on this, see Quine's papers "Speaking of objects" and "Ontological relativity".

[15] Although the thesis that language has certain theoretical assumptions, in addition to ontological assumptions, calls for comparison with Carnap's standpoint, I argue that it reveals an essential difference between them. In addition, it seems to entail the view that there is no important difference between philosophy and other types of inquiry that Carnap did not accept. Since this will be discussed in more detail below, now it will suffice to say that philosophical doctrines, just like scientific ones, are also subordinated to this background theory which already implies ontology, even though it is "primitively adopted and ultimately inscrutable" (Quine 1968: 202).

objects of that theory only tentatively, from the perspective of assumptions about objects of our theory. This will make Quine advocate, in addition to the underdetermination thesis, two additional ones, on indeterminacy of translation and inscrutability of reference which together form the content of his more general viewpoint known as ontological relativism. However, this brings us to the first major tension in Quine's philosophy, and I argue that although it may not conflict with relativism, the way he approaches the problem of radical translation conflicts with his anti-realism, and that, generally speaking, it can be interpreted as one of the indicators of Quine's commitment to realism.

Namely, although examples of reinterpreting subordinate theories on the one hand, and background theories or languages on the other may be the same from the viewpoint of ontological relativism – primarily because in both cases the general principle would apply that assertions about the existence of objects are relative to a *particular* conceptual framework – there is no sense in which two different languages, as well as theories about the world could imply the same observation conditionals unless we assume that it would be possible to reinterpret them mutually. However, since this would require the existence of a common background theory which does not exist in this case and it is not clear at all how it could exist, I argue that the only plausible explanation is that, in addition to anti-realist assumptions, Quine implicitly adopted certain realist assumptions.[16]

5.1. Observation sentences and holism

Therefore, it seems that when it comes to radical translation, it makes sense to speak of underdetermination only if we reintroduce talk of the given, so there would be several theories that explain and assimilate the given equally well.

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[16] Thus, for example, in presenting Quine's ontological relativism, Gibson argues that in the case of radical translation "we cannot say absolutely that 'gavagai' refers to rabbits, nor that 'gavagai' refers to undetached rabbit parts. But we can say that relative to one manual of translation 'gavagai' refers to rabbits, and relative to a different manual of translation 'gavagai' refers to undetached rabbit parts. So, while talk of absolute reference is nonsense, talk of relative reference is not" (Gibson 1988: 137). However, we should bear in mind that when Gibson says this, he already takes a certain theoretical position which is a realist position from which he interprets Quine's entire philosophy, as we shall see below.

As we know, the terminology used for speaking of the given is markedly realist, and we can assume that it is inadequate for presenting Quine's ideas. Nevertheless, we shall see that there is a sense, albeit different from the one implied by the positivists, in which to speak of the given even within Quine's system.[17] However, before trying to interpret Quine's commitment to realism detected here as an indicator of his movement towards naturalism, it is necessary to present in detail some features of Quine's holism that were not presented so far, which also have the seeds of realism and, according to some interpretations, foundationalism.

All holistic theses are characterized by opposing the view that individual statements have empirical content. Nevertheless, it is a heterogeneous doctrine whose representatives often argue for significantly different viewpoints, so it seems that the most effective way to find out which version of holism a particular scholar advocates is to answer two distinct but closely related questions.

Namely, if (scientific) statements can have observable consequences only after they have been connected in a theory – and it seems that this should be implied by every holistic view – the question is "how inclusive does that theory have to be? Does it have to be the whole of science, taken as a comprehensive theory of the world?" (Quine 1975: 314). On the other hand, there is *the problem of the status of statements* that are covered by this view, i.e. the question is whether they have an equal status as in Neurath's case, or some of them have a special status which is the thesis we come across in Quine's work.

The first question has already been answered, and although Quine's view leaves room for different interpretations, it seems that it would be most accurate to interpret the unit of meaning presupposed by his holism as a comprehensive theory of the world that is implicitly contained in

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[17] Moreover, while Quine's commitment to realism is still hidden here, it will become firmer and more obvious over time, and it will go so far that Quine at some points claims that even though we have several conceptual frameworks, and based on the available evidence we cannot give priority to any of them, only one of them can be true. Also, while the thesis on indeterminacy of translation will be preserved, the one on indeterminacy of objects will be moderated, as we shall see, to the point where it would be possible to determine in an absolute sense what the objects of a theory are.

language.[18] And while this is one of the facts that makes Quine's holism different from Duhem's,[19] answer to the question regarding the status of statements will make it substantially different from Neurath's. In a word, unlike Neurath – or later Rorty, who argued that holism applies equally to all sentences within a system – Quine believes that the holistic thesis "would be wrong if understood as imposing an equal status on all the statements in a scientific theory and thus denying the strong presumption in favor of the observation statements" (Ibid.).

There are several reasons for emphasizing the special character of the so-called observation statements in Quine's work. Namely, apart from the fact that in this way he intended to reconcile two conflicting demands in his philosophy (insistence on the empirical character of our knowledge, and advocating an anti-realist view that theories are only a means of controlling the flux of experience by a manageable structure), it was supposed to provide the necessary basis for showing that the theory we developed corresponds to sensory evidence. Since the prerequisite for a theory to correspond to sensory evidence is that it is empirical in character, Quine found the basis for the assertion that our knowledge is empirical in character in the thesis that, although theories are not unambiguously determined by experience, "the edge of the system must be kept squared with experience; the rest, with all its elaborate myths or fictions, has as its objective the simplicity of laws" (Quine 1951: 43).

Therefore, even though objects postulated by a theory are only 'cultural posits' and the theories are 'fictions', they are still empirical in character. This feature is ensured by the fact that

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[18] For example, some scholars (Gibson) argue that it "is more accurate of current scientific practice (...) to think of significant stretches of science, rather than the whole of science, as having observable consequences" (Gibson 1988: 33). For now, however, the thesis that it is the whole of science will suffice.

[19] Namely, although Quine's holistic thesis is often called the Duhem-Quine thesis, it should be noted that the smallest unit of (experimental) meaning for Duhem is not the entire science, but only *physical* science: "Physical science is a system that must be taken as a whole; it is an organism in which one part cannot be made to function except when the parts that are most remote from it are called into play, some more so than others, but all to some degree" (Duhem 1991: 187-188). On the other hand, we have seen that for describing his holism, Quine uses the term 'science', but as it will be discussed in more detail later, he 'uses it broadly' in a sense that "explicitly includes psychology, economics, sociology and history under that heading" (Hylton 2010: 8). Moreover, we shall see that, in addition to including non-physical science, Quine's holism also integrates common-sense propositions.

a part of the system, or as Quine calls it, its experiential periphery is in direct correlation with sensory stimulations. Since Quine sees this system as "a complex of ideas the most practical way of coming to grips with is by way of the words that express them", it would consist of so-called observation sentences: "(...) our (putative) knowledge forms a highly interconnected system. Some sentences, which he calls observation sentences, are directly correlated with sensory stimulations. Other sentences are not directly correlated with stimulations, but are connected with observation sentences, in some cases quite indirectly" (Hylton 2010: 13).

This brings us back to Quine's metaphor about our knowledge/belief system as a 'field of force' that impinges on experience only along its edges. Statements about the experiential periphery of the field would be the above observation statements, and they would be entirely empirical since they are directly correlated with the world. Leaving the experiential periphery of the field and moving deeper into its 'discursive interior', statements become more and more theoretical and more indirectly conditioned by stimulations. However, the fact that most of our statements are not directly conditioned by stimulations does not, in Quine's opinion, jeopardize their empirical character, because "stimulation will trigger our verdict on a statement only because the statement is a strand in the verbal network of some elaborate theory, other strands of which are more directly conditioned to that stimulation" (Quine 1957: 15). In other words, since the statements in the interior of the field are sensitive to "reverbations across the fabric of intralinguistic associations" (Ibid., 15-16), they are also connected with the real world, although indirectly. This is ensured by their relation with observation statements which, apart from providing evidence for our theories, are also "the gateway to language and to science" (Gibson 1988: 55).

5.2. Epistemological and semantic aspects of observation statements

Therefore, Quine finds the basis for the thesis about the special status of observation sentences in the fact that, by being related to the world and experience, they constitute evidence on which our theories rest. On the other hand, Quine also believes that observation sentences are "point in which language confronts reality directly enough" (Dancy 1989: 235) which is why

both our knowledge and mastery of language begin with them. In a word, apart from epistemological priority, observation sentences also have semantic priority, which is why some scholars (Mi) point out that the relation between scientific theory and observations used to support it can be revealed in Quine's case "from two aspects: that of epistemology and that of semantics. (...) The epistemological aspect reveals the relation through which our epistemic beliefs justified in theory gain their support. The semantic aspect reveals the relation through which our linguistic statements expressed in theory gain their meaning" (Mi 2007: 118).

Given this dual aspect, a widespread view is that there is a certain dichotomy regarding observation sentences, because on the one hand, these sentences play a role of evidence for supporting theories, and on the other, they constitute the basis of empirical content and learning (scientific) language. However, while acknowledging these different aspects, Quine believed that "evidential relation from observational evidence to scientific theory and the semantic relation from observational evidence to scientific language have the same extension" (Ibid., 118) which is why a reflection or a model for the activity of developing a theory is the activity of language learning.

Namely, since "the channels by which, having learned observation sentences, we acquire theoretical language, are the very channels by which observation lends evidence to scientific theory" (Ibid., 106), describing the way in which we acquire language competence, Quine argues that we thereby also obtain an explanation "for the fact that the finished theory is answerable to evidence, and thus about the world" (Hylton 2010: 95). This approach fully supports the type of interpretation followed so far, that language and science are for Quine largely coextensive. Namely, since there is no significant difference between them, to learn a language means to learn a particular theory of the world, and "to learn a theory of the world, in some sense, is to learn a theory of what there is in the world. And what a theory says there is in the world is closely related to a matter of reference" (Mi 2007: 122).

Therefore, it could be said that, in reconstructing the way in which we adopt a theory, Quine gave priority to the semantic aspect, with an explanation that mastering the referential aspect of language concerning observation sentences is the first step and a prerequisite for adopting the apparatus for speaking of objects in general: "The non-observational superstructure of language mentioned by Quine (...) is nothing more (...) than a model of language as a man-made fabric

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which impinges on observations only along the edges. Observation sentences are the exterior edge of language, where our language contacts with experiences, and where our speech is conditioned to stimulations. Our learning of the primitive vocabulary of observation sentences consists in our learning of associating it with the appropriate sensory stimulations" (Ibid., 124). However, there is still a certain, non-negligible difference between language and theory that Quine was not inclined to make – and thus also between semantic and epistemological aspects – as evidenced by the fact that on this issue, Quine advocated a version of foundationalism that would have been unnecessary if he had focused on the semantic aspect only.

Namely, in order to preserve the 'strong thesis about the special status of observation sentences', as well as about the empirical character of our knowledge, Quine had to introduce certain realist assumptions in addition to pragmatic ones into the description of adopting a theory using a model through which we acquire language. Furthermore, he claimed something that is considered to be fundamentally opposed to holism – that statements about the periphery of the field, i.e., observation statements, are subject to independent empirical verification: "It is the contrast between holism at the non-observational level and atomism at the level of observation that Quine is revealed as a foundationalist. The asymmetries are there for all to see. Observation sentences, where meaning is firm and translation possible, afford the only entry to a language" (Dancy 1989: 101).

Although I believe that classifying Quine as a foundationalist is not justified, this is evidence that in Quine's reconstruction of the way we adopt a theory of the world semantic and epistemological aspects are in fact intertwined; for if he focused only on the semantic one, he would not need any additional assumption about the special character of observation sentences other than that they are sentences which we learn first, amidst intersubjectively accepted circumstances. In other words, the semantic aspect invokes ontological relativism that calls into question justification and even the possibility of distinguishing observation sentences on any basis other than pragmatic one.[20] However, I do not imply here that the semantic aspect would be

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[20] Convincing evidence for this is the example of radical translation that was discussed in the previous chapter, when it was noted that we could get an adequate translation, but adequate only according to the pragmatic criteria of usefulness. In other words, we could translate a completely unknown language, but we could not learn a theory of

free from ontological assumptions; but since Quine also advocated the thesis about the empirical character of our knowledge, this required a stronger assumption about what the objects of a theory would be, because only then could one claim what Quine has claimed from time to time – that observation sentences are directly correlated with the *real* world.

As we have seen, this recognition of the special (epistemic) role or status of observation statements implied, according to some interpreters, a certain Quine's concession to foundationalism. However, although he was no doubt aware that speaking of what there is proves to be far more binding in epistemological than semantic context – which is why, after all, he made the above foundationalist concession – we should bear in mind that, unlike empiricists before him, Quine believed that "evidence of one's senses (...) concern not what is internal to the observer but what is external to him, that is to say the presence of certain (public) stimuli" (Dancy 1989: 88). This is an important fact to do with Quine's externalization of empiricism that will be discussed in more detail later. Now the question of the relationship between epistemology and ontology in Quine's work will be addressed, which is a question especially important for us.

5.3. The relationship between ontology and epistemology in Quine's work

As we have seen, although on the one hand Quine did not give up holism and pragmatism – which still made his program significantly different from the traditional empiricist program – in order to preserve the strong thesis about the special status of observation sentences (as well as about the empirical character of our knowledge) he had to make certain concessions to realism and foundationalism. However, while some scholars (Mi, Gibson) interpret these concessions as responsible for dichotomies in Quine's philosophy, I argue that these are open tensions that can be detected at different levels, which I will try to show now by bringing Quine's attitude towards ontology and epistemology to the fore.

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the world that is implicitly contained in it because we would be forced to project onto it our own ontological point of view.

It is well-known that ontology and epistemology are disciplines that deal with different issues; while ontology focuses on the question such as 'What there is?', epistemology is primarily interested in 'How do we know what there is?', or 'What evidence do we have that would be in favor of what there is?'. However, we have seen in the previous section that the description of how we learn about what there is (or the way we acquire our theory of the world) necessarily includes ontological assumptions, which is why Quine has argued that ontology and epistemology are closely related, or rather, that they are in a relationship of 'reciprocal containment': "Despite the fact that ontology and epistemology focus on different issues, ontology and epistemology are, for Quine, intimately related to each other. (...) The relationship is complex and subtle, and it is best characterized, in Quine's own words, as 'reciprocal containment'" (Gibson 1988: 45).

Broadly speaking and subtleties aside, Quine's thesis that epistemology and ontology are reciprocally contained consists in the demand that answers to the questions about method and evidence must also include answers to the questions about truth, just like those about truth or what there is depend on the (available) evidence. However, we have seen that in certain cases such as the case of radical translation, answer to the question of what a particular theory claims to exist (or what evidence we have that would support what is true) could be obtained solely on pragmatic grounds. As noted above, this does not mean that acquiring a language or a theory would be free from any ontological assumptions, but it is certain that it can imply a very weak thesis about what would be the objects implied by a theory, a thesis that, moreover, might contradict what the theory actually asserts. On the other hand, this implies that theories – whether we know them or not – have truth conditions of their assertions, which is why Quine – even when he speaks of them through the semantic (coherentism) model – also implies realist concepts concerning the relationship between our statements and the real world.

This is evidence of strong tensions in Quine's philosophy between language/science, semantic/epistemological, and it seems that, by insisting that epistemology and ontology are reciprocally contained, Quine somehow tried to overcome these tensions. However, although relating epistemology and ontology seems to be an important and justified move that Quine made, I do not find the assertion that they are in a relationship of reciprocal containment particularly enlightening, and I believe that it only reflects the existing tensions in his work. On

the other hand, it seems that some other Quine's interpreters shared this belief, because although they did not give up the idea that ontology and epistemology are closely related, and that "Quine's philosophy cannot be properly understood without grasping the nature of this intimate relationship" (Ibid.), in evaluating it, they increasingly gave priority to one of them – ontology.

Among the interpreters who gave priority to ontology, Roger Gibson particularly stands out. Namely, in Gibson' view, this type of interpretation has several advantages because, apart from alleviating the tensions in Quine's philosophy, it also associates it with natural science, and we have seen that, in presenting his holism, Quine argued that the smallest unit of empirical meaning should be the entire natural science. However, while Quine arrived at this view independently of speculations about the nature of the relationship between epistemology and ontology, Gibson draws on this point through the thesis that, although the questions of method and evidence primarily concern epistemology, "ontology (natural science) tells us that its only evidence is sensory evidence" (Ibid., 48). Since sensory evidence is nothing but "the activation of (physical) nerve endings by physical objects" and "the very idea of nerve endings, epistemology's contact points with the world, belong to the part of ontology called physiology", Gibson also claims that ontology has priority over epistemology, because it necessarily "presupposes an ontology of nerve endings" (Ibid.).

Therefore, since "the two cardinal tenets of Quine's empiricistic epistemology presuppose an ontology of nerve endings and their physical stimulators, external objects" (Ibid.), instead of ontology and epistemology being reciprocally contained as in Quine's case, in Gibson's interpretation we come across the idea that the questions of truth or ontology have priority over epistemological questions of method and evidence. However, although in the later period Quine increasingly leaned towards something akin to this type of interpretation, it is uncertain whether he ever made a definite decision in favor of ontology. One of the reasons is no doubt that this would cause a number of difficulties the most important of which is certainly that it would jeopardize his empiricism; as Quine's epistemological views are commonly thought to be closely

related to his empiricism,[21] this would have consequences for his epistemological concepts as well.

Namely, although Gibson argues that his interpretation does not significantly affect Quine's epistemological project, and that his primary intention is to make it "partly empirical rather than solely a quest for internal coherence" (Ibid.), his tendency to identify epistemological assumptions with ontological ones (more precisely, with ontology of nerve endings and physical objects) will, as it will be shown in more detail later, pull epistemology in the direction in which an explanation of the way we adopt a theory of the world would imply only explanatory models of natural science. However, since its peculiarities in relation to ontology would thus be largely lost, I argue not only that Quine's reform of epistemology excludes this possibility, but I also believe that it requires the opposite assumption, the assumption of the priority of epistemological over ontological questions.

Although, as we shall see below, Quine was not ready to make this move – but remained consistent in asserting that epistemology and ontology are disciplines in a relationship of reciprocal containment – I believe that it was necessary because only in that case the fundamental level of research such as epistemological could be preserved, regardless of the specificities of Quine's approach. However, before addressing these questions in more detail, we must focus attention on the grounds on which Quine gave priority to natural science, as well as on the way in which he arrived at his naturalistic views that is significantly different from the way Gibson has done it, as we shall see below.

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[21] As we shall see in more detail below, "evidence is, for Quine, sensory evidence, so epistemology is, for Quine, empiricism. It follows that empiricism is not a theory of truth but a theory of evidence (i.e. of warranted belief). It does not purport to tell us what there is, but only what evidence there is for what there is" (Gibson 1988: 44-45).

6. Quine's naturalism

For the purpose of presenting Quine's philosophy in the way indicated at the beginning, as a kind of evolution of ideas, from empiricist to naturalistic, we finally arrive at Quine's naturalism. As noted above, for Quine naturalism is primarily the recognition that 'reality should be identified and described within science itself, and not some kind of *a priori* philosophy'. However, while I argue for an interpretation according to which this view, although significant, is only one of the views that Quine has advocated, for scholars such as Gibson, naturalism is the most important in his entire philosophy, the view that resolves dichotomies and brings it closer to the methodology of natural science.

As we have seen, Gibson came to emphasizing naturalism by giving priority to ontological over epistemological questions. He found the grounds for this in the fact that whatever the way in which we adopt our theory of the world – and in Quine's work, this way is identified with the way in which we acquire language, primarily its referential aspect – sensory evidence remains the only evidence we have. Since sensory evidence is nothing but activation of nerve endings by physical objects, Gibson argues that ontological assumptions are fundamental even in the epistemological context, which is why he gave priority to the questions of truth, or what there is, over the questions of evidence.

Although accepting Gibson's model would have alleviated the tensions in Quine's philosophy and made it a more systematic whole, he nevertheless sought to preserve an equal relationship between these questions. One of the reasons for Quine's reluctance was no doubt that adopting Gibson's proposal and the resulting systematicity would entail radical modification of his empiricism. Another, even more significant reason is that it remains questionable to what extent Gibson's proposal is tenable, despite all its appeal, primarily because there is a controversial idea in its background that the questions of method and evidence should be treated in a physicalistic

way, or that epistemological methodology should be modelled entirely according to the methodology of natural science.

Although in the later period Quine leaned towards something akin to Gibsonian type of interpretation, it is at the very least uncertain whether he ever made such a definite claim, which is why his naturalism remained less specific than the one we find in Gibson's proposal, as we shall see below. On the other hand, since for Quine empiricism and epistemology are closely related – through the thesis that empiricism is not a theory of truth, but a theory of evidence – it is particularly important to those of us who want to emphasize continuity in Quine's philosophy that the adoption or further development of a model such as Gibson's, apart from requiring a modification of his empiricism, would have far-reaching consequences for Quine's epistemological pretensions.[22]

6.1. Externalized empiricism and behaviorism

Thus, although Quine argued for its naturalization, it is at least arguable whether he has ever advocated anything as radical as Gibson's proposal, as evidenced by the fact, *inter alia*, that for him epistemology has never been subordinated to ontology the way it is in Gibson's work. Besides, the way in which Quine arrived at his naturalistic views is fundamentally different from Gibson's, which together made his naturalism a much broader, and in a way a more indeterminate viewpoint than the one to which Gibson aspired.

Generally speaking, Quine arrived at his naturalistic views through behaviorist doctrine, and we shall see below that naturalism he advocated would not go much beyond what was guaranteed by behaviorism. However, although these viewpoints are closely related in Quine's

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[22] To say that adopting Gibson's proposal that ontology has priority over epistemology would jeopardize Quine's empiricist postulates means primarily that it would emphasize the realist versus anti-realist assumptions that I believe to characterize Quine's empiricism above all. In other words, a consequence would be a definite decision and giving priority to science (theory) over language, as well as to epistemological over the semantic aspect of acquiring them, as we shall see below.

case, unlike Gibson who emphasized naturalism, I will bring to the fore the doctrine that concerns the explanation of mental phenomena based on their reduction to behavior in observable circumstances. The reason for this is, *inter alia*, that I want to emphasize the continuity I believe to exist in Quine's philosophy which will require to show how behaviorism, in addition to being important to naturalism, also played an important role in Quine's empiricist postulates. More specifically, I will advocate the view that Quine's empiricist postulates enabled the introduction of behaviorism, and ultimately, naturalism into his philosophy.

However, one of the peculiarities of Quine's behaviorism which is sometimes called radical behaviorism, is that Quine was not inclined to acknowledge the existence of mental entities (propositional attitudes, intensional objects, etc.) as he was ready to acknowledge it when it comes to physical objects. On the other hand, since the very idea of sensory evidence or experience implies, if not propositional attitudes and intensional objects, then certainly *a kind of intentionality or mental*, the question is what relationship can there be between behaviorist doctrine that Quine has in mind and the doctrine whose central tenet is that sensory evidence is the only evidence for science?

Although Quine has argued with the empiricists that sensory evidence is the only evidence for science, one of the consequences of his reform of empiricism is that sensory evidence no longer refers to something that is in the subject of experience, but to something outside the subject, i.e. to the presence of certain *publicly available* stimuli. This has been a significant novelty compared to the traditional empiricist program, because the talk used by the positivists, 'of the relation between, say, sensations and reflections, impressions and ideas, or sense data and theory' has been replaced by "talk of the relation between observation sentences and theoretical sentences, and of the relation between observation sentences and stimuli" (see, Ibid., 54). In other words, Quine has replaced old empiricist concepts of 'experience' with the "scientific notion of the stimulation of our sensory receptors" which will result in "construing our 'theory of the world' not as a purely mental entity but rather a collection of sentences to which we offer our scientific assent" (Wrenn 2008a: 2). These modifications will enable the introduction of behaviorism into Quine's philosophy, which will be most evident in his approach to the way we adopt our theory of the world.

Namely, let us recall that adopting a theory of the world takes place in parallel with language acquisition. However, language acquisition is a relatively complex process because it presupposes learning the truth conditions of sentences (which will be discussed more later) that can be both nonverbal and verbal stimuli. In the first case, truth of the sentences is determined by the world, because "although most of the language consists of interverbal associations, somewhere there have to be nonverbal reference points, nonverbal circumstances that can be intersubjectively appreciated and associated with appropriate utterances" (Gibson 1988, 55). In the second, it is determined by the relation of observation sentences with theoretical ones that, thanks to this relation, also have truth conditions: "[Just as] ranges of nonverbal stimuli become evidence for the truth (i.e. justification) of various observation sentences, these sentences in turn become evidence for theoretical sentences" (Ibid., 82). However, what is particularly important is that all these sentences, or their utterances and stimuli are now "out in the open, accessible to the intersubjective techniques of study characteristic of natural science in general" (Ibid., 54) which enables us to learn language, at least in the initial stages, by observing behavior and statements of others in observable circumstances. On the other hand, it also provides us with the basis for using behavioral means in reconstructing the way in which people acquire their knowledge, which is why experimental situation that Quine rather assumes in order to study the entire process is the situation in which a child finds himself when acquiring language.

This is the so-called genetic approach to which Quine focused his attention in his work, which will be discussed in more detail later. Now it is important to emphasize its behavioristic character as well as the fact that its implementation was primarily due to a special type of empiricism that Quine advocated, which is also called 'externalized' or 'enlightened' empiricism: "The externalization of empiricism amounts to focusing on the relation between observation sentences and stimuli and the relation between these same observation sentences and theoretical sentences. The genetic approach towards studying these relations amounts to studying language learning (...). Behavioral psychology is the medium for this inquiry" (Ibid.).

6.2. The naturalistic-behavioristic thesis

Therefore, since the question of how people acquire knowledge about the world is a matter that primarily concerns the available evidence – and it is believed that Quine's empiricism is not a theory of truth, but of evidence – the purpose of referring to the genetic approach is, *inter alia*, to show how it is closely related to Quine's empirical postulates. Moreover, we have seen that introducing it into Quine's philosophy enabled the externalization of empiricism, i.e. the thesis that sentences and stimuli are now out in the open, accessible to intersubjective (objective) study techniques. However, since this intersubjectivity is something that is "characteristic of natural science in general" (Ibid., 54), it is extremely important that Quine believed he was not improving the traditional approach to epistemological questions in this way, but changing it entirely by making it part of scientific methodology.

As noted above, there is a close connection between Quine's behaviorism and naturalism, and Quine often pointed out that, by introducing behaviorist approach into the study of how people acquire their knowledge of the world, he based epistemological research on objective, scientific grounds. He found the justification for this claim primarily in the above intersubjectivity characteristic of both the methodology of natural science and behaviorism. However, since it is a doctrine that traditionally concerns the explanation of mental phenomena based on their reduction to overt behavior, the question is what role could behaviorism play in a philosophy that neither accepted this type of explanation, nor acknowledged the reality of mental entities to begin with?

When it comes to the place or importance of the behaviorist doctrine in Quine's philosophy in general, first of all it should be pointed out that Quine came to the famous principle 'no entity without identity' drawing on the legacy of this doctrine. Namely, since there is nothing in observable behavior that would testify to the existence of some additional, mental states or events, physical objects are for Quine the only ones that can have pretensions to reality, because

only for them we have clear, behavioristic identity criteria.[23] However, although he did not acknowledge their reality in the sense of reality of physical objects, since their "behavioral adjuncts serve to specify them objectively" (Quine 1977: 102) Quine recognized intersubjectivity of mental entities. It is thanks to this fact that mental entities have a role to play in behavioristic reconstruction of the way in which we acquire our knowledge of the world, except that they would no longer be seen as entities, but as "dispositions to gross behavior" (Quine 1975a: 87), as evidenced by the example of 'meaning' as a mental entity which was the first to be attacked by Quine's criticism.

Namely, the dominant approach in philosophy that Quine opposed has been to treat 'meaning' in a similar way as intensional objects or propositional attitudes (desires, intentions, beliefs, etc.), as causally effective internal states. In contrast, Quine insisted that 'meaning' is nothing more than what is "implicit in people's dispositions to overt behavior" with the general view that "semantics is vitiated by a pernicious mentalism as long as we regard a man's semantics as somehow determinate in his mind (...)" (Quine 1968: 186-187). In a word, Quine's thesis was that "there is nothing in linguistic meaning beyond what is to be gleaned from overt behavior in observable circumstances" (Quine 1970: 5) and it was supported by the fact that "language is a social art which we all acquire on the evidence solely of other people's overt behavior under publicly recognizable circumstances" (Quine 1968: 185).

Therefore, when it comes to 'meaningfulness of language', Quine's view is that it should not be explained by mental but behavioristic terms, such as "matter of the language-users' having dispositions to exhibit certain forms of behaviour, especially verbal behaviour, in certain circumstances" (Hylton 2010: 101). In doing so, Quine continued the pragmatist tradition established on this matter by the American philosopher John Dewey who believed that mental phenomena such as "knowledge, mind and meaning are part of the same world that they have to do with, and that they are to be studied in the same empirical spirit that animates natural science" (Quine 1968: 185). Since the above 'behaviorizing of meaning' applied equally to other content of the mental, Quine found the way to study them empirically precisely in behaviorism, i.e. in the

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[23] "Quine's rejection of intensional objects, including meaning, propositions, attributes, and relations, is not a reaction to their being abstract objects. Rather, his concern is, for the most part, that we have no behavioristic identity criteria for such objects" (Gibson 1988: 13).

fact that, thanks to their behavioral adjuncts, they can be paraphrased as dispositions to behave in observable circumstances.

Thus, while there is 'no place in objective science' for talk of mental states such as propositional attitudes due to its ambiguity and logical imprecision,[24] Quine argued that mental phenomena are subject to the same type of study that characterizes natural science, thanks to the fact that they are characterized by intersubjectivity *inherent in (natural) science*. With this in mind, Quine's naturalistic-behavioristic thesis would basically consist in this: "The naturalistic-behavioristic thesis may be construed both substantively and heuristically. It is substantive insofar as it makes a factual claim about the (behavioral) parameters of the language-learning context: language is learned by emulating the verbal behavior of members of the linguistic community. It is heuristic insofar as it proscribes the development of mentalistic theories of language learning and linguistic meaning: any underlying psychological mechanisms of language learning and any 'meaning' not discoverable behaviorally may be safely ignored" (Gibson 1988: 2).

However, although Quine's genetic project has not been discussed in detail yet, it does not seem plausible that a behavioristic explanation of how we acquire a theory of the world would imply or start from the same assumptions as a typically naturalistic paradigm such as physicalism. In addition, there remain ambiguities regarding Quine's position on the ontological status of mental entities, and the matter is further complicated by the fact that, although he did not acknowledge their existence, Quine still believed in the possibility of explaining them. In a word, Quine argued that in the background of mental phenomena "there is a physical state of the matter, a fact ultimately of elementary physical states" (Quine 1979: 167) which is why he thought that the only satisfactory explanations would be those obtained using neurology: "Mental

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[24] Quine based the assumed pseudo-scientific nature of the talk of propositional attitudes, *inter alia*, on the lack of trust in the possibility of a general translation of the idiom of propositional attitude into more objective terms: "In each particular case, knowing the circumstances, we may be able to say something in other terms that would be no less useful as an aid to transacting some business in hand; but we can hope for no verbal equivalent of 'a believes that p' even for given 'a' and 'p', that is independent of the circumstances under which it may have been said that 'a believes that p'" (Quine 1969: 146).

states do not reduce to behavior, nor are they explained by behavior. They are explained by neurology, when they are explained" (Ibid., 167).[25]

6.3. Place of naturalism in Quine's philosophy

Therefore, despite similarities between behavioristic and purely naturalistic (physicalistic) explanations – of which intersubjectivity is certainly the most significant one – it seems that there is still a certain gap between them, and the tensions characteristic of Quine's philosophy in general can also be detected in his naturalistic-behavioristic thesis.[26] In this case, I believe that they are primarily due to Quine's ambiguous attitude towards the mental which can be best presented through Quine's definition of mental entities as "twilight half-entities to which the identity concept is not to apply" (Quine 1957: 20). However, before examining more closely these issues – and the problems that will inevitably arise from them, given the topic – it is necessary to determine more precisely the place of naturalism in Quine's philosophy, which will, in addition to epistemological, also imply ontological assumptions that it entails.

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[25] As we shall see in more detail below, Quine distinguished among three types of explanations of mental phenomena – mental, physiological, and behavioral: "The mental is the most superficial of these, scarcely deserving the name of explanation. The physiological is the deepest and most ambitious, and it is the place for causal explanations. The behavioural level, in between, is what we must settle for in our descriptions of language. (…) It is here, if anywhere, that we must give our account of the understanding of an expression, and our account of the equivalence that holds between an expression and its translation or paraphrase. These things need to be explained, if at all, in behavioural terms: in terms of dispositions to gross behavior" (Quine 1975a: 87).

[26] Although most interpreters tended to overcome behaviorism in favor of some typically naturalistic paradigms such as physicalism, a close connection between behaviorism and naturalism that Quine postulates is something that Gibson also acknowledges. For example, Gibson believes that the naturalistic-behavioristic thesis is the central tenet of Quine's entire systematic philosophy: "The reading of Quine that I am advocating focuses on what I have elsewhere (Gibson 1980 and 1982) dubbed the naturalistic-behavioristic thesis of language. The thesis is naturalistic in that it makes the study of language accessible to empirical investigation, and it is behavioristic in that it relies upon behavior as the substance of observable data" (Gibson 1988: 1).

As noted above, although by introducing behaviorist approach into the study of how people acquire their knowledge of the world Quine has already made some important steps in this direction that have been sufficient according to some (Gibson), the common view is that the key motive for promoting naturalism was ontological, and that it can be found in Quine's belief that natural science, i.e. physics, is the only one that can give us a satisfactory answer to the question of what is truth: "According to Quine's naturalism, there is no source for facts beyond what the best science has to offer, and physics is the best science has to offer" (Thompson 2008: 122).

Although none of what is included in this thesis has to be interpreted as a form of anti-empiricism, it is believed that there are significant differences between these doctrines, and that naturalism and empiricism are, if not openly opposed, then certainly incompatible viewpoints. In addition, although Quine's view became increasingly categorical over time that the smallest unit of empirical meaning is (entire) natural science (which would seem to be quite consistent with naturalism), he also did not give up the thesis that his holism, apart from theoretical propositions, also includes our common-sense propositions. Having this in mind, it seems reasonable to try to determine the place of naturalism in Quine's philosophy in relation to both his empiricist and holistic assumptions.

Namely, let us recall that with the thesis on underdetermination of theories by empirical evidence, Quine pointed out that theories are not unambiguously determined by the data, and that "our talk of external things, our very notion of things, is just a conceptual apparatus that helps us to foresee and control the triggering of our sensory receptors" (Quine 1981: 1). In other words, when it comes to Quine's empiricism, it is primarily characterized by anti-realist character which these theses should illustrate. However, although Quine claimed that 'objects implied by theories are only cultural posits', and these theories are at best 'fictions', he still acknowledged their reality, as we have seen, *inter alia*, by emphasizing behavioristic identity criterion: "Everything to which we concede existence is a posit from the standpoint of a description of the theory-building process, and simultaneously real from the standpoint of the theory that is being built" (Quine 1960: 22).

Therefore, Quine holds that objects implied by a theory do have reality, although they cannot be defined in terms of experience, and the increasing emphasis on this fact became one of the prominent features of his later philosophy. Since it is commonly believed that the main feature of

Quine's later philosophy is that it is primarily naturalistic, one of the sure signs of the weakening of empiricism in favor of naturalism in Quine's work is that objects are less and less conceptualized as posits, and more and more as constituents of objective reality. However, perhaps even more significant is that, in contrast to the empiricist phase in which he advocated ecumenical position and believed that the only criterion we have when choosing theories is the pragmatic criterion of usefulness, due to their ambiguous determination by the data, Quine later increasingly advocated the so-called sectarian approach which implies that although we have many theories that are equally supported by evidence, only one of them can be true.

In other words, although Quine's pragmatic criterion of truth was not entirely replaced, it would increasingly give way to realistic criterion of correspondence, and I believe that this is best reflected in Quine's adoption of the so-called sectarian position. Quine finds justification for such a radical turn primarily in the following reflections: "Our scientific theory can indeed go wrong, and precisely in the familiar way: through failure of predicted observation. But what if, happily and unbeknownst, we have achieved a theory that is conformable to every possible observation, past and future? In what sense could the world then be said to deviate from what the theory claims? Clearly in none. (...) Our overall scientific theory demands of the world only that it be so structured as to assure the sequences of stimulations that our theory gives us to expect" (Quine 1981: 22).

Therefore, since "we have no conception of reality other than that provided by our ordinary system of beliefs, and internally generated modifications and extensions of that system" (Hylton 2010: 92), if a theory can explain our present experience, but also anticipate and fit in every future experience, Quine would think something very close to achieving positivist aspirations – that we have a theory which, in addition to meeting our goals, also reflects objective reality. However, since "all we can demand of our knowledge (...) is that it should make successful predictions" because "no further demand makes sense" (Ibid.), this conclusion differs from the positivist one insofar as Quine still uses pragmatic criteria of usefulness in reaching it. On the other hand, since the adoption of sectarian position inevitably brings ontological or questions of truth to the fore, he has increasingly (and more decisively) advocated certain realist positions concerning them.

Namely, we have seen above that Quine already cultivated some realist assumptions in his empiricist phase because in the case of radical translation it was possible to claim that theories imply the same observation conditionals only on condition that there was a common background theory within which they could be reinterpreted.[27] On the other hand, he also advocated something that is commonly thought to be in principle in contrast to holism, that certain statements and sentences (so-called observation ones) are subject to independent empirical verification: "The observation sentence, situated at the sensory periphery of the scientific body, is the minimal verifiable aggregate; it has an empirical content all its own and wears it on its sleeve" (Quine 2008a: 536). However, since what natural science tells us is now the final arbiter of what is true, when it comes to holism, Quine will subsequently be increasingly decisive that the smallest unit of empirical meaning is in fact and only (entire) natural science. Although it seems that this referring to or emphasizing natural science – which would thus be the theory of the world that would have the greatest chance of pretending to be true – if it were to be plausible could justify Quine's adoption of the sectarian position, certain problems arise here that are related to Quine's holism.

Namely, although he advocated more and more resolutely the thesis that natural science is the only one that can tell us what is true, the fact is that Quine never managed to separate it from science in general – at least not in the way that interpreters inclined to naturalism like Gibson would have it. Moreover, not only is it difficult in Quine's case to distinguish natural science from other sciences, it is equally difficult to distinguish it from common sense assumptions, as evidenced by the fact that Quine still maintained the thesis that his holism included both theoretical and our everyday, non-theoretical knowledge. In short, Quine argued that science, including natural science, is "continuous with common sense" (Hylton 2010: 8), and that our scientific knowledge is nothing more than "refined common sense" (Quine 1976b: 253).

Bearing all this in mind, it can be said that for Quine "all (putative) knowledge is in the same very general line of business" – systematization and prediction of future in light of past experiences – which is why there is no significant difference between its assumed areas: "Where

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[27] To support this, it can be noted that, in determining the relationship between theory and observation, Quine argued that "the theory implies observation conditionals" (Quine 1975: 318).

common sense and science appear to compete, it is not because they have different concerns or different standards of evidence; it is, rather, because unreflective common sense has not yet absorbed an improvement made by science" (Hylton 2010: 8).[28] However, although this does not conflict, at least at first glance, with the definition of theory as a means of systematizing present and anticipating future experience (because it is clear that common sense methods can serve this purpose just as scientific ones, although perhaps not equally well), the question is what is ultimately covered by Quine's naturalism?

Namely, if natural science is something so broad that it includes common-sense propositions, it has to be concluded that common-sense propositions are an integral part of Quine's naturalism. Since this does not seem particularly convincing, I argue that the main characteristic of Quine's naturalism, despite the emphasis on natural science, is to be found elsewhere – in adopting certain realist views about what exists and what is true, which need not be strictly related to or limited to natural science as it is commonly understood. In other words, just as I have defined Quine's empiricism as anti-realist, I also believe that the most prominent feature of his naturalism is that it is realist. Now let us focus attention on what is the actual main subject of this book, and see Quine's proposal for naturalizing epistemology independently of these speculations – as a reaction to foundationalism (Cartesianism), and an appeal for its reform.

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[28] In other words, when Quine speaks of science, including natural science as 'refined common sense', he points out that it is not a substitute for it, but a continuation of it: "Science is itself a continuation of common sense. The scientist is indistinguishable from the common man in his sense of evidence, except that the scientist is more careful. This increased care is not a revision of evidential standards, but only the more patient and systematic collection and use of what anyone would deem to be evidence" (Quine 1976c: 233).

7. Quine's proposal for naturalizing epistemology

Starting with Quine's reform of empiricism and up to his arguing for certain naturalistic views which are thought to represent his ultimate viewpoint, we have come a long way in order to cover both the main topics of his philosophy as well as some of the most important problems arising from it. However, when it comes to the problems, we have seen that Quine defended diametrically opposed views on certain issues, primarily because he approached them from different positions in different periods. To simplify matters somewhat, these positions have been labeled as anti-realist and realist.[29]

Generally speaking, this fact is considered to be an insurmountable obstacle for anyone who would like to see Quine's philosophy as systematic, which is why some scholars, in order to ease tensions, thought fit to stick to a certain type of interpretation that Quine advocated at some point. Thus, for example, by giving priority to ontology over epistemology, Gibson gives priority to Quine's naturalism (realism), with the explanation that it is a doctrine which, among other advantages, makes a systematic whole of his philosophy.

However, although there are ambiguities in this philosophy when it comes to the solutions it offers, we have seen that it is quite consistent in terms of its topics. In short, there is a set of problems and methods related to them that Quine developed mostly independently, and which he dealt with throughout his career, never departing significantly from the framework he formulated.

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[29] Although it may seem that this interpretation is a considerable generalization and simplification of Quine's philosophy, since it is a project covering a long period of time during which Quine argued exhaustively for every new view that he held, these generalizations were necessary. Nevertheless, I believe that this kind of interpretation, although general, is in principle acceptable, and one of the reasons for accepting it is that it also has a heuristic value.

Since I believe that there is already a certain continuity in Quine's philosophy, I do not deem it necessary, like Gibson did, to make it more systematic than it is. On the other hand, following Gibson's example, it seems that in such a case we would have to sacrifice a large part of it (or at least to significantly modify it) for the sake of obtained systematicity. Given that the advantages of such an approach are not obvious, I opted for the one that will preserve tensions, but which represents this philosophy in a much more plausible way.[30] However, when it comes to the reform of epistemology, despite certain indeterminacy that is also present, it can be said that Quine never significantly changed his view about what assumptions it should be based on.

7.1. Quine's Anti-Cartesianism and Precursors

The questions of realism and anti-realism, continuity or discontinuity in Quine's philosophy will be temporarily put aside, and the attention will be focused on the main subject matter of this book – Quine's proposal for naturalizing epistemology. However, since it concerns a reform, before going into the details of Quine's epistemological project, it is important to specify the key motives behind it (some of which have already been mentioned), and to try to determine Quine's place in the history of this discipline as precisely as possible.

The dominant tradition in epistemology that Quine rebelled against is Cartesian, and as pointed out in Chapter 2, it is characterized by the search for an absolute grounding of our knowledge.

Namely, Descartes believed that the adequate method for examining the justification of our individual beliefs consists in calling them into doubt. Doubting them systematically, Descartes came to the conclusion that the only beliefs immune to doubt are those concerning our ideas,

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[30] If I had to make a decision and give priority to a doctrine, my view is that behaviorism, although it has shortcomings, is the doctrine that summarizes Quine's philosophy more consistently than any other. In other words, although it maintains the tensions that naturalism presumably eliminates, I believe that behaviorism forms the link between Quine's empiricism (anti-realism) on the one hand, and naturalism (realism) on the other hand, preserving at the same time its original integrity and originality.

while all others need additional grounding or justification. This justification would consist in referring to, or relating them to the above ideas, i.e. to beliefs about the content of our immediate experience which were later named basic: "[Classical foundationalism states] that our basic beliefs are beliefs which concern the nature of our own sensory states, our own immediate experience. Such beliefs are able to stand on their own feet, without support from others. Other beliefs need support, and hence must get it from our beliefs about our sensory states" (Dancy 1989: 53).

It can be observed that there is a close connection between Descartes' epistemological project and the positivist project of rational reconstruction of knowledge which we discussed more in the third chapter.[31] Nevertheless, Quine's criticism of logical positivism did not affect Cartesian epistemology, which proves that apart from similarities, there are also certain differences between these projects. For this reason, before focusing on the specific proposals that Quine offers for its reform, I will try to briefly point out these differences, thereby specifying both classical foundationalism and what was primarily the subject of Quine's criticism.

Namely, it turns out that the result which Descartes reached by calling our beliefs into doubt is that it does not really matter what impressions the subject has, or what the specific content of his impressions is, but the fact that he has certain impressions and that he cannot be wrong in this respect. However, if the conclusion is that the only thing we cannot doubt is that we have certain impressions, then the content of an individual belief becomes the same as any other, and therefore irrelevant. On the other hand, we have seen that *the content of our impressions* was crucial for positivists, at least initially, because the justification of beliefs that do not concern immediate experience was supposed to be based on it, by reducing all other statements to statements about sensory impressions.

In other words, Descartes founded the idea of the epistemic privilege of the subject, but by concluding that the only thing this subject cannot doubt is that he has certain impressions, he

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[31] Apart from the fact that classical foundationalism clearly expresses the main postulate of empiricism (that all our knowledge comes from experience), by adopting the thesis that beliefs which do not concern our current sensory states (immediate experience) can be justified only by referring to beliefs that concern them, positivists have also adopted foundationalist idea of the epistemic asymmetry that exists between them.

simultaneously created a gap between him and the objective world. Since it was not possible to carry out the project of rational reconstruction of knowledge on such grounds, it was necessary to reestablish the continuity between subject and object which was broken by Descartes' approach – more precisely, by Descartes' skepticism. Classical empiricists reestablished this continuity by not even accepting the conclusion reached by Descartes,[32] and after them, positivists declared this whole aspect of his doctrine to be meaningless.

As in other cases, they found justification for this in the fact that questioning claims such as the one *that objective world is unknowable* would go beyond all known methods of empirical verification. However, given that this aspect of Descartes' work was not accepted by Quine for similar reasons, the question is *what is the difference between Quine's anti-Cartesianism and the positivist one*?

Namely, the main problem with Descartes' skepticism, both for logical positivists and for Quine, is that it "presupposes the idea of a standpoint wholly external to our ordinary system of beliefs" (Hylton 2010: 92). However, while positivists rejected skepticism as meaningless for these reasons, it seems that Quine did not consider skepticism to be meaningless, as it will be shown below, but that the position which led Descartes to it was incoherent and unjustified. However, this position was adopted by all positivists.

Namely, although positivists rejected Cartesianism, they believed in something which is its consequence – that there is so-called *a priori* knowledge not open to the usual methods of (empirical) verification, but which, despite this, has the character of infallibility. In addition to analytic truths (statements of logic and mathematics), this knowledge would also consist of statements about the content of immediate experience (the so-called observation statements) which they thought could serve, having neutralized skepticism, in deducing the objective world from subjective impressions.

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[32] In fact, classical empiricists, above all Hume, also reached a skeptical conclusion, but it is fundamentally different from Descartes'. Namely, "by his identification of bodies with impressions" Hume did not allow skepticism about our ability to know ordinary physical objects. However, although in this way "he did succeed in construing some singular statements about bodies as indubitable truths, as truths about impressions directly known, general statements and singular statements about the future gained no increment of certainty by being construed as about impressions" (see: Quine 2008a: 529).

However, emphasizing that "there are no completely unrevisable sentences" and that in a certain sense, "all sentences count as synthetic" (fallible, A/N) (Dancy 1989: 233), we have seen that in "Two Dogmas" Quine already criticized very successfully the assumptions that were at the foundation of their program, where one of them was based precisely on the thesis about the *infallibility of the first-person perspective,* through the idea 'that each meaningful statement is equivalent to some logical construct upon terms which refer to immediate experience'. However, to criticize this view within traditional epistemology, he needed something more than the methodology available to him at the time, and more than labeling Descartes' skepticism as meaningless which was already done by positivists.

As indicated above, my view is that Quine, in principle, did not think that skepticism was meaningless (even the radical one such as Cartesian) but the position that had led Descartes to it, which was also adopted by positivists (although with different assumptions). In this respect, I will argue that by accepting skepticism in general, Quine also accepted skepticism in epistemological context; however, Quine did not accept the idea of epistemic privilege found both in Descartes's work and the positivists, which is, in his view, responsible for all the negative effects of Cartesianism both on logical positivism and on epistemology in general.

In epistemological context, this very idea resulted in radical skepticism, i.e. the thesis "that it is logically possible at any time and in any circumstances that one's present belief should be false" (Ibid., 236). However, while Descartes used a *logical* criterion for demarcating justified from unjustified beliefs – according to which all beliefs are unjustified if an error related to them is conceivable – as indicated in the second chapter, the only possibility that Quine allowed regarding the fallibility of our beliefs was *physical*, i.e. "that which our science admits as possible" (Ibid.). However, he was able to formulate a viewpoint that, apart from being a critique of Cartesian view, would also provide a new perspective in epistemological inquiry only after the reform of empiricism, by adopting certain behaviorist and naturalistic views.

In other words, it was behaviorism and naturalism that enabled Quine to develop not only anti-positivist, but also markedly anti-Cartesian viewpoint. I believe that the most important feature of this viewpoint is not its opposition to skepticism – as I will try to show below – but the first-person perspective in evaluating knowledge claims as well as insisting on the intersubjective (objective) character of our knowledge in general. However, before continuing, it is important to

mention a few of Quine's most prominent predecessors in this matter, even though he was not particularly inclined to refer to them – the founder of pragmatism Charles Sanders Peirce, but also one of the founders of logical positivism who later abandoned this view completely, Ludwig Wittgenstein.

Namely, just like Quine, both Peirce and Wittgenstein opposed the thesis that the only legitimate standpoint in examining the justification of our beliefs is the first-person perspective. Similar to Quine, they attempted this by emphasizing the priority – in Wittgenstein's case logical, and in Peirce's phenomenological – of the intersubjective over the subjective.

This idea was most consistently put forward by Wittgenstein through the proof of the impossibility of existence of the so-called private language. Namely, although he did not rule out the possibility of private experience in general, Wittgenstein believed that it also depends on the sphere of public experience, proving his thesis through an argument about the impossibility of existence of something that would in principle be inaccessible to anyone except the *subject* – such as private language. However, while Wittgenstein's anti-Cartesianism was not directly fostered by his anti-skepticism – and neither was Quine's, in my view – the emphasis on the intersubjective character of our knowledge was developed in Peirce's work along these very lines, by emphasizing the importance of so-called background beliefs that do not depend on correspondence to objective reality, but on the ultimate decision of community.

In other words, unlike Descartes and positivists in particular, who demanded "that the nature of reality be absolutely independent of our – even our most considered, collective, or 'final' – opinions", Peirce believed "that reality 'depends on the ultimate decision of community'" (Philström 2004: 51). However, since this was no guarantee that beliefs which are collective, or depend on the consent of members of a community cannot be doubted, in order to protect them from doubt, Peirce added the requirement that certain beliefs should be treated as fixed and unchangeable, finding the justification in the thesis that doubting them would block the way of any inquiry.

Namely, according to Peirce, the biggest sin that we can commit in science is to 'block the way of inquiry', and in the history of philosophy, Cartesian skepticism is precisely such an example. In other words, not only are Cartesian doubts a threat to our common knowledge

claims, tending to present them all as unjustified, they threaten to call into question the justification of our overall inquiry practice. However, Peirce observes that they are also incapable of motivating inquiry, which is why they are not 'genuine' but 'paper' doubts. In a word, Peirce neutralizes Descartes' skepticism with the thesis that only phenomena that cannot fit into existing explanatory schemes can motivate inquiry, and the condition for their emergence is that there is something fixed and unchangeable, something that cannot be doubted. Something fixed and unchangeable are the so-called background beliefs, and if we were to doubt them like all other beliefs, we would block the way to inquiry.

7.2. 'Conditional correctness of skepticism' and 'Epistemology's meta-context'

Therefore, the difference between Quine and positivists in terms of their relation to the Cartesian tradition is primarily a different position regarding the first-person perspective, which Quine completely rejects and the positivists unreservedly adopt (although with significant modifications). Also, we have seen that Quine was not alone in advocating the idea that in evaluating knowledge "one must start not with our individual selves, but with what is common to all or public" (Misak 1995: 189). However, while Wittgenstein's anti-Cartesianism is somewhat vague and idiosyncratic in its epistemological implications, some of Peirce's tools will find application within Quine's epistemological project.

Namely, one of the prominent features of Quine's entire philosophy is fallibilism or the idea of the fallible character of our knowledge, and we have seen that it was already present in his criticism of the positivist project of rational reconstruction of knowledge. This idea is one of the main postulates of pragmatism that Quine tried to bring closer to empiricism, and Peirce was among the first to advocate it, by emphasizing "a fallible background of 'common sense' belief which is not in fact in doubt" (Misak 2004: 153). However, while in some facets such as this one Peirce's attitude is close to Quine's, it will turn out that in others he is also inclined to something akin to the position that positivists will advocate on Cartesian skepticism.

Namely, we have seen that Peirce insisted on the failure of any skepticism regarding a large part of our knowledge (although on different grounds) so it could be said that he also came to the conclusion that Cartesian skepticism is a meaningless doctrine. However, this does not imply that Peirce's view was that some of our beliefs are infallible, but that beliefs "which inquiry has not thrown into doubt [are] stable" and that "we should retain them until a reason to doubt arises" (Ibid., 153).[33] On the other hand, we have seen that Quine also attributed a certain stability or immunity to revision to some statements – those that are closer to the center of our field or 'web' of beliefs; however, it is important to note that, unlike Peirce, Quine did not believe that it would be pointless to doubt these statements, but only that there is "a difference of degree between sentences to whose truth we are very firmly wedded and those which we are more easily persuaded to abandon" (Dancy 1989: 233).

Therefore, although Quine rejected its Cartesian form, as shown in Chapter 2, he accepted skepticism primarily because it is entirely in line with his fallibilism, the thesis that "no element in our total theory of the world is immune to revision" (Bergström 2008: 27). However, apart from being inclined to skepticism, I argue that, by postulating the fundamental level of inquiry such as epistemological, Quine also accepted something that Stroud called 'conditional correctness' of the Cartesian version. That is why I believe that the common view regarding Quine's reform of epistemology – according to which it is primarily based on rejecting Cartesian skepticism – is inadequate, which I will try to show now.

Namely, with the thesis that skeptical doubts are in fact scientific doubts, and that "science, construed as the effort to adjust our conceptual scheme and root out errors, might well be impossible without them" (Wrenn 2008b: 81) the common view is that Quine's most important step in criticizing Cartesian epistemology consisted in denying that philosophical doubts have a special status. However, if we looked at philosophical skepticism from a holistic perspective according to which there is no important difference between philosophy and other types of inquiry (at least in Quine's case), there was a danger that Cartesian doubts would prove to be justified, because in that case they would not be external to our system of beliefs.

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[33] "Any of our beliefs might be false, but it would be absurd to doubt them all because of this. If we did, we would not possess a body of stable belief by which to judge new evidence and hypotheses, and hence, we would block the path of inquiry" (Misak 2004: 13).

In general, given his fallibilism and the thesis that there are no infallible beliefs, I believe that Quine would not reject this. However, what Quine does not accept is that we can, as Descartes does, believe in the existence of infallible truths on the one hand, and in unlimited skepticism regarding our beliefs about the external world on the other, and this very fact makes his position incoherent.

In other words, the contradictory requirements listed here make Descartes' position *both external and internal* to our system of beliefs, and since they cannot be reconciled except by adopting a counterintuitive conclusion that the objective world is unknowable, hence the skepticism about the possibility of our knowledge of the external world. However, we should keep in mind that, given Quine's fallibilism, the premise that he finds unacceptable is not the one that calls our beliefs into doubt, but the one that asserts infallibility. In this respect, it can be said that Quine accepts skepticism – "but surely, 'fallibilism' is a better term" (Bergström 2008: 41) – but does not accept that the only legitimate standpoint in evaluating our beliefs is the first-person perspective, because precisely this is *external to our system of beliefs* – i.e. the position it implies – just like *any standpoint would be for Quine from which any kind of infallibility would be asserted*.

It can be observed that disputing Cartesianism by drawing attention to the external character of Cartesian position, and thus, to unmotivated doubts that it implies invoke Peirce's and positivists' views. However, I believe that what makes Quine's position different from the above is that he recognized the autonomy or distinctiveness of the discourse established by Descartes. Apart from the fact that he intended to reform it, it can be pointed out in defense of this view that, contrary to most scholars mentioned so far, there is a large group of those who saw Cartesian doubts as a real obstacle to knowledge, arguing that, thanks to them, it cannot be justified in an absolute sense.

Namely, it turned out that if we accept the logical criterion used by Descartes in evaluating knowledge claims, we can imagine a situation in which, in the process of acquiring knowledge or receiving impressions from the external world, the subject is deceived by a mad scientist – who produces his impressions through interventions in his brain – or an evil demon, in the spirit of Cartesianism. Although these scenarios may be implausible, we cannot obtain evidence that they have not been realized which is why some scholars (David Lewis, Robert Nozick, Fred Dretske,

and others) undertook the task of developing strategies at least for mitigating their negative effects on our knowledge claims. They found a way to do this primarily by pointing out the fact that our knowledge is largely contextually determined, so even if we cannot justify it in an absolute sense, we can do it in a relative sense.

I am not aware that Quine ever set forth his attitude about contextualism but it can be safely assumed that it would have been markedly negative, and the reasons for this will be given below.[34] Nevertheless, I argue that Quine intended to operate within that approach, or, if this is too strong, that there is a certain affinity between him and contextualists (and ultimately, Descartes) that does not exist between them and positivists or Peirce. This affinity is primarily reflected in the fact that although Quine did not accept its theoretical and methodological assumptions, unlike Peirce and the positivists, he nevertheless accepted the idea of the autonomy of epistemological discourse that contextualism embodies better than any other tradition. However, certain problems arise here regarding the position we want to attribute to Quine, i.e. his attitude towards the epistemological program thus identified which is why it will be useful to adopt Michael Williams' terminology and the term 'epistemology's meta-context' when we speak of it.

By introducing the term 'epistemology's meta-context', we want to draw attention (which was also Williams' intention) to the specificities of the epistemological discourse which implies certain methodological assumptions or 'methodological necessities' whose adoption is a prerequisite for using it.[35] In this sense, when I argue that Quine's attitude towards contextualism would be negative, I do not mean that the reason for this, as it is commonly believed, is that Quine saw the quest for certainty initiated by Descartes and followed by contextualists as a pointless task – because when Quine states, as an argument against Cartesianism in epistemology, that its ultimate motivation (the Cartesian quest for certainty) turned out to be 'a

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[34] In fact, I am aware only of Quine's argument against a scenario in which a subject is deceived by a mad scientist, who intervenes in his brain to produce the impressions he has. Namely, Quine believes that, although something like this is logically possible, it is nevertheless 'technologically impossible', which is completely in the spirit of his naturalism and what it allows.

[35] See: Williams, Michael, Contextualism, externalism and epistemic standards, *Philosophical studies 103*, 2001; and Knowledge, reflection and skeptical hypothesis, *Erkenntnis 61*, 2004.

lost cause' (see Quine 2008a: 530), he puts forward a view that his fallibilism already presupposes – but primarily because the assumptions of 'epistemology's meta-context' maintained by Descartes and adopted by contextualists are untenable. One of these assumptions, certainly the most significant one, is the assumption about the infallibility of the first-person perspective, entailing both Cartesian skepticism and the thesis that knowledge as such is *not open to scientific study*.

In a word, apart from rejecting Cartesian skepticism for the above reasons, Quine also believed that it was necessary to approach epistemological questions in the same objective spirit that animates natural science, and what characterizes contextualist approaches is, *inter alia*, their highly speculative character.[36] However, since the prerequisite for introducing scientific methodology (as in the case of rejecting skepticism) consisted in rejecting the thesis about the infallibility of the first-person perspective, Quine has been forced to revise most assumptions on which epistemological meta-context rests. Although he has believed that this enables to introduce scientific methods into epistemological inquiry, it will bring up a number of questions, the most serious one certainly being *whether Quine, despite his pretensions, remains within epistemological discourse ('meta-context') or abandons it*? Since this will be discussed more below, now it should be said how Quine ultimately sees epistemological inquiry.

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[36] Some of the strategies used by contextualists to neutralize skeptical scenarios include the strategy of relevant alternatives (which draws attention to the fact that, as a cause of error, the skeptical scenario is not one of them), possible worlds (where, if realized, that scenario is in the most distant of possible worlds), or conversational standards that are lowered and raised depending on the demands of the conversation, where our knowledge is assumed to be preserved in contexts where these standards are relatively low. For more detailed information on contextualism, see for example: Lewis, David, *Elusive knowledge*, Australian journal of philosophy 74; DeRose, Keith, *How can we now that we're not brains in vats*?, Southern journal of philosophy 38; Heller, Mark, *Relevant alternatives and closure*, Australian journal of philosophy 77; Harman, Gilbert, *Epistemic contextualism as a theory of primary speaker meaning*, Philosophy and phenomenological research 75; Pritchard, Duncan, *Closure and context*, Australian journal of philosophy 78.

7.3. Basic premises of Quine's naturalized epistemology

In order to present Quine's view as concisely as possible, Hylton points out that for Quine epistemology is not "a matter of *a priori* philosophical argument", because it is "a finding of natural science itself that we come by our information about the world by the impingement of various forms of energy on the surfaces of the body, and the consequent stimulation of our nerve endings" (Hylton 2010: 89).

This is the common view that we come across in reviews of Quine's epistemological project, and two distinct but presumably closely related theses can be recognized in it.

However, one should not think that from *a finding of natural science* that we obtain information about the world "through the impact of light rays and molecules upon our sensory surfaces" (Quine 1975c: 68) it also follows that epistemology is not a matter of *a priori* philosophical argument, for although this fact was known to most epistemologists, it was of little or no importance to traditional ones. The reason is that it could not by itself influence in any way the type of interpretation of the very sense data, and thus neither the general direction of their endeavor. In other words, it turned out that, in order to abandon speculative methodology in epistemological inquiry and establish the natural science one, it was necessary to do something more than merely emphasize the physical character of the process through which we obtain information about the world, which is a special type of interpretation of the very sense data.

However, Quine did not hesitate to do so, and it is the thesis that sense data can be accessed in the same objective spirit that animates natural science which will strengthen his belief that he has all the necessary means to relieve philosophy of its responsibility to tell us what knowledge is and how we acquire it, and to hand over the problem to disciplines that should be, in his opinion, responsible for it. However, it will turn out that along with this, Quine will be forced to reformulate the subject matter of epistemology which becomes, instead of the search for an

infallible basis of our knowledge, the inquiry into the link between observation and science, and the discovery of how it is in fact developed and learned through language.[37]

Although Quine claims that this project is just as fundamental, and that it has a comparative advantage of being feasible in a strictly scientific framework, it can be noted that it is significantly different from the traditional one. Nevertheless, he believes that they have certain features in common, and one of them which should be emphasized is that, just like Descartes, Quine also puts the knowing subject in the center of his epistemological postulates.

Namely, since in the spirit of empiricism Quine believed that everything that a subject is 'or ever hopes to be is due to irritations of its surface' (see Quine 1976c: 228), he approached the subject matter of epistemology through something that can be called, for the sake of convenience, general epistemic situation. This situation implies referring to elementary conditions of any knowledge, while its generality consists in the fact that these conditions are universal and unchangeable, and imply a human subject "accorded [to] a certain experimentally controlled input, certain patterns of irradiation in assorted frequencies" who, prompted by them somehow creates 'an elaborate and useful science', i.e. "in the fullness of time (...) delivers as output a description of a three-dimensional external world and its history" (Quine 2008a: 533).

In a word, in the idea of a subject 'sitting in a physical world' whose 'forces impinge on its surface', but who, for his part, strikes back, 'emanating concentric airwaves which take the form of a torrent of discourse about tables, people, molecules, light rays, retinas, prime numbers, infinite classes, joy and sorrow, good and evil' (see Quine 1976b: 228) Quine finds a suitable starting point, but also a problem that needs be solved. This problem primarily consists in the fact that everything that the subject delivers over time as output, exceeds by far what he is capable of receiving through input, which is why the subject matter of epistemology becomes the inquiry into this very relation – relation between meager *input*, and torrential *output*.

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[37] The question remains to what extent Quine was forced to do this, if at all, since all 'the hopelessness of grounding natural science upon immediate experience' was revealed, so he firmly believed that we should 'stop dreaming of deducing science from observations' (see Quine 2008a: 530-531). On the other hand, it will turn out that this 'hopelessness' of the traditional project was also observed by other scholars, but this fact did not guarantee the unanimous acceptance of the alternative that Quine has offered, as we shall see.

Broadly speaking, this is the framework in which Quine attempted to place epistemological inquiry. On the other hand, he also thought that the appropriate means for carrying it out would concern only the methodology of natural science: "Epistemology is best looked upon, then, as an enterprise within natural science. Cartesian doubt is not the way to begin. Retaining our present beliefs about nature, we can still ask how we can have arrived at them. Science tells us that our only source of information about the external world is through the impact of light rays and molecules upon our sensory surfaces. Stimulated in these ways, we somehow evolve an elaborate and useful science. How do we do this, and why does the resulting science work so well? These are genuine questions, and no feigning of doubt is needed to appreciate them. They are scientific questions about a species of primates, and they are open to investigation in natural science, the very science whose acquisition is being investigated" (Quine 1975b: 68).

However, given that Quine, like Descartes, also starts from the knowing subject, the question is how he overcomes the egocentric predicament characteristic of traditional epistemology and Cartesianism in general, and this is where his theses regarding the intersubjective (objective) character of sense data come to the fore. Apart from being a prerequisite for introducing the methodology of natural science into epistemological inquiry, overcoming the first-person perspective, or more precisely, the thesis about its infallibility was the most important point of Quine's anti-Cartesianism, and the germ of this view should be sought in his empiricism, as we have seen above.

Namely, with the thesis that sensory evidence does not refer to something in the subject of experience, but to the presence of certain publicly available stimuli, what applies to physical objects in externalized or enlightened empiricism will, in principle, apply equally to sense data. In a word, contrary to the viewpoint of traditional empiricists, where they "constitute the sort of immediate extra-theoretical given" (Hylton 2010: 87), for Quine, sense data have the status of posits, just like physical objects. In this way, Quine has prepared the ground for a view that will be applied in epistemological context with his naturalism and behaviorism, a view that sensory impressions are equally open to objective methods of study, which is why – in the context of epistemological inquiry as he sees it – everything that the subject experiences by receiving impressions from the environment is "open to scientific study" (Quine 1975c: 68).

Therefore, since "the stimulation of his sensory receptors is all the evidence anyone has to go on, ultimately, in arriving at his picture of the world" (Quine 2008a: 530) – and epistemological project is *precisely an attempt to describe* how a man can evolve, from such scarce data, an elaborate and useful science, and why that science works so well – all that was necessary to approach it using the objective means of natural science was to adopt the conclusion that Quine had already reached in his empiricist inquiry. However, even if we were to accept that sense data are posits, or at least, that *they can be interpreted as such*, there remains an important question that could make Quine's conclusion controversial, namely: exactly which (naturalistic) discipline should be responsible for these posits?

Given the view that unlike old epistemology which 'aspired to contain, in a sense, natural science', i.e. 'to construct it somehow from sense data' (see Quine 2008a: 534) epistemology that he advocates "simply falls into place as a chapter of psychology and hence of natural science" (Ibid., 533) Quine was inclined to claim that sense data are primarily "posits of psychological theory" (Quine 1976b: 252). On the other hand, he often set forth the thesis of epistemological interdisciplinarity, arguing that in describing how we adopt our theory of the world, and our understanding of the link between observation and science, it would be advisable to use the means of all disciplines that could help us: "If we are out simply to understand the link between observation and science, we are well advised to use any available information, including that provided by the very science whose link with observation we are seeking to understand" (Quine 2008a: 531).

In other words, it turns out that the relation between meager input and torrential output can be approached in a number of different and not necessarily compatible ways, and that the way it will be approached depends primarily on how ambitiously we interpret, and what conclusions we are ready to draw from the thesis about the *objectiv*e character of sense data, and thus, the epistemological project. Although some scholars (Gibson) draw more far-reaching conclusions from this assumption than others, even from Quine himself, we should bear in mind that the so-called genetic approach mentioned above has an important place in all these approaches, which concerns "a language learning process from learning observation sentences (the meager input) to acquiring a whole theoretical language (the torrential output)" (Mi 2007: 106).

As this will be discussed in detail below, now it suffices to say that, when it comes to Quine's view, I will stick to the interpretation that I believe to be most in agreement with his philosophy as a whole, according to which – as Quine also pointed out – the subject matter of naturalized epistemology should be primarily the subject matter that concerns (cognitive) psychology: "Naturalism does not repudiate epistemology, but assimilates it to empirical psychology. Science itself tells us that our information about the world is limited to irritations of our surfaces, and then the epistemological question is in turn a question within science: the question how we human animals can have managed to arrive at science from such limited information. Our scientific epistemologist pursues this inquiry and comes out with an account that has a good deal to do with the learning of language and with the neurology of perception" (Quine 1981: 72).

8. Criticism of Quine's proposal

Therefore, although Quine rejects the thesis about the infallibility of the first-person perspective and everything that it entails in epistemological inquiry (primarily the search for an absolute grounding of our knowledge), he believes that there are certain similarities between his program and the traditional one, and that the type of inquiry he advocates is "prompted (...) for somewhat the same reasons that always prompted epistemology; namely, in order to see how evidence relates to theory, and in what ways one's theory of nature transcends any available evidence" (Quine 2008a: 533). With this in mind, I have related Quine's project to contextualism in epistemology. However, the question remains as to on what basis this was done, primarily because it seems that the differences between these programs are far more marked than the similarities.

To answer this question, it will be useful to confront positivism and contextualism, hoping this will help us to specify Quine's epistemological position, which is really the main goal of the current discussion.

Although links with Cartesianism are present in both of these traditions, we have seen that they are much stronger, or rather, more consistent in contextualism. In fact, I believe that contextualism is the only typically Cartesian program in epistemology, and it is characterized, *inter alia*, by the assumption which Quine also advocated – that epistemological context is *autonomous context of inquiry* which, as such, has its own set of methodological assumptions or 'necessities'.[38] On the other hand, we have seen that, unlike the positivist view, skepticism –

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[38] Although Quine intended to modify most of these assumptions – thinking that it is necessary to approach problems of knowledge in the objective spirit that animates natural science, while contextualists approached it only in a speculative manner that animates philosophy – he also believed that, at least in principle, this would in no way jeopardize the idea of the autonomy of epistemological discourse. However, this will remain one of the controversial issues regarding his proposal, as we shall see below.

even as radical as Cartesian – was neither the main nor only target of Quine's criticism of the traditional epistemological program, but the assumption that "we cannot explain knowledge (...) without invoking methods and ideas which go in principle beyond anything drawn from our study of the natural world" (Hylton 2010: 94).

In other words, apart from the idea of the autonomy of epistemological discourse, Quine also accepts what Stroud called 'conditional correctness of skepticism'.[39] However, the problem is that Stroud does not attribute the above view to Quine at all, but to Carnap and the positivists (and, for that matter, to Kant).

Namely, in his book 'The significance of philosophical skepticism', in evaluating different approaches in epistemology, Stroud comes to a conclusion – which I believe to be justified – that their validity was largely determined by the extent to which post-Descartes scholars took seriously skeptical or Cartesian doubts. In this respect, he points out that the positivists, above all Carnap, came to a 'destructive conclusion' regarding Cartesian skepticism, but that they could not have come to such a conclusion if they had not shown a certain understanding of what a traditional epistemologist does: "Carnap (...) is fully in sympathy and even total agreement with the philosopher's (Cartesian, A/N) skeptical conclusion – or at least with what it would be if it were intelligible" (Stroud 1984: 179).

In other words, Stroud believes that Carnap could not have reached his 'destructive conclusion' that Cartesian skepticism is meaningless if he had not previously accepted the idea of its 'conditional correctness': "If the traditional philosopher did manage to raise a meaningful question about our knowledge of the world, his skeptical answer to it would be correct. Only if that conditional is true will the problem be meaningless" (Ibid., 179) and since the question posed by traditional philosopher is an external, i.e. pseudo-question, it is meaningless according to the above criteria. However, I do not see why it was necessary to adopt the thesis on

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[39] Although there is an important difference between correctness of skepticism accepted by contextualists, and 'conditional correctness of skepticism' accepted by Quine, it is important that Quine would not reject skepticism *per se*, if placed in an adequate framework. In addition, even though he sometimes claims the opposite, namely that Cartesian skepticism is a form of extremism, one should not think that it is its radicalism that Quine could not accept since he also advocated controversial and radical views, like leaving open the possibility of questioning elementary truths of logic and mathematics.

'conditional correctness of skepticism' for this conclusion. Even if we have grounds for claiming that a position is external and thus meaningless, it does not mean that the position is skeptical. Also, it is not quite clear why it is destructive to Cartesianism as Stroud claims it to be, because just as it may seem from the positivist perspective that the Cartesian standpoint is meaningless, the same could be said for their standpoint from Descartes' perspective – or that, if nothing else, it is also arbitrary, as shown by Neurath (See, Chapter 4).

However, I believe that the main indicator of the fact that positivists and Carnap, unlike Quine, did not adopt the assumption of conditional correctness of skepticism is that they did not accept the idea of the autonomy of epistemological discourse. On the other hand, to say this does not mean to advocate the view that these things are necessarily connected, but rather to argue that Quine's acceptance of conditional correctness of skepticism was a prerequisite for using epistemological context only because it is a *prerequisite for adopting as coherent the idea of any inquiry*. In this regard, contrary to what Peirce believed, we have seen that Cartesian skepticism has proved more than capable of motivating inquiry, and contextualism is the best example. Also, it turns out that all the positivists have done – whether it was to justify our beliefs through sensory impressions or an adopted linguistic framework – was to adhere to a norm in which things fit or do not fit, but in which it is difficult to speak of any kind of inquiry except in the broadest sense of the word that is certainly inappropriate for the present purpose. However, as much as this was a disadvantage on the one hand – primarily because positivist programs proved to be untenable – on the other hand, it was their strength *in epistemological context*, revealing at the same time one of the key weaknesses of Quine's position.

8.1. Stroud's criticism of the bi-partite conception of knowledge

Publication of the paper 'Epistemology naturalized', in which Quine presents the most important theses related to the reform of epistemology, caused a reaction from a number of scholars who believed that Quine's proposal was untenable. Although they criticized its various aspects, I believe and will try to show that all these objections ultimately boil down to one which is the most important – that epistemology freed from the concept of normativity such as Quine's

is untenable. This is the case even when it comes to such apparently different criticisms as Jaegwon Kim's and Stroud's, which is why I will limit myself, in presenting the problems that Quine's proposal faces, primarily to these scholars' objections.

Namely, while Kim's main concern was to show that by calling for the adoption of the methodology of natural science in epistemological inquiry, Quine's proposal is extremely 'radical' because it requires to put "purely descriptive, causal-nomological science of human cognition" (Kim 1988: 388) in place of traditional, justification centered epistemology, Stroud focused primarily on the unacceptability of the very framework in which Quine placed epistemological inquiry. In other words, having in mind its radicalism, Kim denies that Quine's program has anything to do with the traditional one (which is why it cannot aspire to be 'epistemological'), while Stroud admits that epistemology advocated by Quine fundamentally shares some important features with the traditional one. However, this similarity to the traditional program is, in Stroud's view, one of the biggest weaknesses of Quine's program, because everything that made it untenable (or more specifically, inoperative) will also prove to be an insurmountable obstacle for Quine's program.

The similarity that exists between these programs that Stroud points out concerns a "completely general distinction" that Quine and traditional epistemologists make "between everything we can get through the senses on the one hand and what is or is not true of the external world on the other. That distinction is essential to the formulation of the problem Quine thinks a naturalized epistemology should answer, just as it is to the traditional problem of the external world" (Stroud 1984: 216). However, Stroud believes that an epistemological project that "depends on just such a bi-partite conception of human knowledge of the world (just as Quine's and the traditional program depend on it, A/N), cannot succeed" (Ibid., 253) for the simple reason that "a completely general distinction between everything we get through the senses, on the one hand, and what is or is not true of the external world, on the other, would cut us off forever from knowledge of the world around us" (Ibid., 248).

Therefore, it could be said that Stroud attacks the very foundations of Quine's project, even before trying to go into its details and examine the possibility of introducing the methodology of natural science into epistemological inquiry, thinking that, if he succeeds in showing that it is fundamentally ill-founded, there is no need to go into its details. In this regard, Stroud

emphasizes that we cannot get an explanation of how our knowledge of the world is possible as long as we see it the way Quine does – as a 'projection' from 'meager sense data that is grossly undetermined by those data'.

To show this, Stroud points out that the explanation in terms of meager input and torrential output that Quine aims for is selective, because it excludes the possibility of understanding, *from a subjective perspective*, how our knowledge of the world is possible. Namely, if we know what others' beliefs are and can know "independently of the fact that they have those beliefs, what is the case in the world those beliefs are about" (Ibid., 243) the explanation in Quine's terms of how *knowledge of other people is possible* is available to us, "only if [we] could see that the same kind of explanation can be applied quite generally to all other people" Quine's conception of the epistemological project "would help [us] explain how anyone at all ever comes to know anything about the external physical world" (Ibid., 241). However, Stroud claims that this is not the case, because "even if [we] can see others' beliefs in that (Quine's, A/N) way and still explain their knowledge of the world in those terms, as it seems [we] can, (...) [we] cannot explain how [our] own knowledge is possible if [we] regard all beliefs about the world around [us] as 'posits' or 'projections' that go beyond 'meager' sensory data. And if [we] cannot understand in that way how [our] own knowledge is possible, [we] cannot understand that way how any other person's knowledge is possible" (Ibid., 242-243).

Thus, Stroud believes that explanation in terms of the meager input and torrential output is available when it comes to answering the question of how other person's knowledge is possible. Nevertheless, he points out that we cannot understand in the same way how knowledge of the external world is possible from the perspective of the knowing subject, because if we follow Quine's suggestions, we are forced to see our beliefs about sensory surfaces not as input, but as "more and more of 'torrential output'". However, in doing so, we will lose "independent access to anything physical whose role in producing 'output' [we] can ever hope to investigate and explain" (Ibid., 246), which explains why the gap between everything we receive through our senses and what is or is not true about the external world will, in Stroud's view, cut us off from

knowledge of it, but also why this (epistemic) distinction, apart from being fatal to the traditional project, is "fatal to the naturalizing project" (Ibid., 248).[40]

This is evidence in favor of the thesis that Stroud focused his criticism entirely on the similarities between Quine's and the traditional program, reaching the conclusion that, as long as we stick to the bi-partite conception of human knowledge that was Descartes' legacy, we have to "regard [ourselves] as getting no closer to knowledge whether or not [our] beliefs about the world are true" (Ibid., 243). However, by identifying these programs on one level, Stroud largely neglects the differences between them on another level, i.e. he forgets that the bi-partite conception or distinction he speaks of is derived in Quine's work from scientific inquiry, as Quine interprets it.

As one of the reliable indicators of this fact, it can be pointed out that, when Stroud speaks of determining what is or is not true about the external world, he has in mind 'familiar verification procedures', that is, he 'does not think it is impossible' to verify our beliefs in the way it is usually done – by comparing them with the world they are about. In this regard, what Stroud wants to show is that these procedures would have value in epistemological context only if we possessed a theory which would warrant that our knowledge is possible. However, given that by interpreting our input as output we will be cut off from knowledge of the world around us, and that any of our 'true' beliefs can prove to be unjustified, this is something neither Descartes' nor Quine's theory can warrant: "What happens when I try to take up the view that all my beliefs about the external physical world amount to a 'construction or projection' from 'meager' sensory 'data'? I know what all my beliefs about the world are, but I do not have any independent access to the world those beliefs are about on the basis of which I could determine whether or not they are true" (Ibid., 243).

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[40] "I do not mean simply that I cannot see all my own beliefs about the physical world as 'posits' or 'projections' which go beyond the 'meager' data at my sensory surfaces. Perhaps I can manage to see my position that way (...) but I do deny that I can do both things at once. I think I cannot see all my own beliefs about the physical world as a 'construction or projection from stimulations' and at the same time explain how I can know anything about the world around me" (Stroud 1984: 242).

Thus, Stroud not only points out the similarities between them, he closely associates Quine's project with the traditional one, which is why his conclusion that Quine's conception of the epistemological project "not only tolerates scepticism (...), but is actually committed to it" (Ibid., 234) is not surprising, except in the context of the fact that he did not acknowledge his acceptance of 'conditional correctness of skepticism'. However, as noted above, he neglects the fact that in Quine's case there is "reciprocal containment, though containment in different senses: epistemology in natural science and natural science in epistemology" (Quine 2008a: 534) which will have as one of its consequences the redirection of epistemological inquiry from the project of knowledge validation to "study of causal relationships between physical stimulation of sensory receptors and the resulting cognitive output" (Kim 1988: 390).

With this in mind, although Stroud's arguments are adequate when it comes to the traditional program – because, given the assumptions we come across within this program and the questions it raises, it is expected to provide some kind of *justification* or validation of our knowledge which would be drawing on what Stroud ultimately has in mind – it seems they are not necessarily adequate when it comes to Quine's program. In this regard, my defense will be based on the idea that Stroud overestimates the importance of verificationist procedure when it comes to the program that concerns an inquiry into the connection between observation and science, aimed at showing that these procedures, although significant, are immanent *in relation to Quine's philosophy as a whole*, which is why in epistemological context such as his (or more precisely, as it will be interpreted here) they have a completely different role and meaning than the one Stroud imposes on them.

However, in addition to abandoning the project of knowledge validation, certain critics have noted that the thesis that there is a reciprocal containment of epistemology in natural science and natural science in epistemology also results in the abandonment of "the entire framework of justification centered epistemology" (Ibid., 388) which characterized the traditional program. And while for Stroud, generally speaking, this kind of program is still part of something "appropriately called 'epistemology'" (Ibid., 387-388), now the focus will be on a scholar who has skipped the speculations that Stroud has in mind and attacked this very consequence of Quine's proposal, believing that, thanks to it, epistemology that Quine advocates cannot be epistemology in the true sense of the word.

8.2. Kim's non-normativity objection

As noted many times, the main task of the traditional epistemological program consisted in founding natural science, or in the attempt to 'construct [it] somehow from sense data' (see, Quine 2008a: 534). Since the foundations of our beliefs about the external world had to be found, the standard interpretation is that the traditional program was "dominated by a single concept, that of justification" (Kim 1988: 381). However, given the general conditions of knowledge mentioned above, and the fact that we cannot take an independent position from which to evaluate our knowledge claims, Quine points out that this tendency itself is "our own construction or projection from stimulations like those we were meting out to our epistemological subject". This is why epistemological project cannot be "studying how the human subject (...) posits bodies and projects his physics from his data" (Quine 2008a: 534), but causal connections between meager input on his sensory surface, and torrential output in the form of representations or theories.

Apart from abandoning the project of validation of (natural) science, this reformulation will, as noted above, result in the complete abandonment of the framework of justification centered epistemology. However, although Kim does not deny that 'an empirical psychological study of our cognitive processes' which Quine advocates in this way would be of immediate scientific importance, he points out that the relation that Quine has in mind and wants to study "is not an evidential relation", and hence asks the question "in what sense is the study of causal relationships between physical stimulations of sensory receptors and the resulting cognitive output a way of 'seeing how evidence relates to theory' in an epistemologically relevant sense?" (Kim 1988: 390).

Namely, Kim believes that there is 'a simple reason for our preoccupation with justification' which only indirectly concerns the validation of (natural) science, namely that "our concept of knowledge [is] inseparably tied to that of justification" (Ibid., 389). Since it implies, as we have seen, giving up the concept of justification, Kim points out that the questions to which Quine's epistemology demands an answer cannot have anything to do with the questions that

epistemology traditionally deals with, "and unless naturalized epistemology and classical epistemology share some of their central concerns, it's difficult to see how one could replace the other, or be a way (a better way) of doing the other" (Ibid., 391).

One of these central concerns is the question of knowledge regarding which Kim – as well as Stroud – advocates the "classic tripartite conception" according to which knowledge is 'justified (or reliably formed) true belief'. However, while Stroud believes that Quine's project is untenable for the same reasons as the traditional one – because it does not provide us with a theory of how justified true belief is possible, Kim points out that within the above definition, justification is "the only specifically epistemic component" (Ibid., 383) which is why the program that implies its abandonment cannot be epistemological. It can be noted that this puts us in a very difficult position with regard to the possible defense of Quine's proposal.

Namely, since I cannot answer Stroud's demand that epistemology, in order to be acceptable, must be able to provide a theory of how our knowledge of the world is possible (because Quine's is not), I indicated that my response to Stroud would be based on an attempt to show that epistemology which Quine has in mind does not concern the project of knowledge validation, and thus it does not have an answer to this question on the agenda. However, since this fact is, in Kim's eyes, its biggest weakness and the reason why Quine's program is not epistemological, it seems that the last resort when it comes to taking a tenable position in its defense is to try to show that this program – unlike what Kim thinks – does share some important features with the traditional one. However, this is a step that Kim has already taken in a sense.

Namely, although Kim believes that by abandoning the concept of justification, Quine's program breaks its connection with the traditional one – which is why it cannot be 'epistemological' – for the sake of argument, he allows that there is "sense in which Quine's epistemology and traditional epistemology could be viewed as sharing a common subject matter, namely this: they both concern beliefs or 'representations'". However, Kim argues that belief is normative just as knowledge is, which is why rejecting normativity not only excludes the possibility that Quine's epistemology is about knowledge, but also that it is about beliefs: "(...) I shall argue that the concept of belief is itself an essentially normative one, and in consequence that if normativity is wholly excluded from naturalized epistemology it cannot even be thought of as being about beliefs" (Ibid., 392).

In order to show that belief is 'essentially normative', Kim refers to Davidson's theory known as 'mental holism' according to which norms of rationality "holistically constrain (...) propositional attitudes in virtue of their contents", while propositional attitude, including belief, have "the content it has in part because of its location in a network of other beliefs and propositional attitudes". Hence it follows, in Kim's opinion, that if we want to interpret Quine's or any theory in a way that it concerns beliefs, we would have to 'identify and individuate the input and output of cognizers', or to resort to 'radical interpretation' which assumes that "his total system of beliefs and other propositional attitudes [is] largely and essentially rational and coherent" (Ibid., 392-393).

In a word, for Kim "belief attribution ultimately requires a 'radical interpretation' of the cognizer, of his speech and intentional states", which means that "we must construct an 'interpretive theory' that simultaneously assigns meanings to his utterances and attributes to him beliefs and other propositional attitudes" (Ibid., 392).[41] And although this is something that we can do, the problem is that we will become "subject to the overall constraint of the assumption that the cognizers are largely rational" (Ibid., 394), and so there is no other choice but to conclude that a program such as Davidson's – despite the fact that it concerns beliefs – is not an acceptable epistemological option for Kim. However, since Davidson's conception clearly meets the normativity requirement, it turns out that normativity may be necessary, but it is still insufficient for a theory to be epistemological. With this in mind, the question is what would programs drawing on Davidson's lack, if not normativity, to be adequate alternatives to the traditional one?

At first sight, it may seem that it is the concept of knowledge. However, this would retain indeterminacy because the concept of knowledge is, as noted above, and as Kim also says, essentially normative, just like the concept of belief. In this regard, it seems justified to assume that there are at least two kinds of normativity, one that would concern knowledge, and the other that would concern propositional attitudes such as beliefs. Since Kim has shown what makes

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[41] "For the interpretation and attribution of beliefs to be possible, not only must we assume the overall rationality of cognizers, but also we must continually evaluate and re-evaluate the putative beliefs of a cognizer in their evidential relationship to one another and other propositional attitudes" (Kim 1988: 393).

belief a normative concept, he should thus answer the question of *what makes knowledge a normative concept*.

In my view, it is the concept of truth; however, it is already clear that this would in no sense be the concept of truth which is, like the concept of belief, present in Davidson's program.

Namely, since a belief cannot be a belief if it is "not understood what it means if it were wrong", it is undeniable that the concept of truth plays an important role in Davidson's program. In fact, for Davidson, "there is no more central concept than that of truth, since having any concept requires that we know what it would be for that concept to apply to something" (Davidson 2004: 10). However, although it is the most significant, or as Davidson says, 'central', it is not clear what would be the purpose of the concept of truth and what it would even mean that it is central if there were no propositional attitudes such as beliefs. On the other hand, it seems that what Kim requires is just such a concept of truth that would be independent of any pre-theoretical assumptions and propositional attitudes such as beliefs.

Bearing this in mind, I believe that there is a reason to assume a strong tendency in Kim's work – despite the fact that he followed a significantly different line of argumentation – towards a certain, or actually the same type of interpretation that is explicitly present in Stroud's work. What characterizes this type of interpretation above all is the assumption that a theory of knowledge, in order to be acceptable at all, would have to concern the concept of truth. However, as noted above, this could not be the concept of truth present in Davidson's program, because from the theoretical perspective adopted by Kim and Stroud, the same objection that realists have raised to coherentism in general can be raised to this program – that it "break(s) the desirable relationship between justification and truth, thus isolating our beliefs from the real world" (Lazović 1995: 148). In short, it is *the real world* or *the world independent of our beliefs* that makes knowledge of it a normative concept, and the connection with it is what Kim and Stroud want to preserve in their epistemological inquiry.

In this regard, it seems that the task here is to examine whether an epistemological theory that would ignore this requirement is possible, and which would not be coherentist like Davidson's. However, before focusing on this issue, it should be noted that, when it comes to knowledge, unlike Kim and Stroud, Quine found it to be a 'vague concept unsuitable to technical use'

primarily because it is "unclear just how strong the evidence must be for something, and how certain we must be of it, to count it as knowledge" (Hylton 2010: 8).[42] On the other hand, when it comes to beliefs or representations as the remaining alternative which I intend to adopt in interpreting Quine's proposal, I believe that it is very uncertain whether Kim has convincing reasons for claiming that they require a radical interpretation.

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[42] The term 'knowledge' is "useful and unobjectionable in the vernacular where we acquiesce in vagueness, but unsuited to technical use because of lacking a precise boundary" (Quine 1984: 295).

9. Quine and his interpreters

One of the reasons I have limited myself to Kim's and Stroud's criticisms, given that they focus on different aspects of Quine's proposal, is that they cover all the main points that other scholars have pointed out as its weaknesses.[43] Thus, while Stroud argues that the biggest problem with Quine's epistemological theory concerns the bi-partite conception of knowledge it is committed to, Kim's main argument against it is that, given that it implies a *complete abandonment* of the framework of justification centered epistemology, this theory cannot be epistemological.

Nevertheless, we have seen that Kim tries to preserve Quine's proposal, contingently speaking, by raising a possibility that naturalized epistemology is not about knowledge, but about beliefs or 'representations'. However, since through such an interpretation we would be subject 'to the overall constraint of the assumption that the cognizers are largely rational',[44] it seems that the only reason why Kim does this is to show that epistemology which would concern beliefs is an unacceptable alternative to the traditional epistemological program. I believe that this fact reveals, although in a somewhat indirect way, an essential similarity that exists between Stroud's and Kim's viewpoints despite the differences, on the basis of which I put forward the thesis that they directed their criticisms to Quine from the same theoretical position.

Namely, we have seen that for Stroud, resorting to 'familiar verification procedures' is an adequate way to determine whether our beliefs about the external world are true: "If I say or

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[43] One of the prominent critics of Quine's naturalistic epistemology was Hilary Putnam, among others; however, I believe that the points he makes are for the most part already contained in Stroud's and Kim's criticisms in particular; see: Putnam, Hilary, *Why reason can't be naturalized*, Synthese, 1982.

[44] "(...) Unless the output of our cognizer is subject to evaluation in accordance with norms of rationality, that output cannot be considered as consisting of beliefs and hence cannot be the object of an epistemological inquiry, whether plain or naturalized" (Kim 1988: 393).

believe that a certain book is in a certain position in the next room, and I then go into that room to find out whether I am right in what I say or believe, I see nothing wrong with saying that I checked my belief against the facts, or even that I compared my assertion or belief with the way things are" (Stroud 1984: 244). However, we have also seen that in order for verification procedures advocated by Stroud to be significant *in epistemological context*, they would have to be extended, in a manner of speaking, to the point of excluding all conceivable possibilities of error, including skeptical scenarios.

Although Stroud argues that neutralizing skeptical possibilities of error is a matter of an entirely different requirement – the requirement for formulating a theory of how our knowledge of the world is possible – it can be noted that the (epistemological) viewpoint he advocates implies the existence of a world independent of our beliefs, a perspective from which the questions of truth and the possibility of knowledge (justification) prove to be closely related. On the other hand, by abandoning epistemological theory that would concern beliefs, I believe that the same goes for Kim's work, as evidenced, *inter alia*, by one of the conclusions reached in the previous chapter – that the concept of justification, despite what Kim argues, is not 'the only specifically epistemic component in the tripartite definition of knowledge', but that it is also the concept of truth. It follows that Kim also assumes the existence of a world that is independent of our beliefs, and that for him, just like for Stroud, questions of truth on the one hand, and the possibility of knowledge or justification on the other, are inextricably linked.

However, we have seen that for Quine these questions concern different assumptions, the first one ontological, and the second one epistemological assumptions; although this may not warrant the plausibility of the position that will be taken here in defense of his proposal, I believe that because of this specificity, it is not necessary to approach it in the way that Stroud and Kim do. In other words, although adequate when it comes to the traditional program, the assumptions that Kim and Stroud start from seem to be largely inadequate when it comes to Quine's program. However, first it will be necessary to show that, contrary to what Kim thinks, a theory that would concern beliefs is in principle an acceptable epistemological option, and as indicated above, my view is that Kim does not really have compelling reasons for claiming that belief attribution requires belief evaluation.

Namely, I argue that the view that belief is 'essentially normative' is not warranted in any sense, because the 'umbrella assumption' that subject is rational or that his "cognitive 'output' is regulated and constrained by norms of rationality" seems to be needed only in cases where we do not know the language he uses, and where a radical interpretation is the only way to gain "a foothold in (...) subject's realm of meanings and intentional states" (Kim 1988: 392-393). In other words, I believe that, unlike knowledge, *belief is normative only when subject's output requires a radical interpretation*. Since these are by no means the standard cases that Quine would have to consider, in what follows, I will stick to the thesis that beliefs are mental states which, thanks to their behavioral adjuncts, can be studied in the same objective spirit that characterizes the methodology of natural science. Yet even if this is acceptable as I believe it to be,[45] before attempting to elaborate on my defense of Quine's proposal as indicated above – by referring to his entire systematic philosophy and to the views of interpreters who did not share his critics' opinion – I need to show why Quine did not take a step that according to some scholars seemed natural in relation to a good part of his philosophy.

9.1. Coherentism as an alternative

Since I believe that Kim has no compelling reasons to argue that belief attribution requires belief evaluation, the question is why Quine did not resort to coherentism in epistemological inquiry, especially since – bearing in mind anti-foundationalism and holism as constant features of his philosophy – some interpreters believe it would be the most natural step he could have taken: "I take it that a holistic theory of meaning would lack the asymmetries characteristic of foundationalism. If the epistemological asymmetry in Quine stems from the semantic asymmetry, holism in the theory of meaning undermines both. In that case we have a general reason for preferring a non-foundationalist theory if we can find one. A holistic theory of meaning should lead to a *holistic epistemology* (emphasis added)" (Dancy 1989: 108).

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[45] For more detailed and, hopefully, more convincing arguments for this, see: Bogdanović, Miloš, Holistic and conceptual character of the mental in the work of Donald Davidson, *Theoria 1*, Belgrade, 2020.

As we can see, interpreters like Dancy base their call for the adoption of coherentism in epistemology that would be, in his opinion, a viable alternative to the traditional epistemological program primarily on Quine's holism: "We saw (...) a general reason for seeking a more complete holism in the theory of justification, to suit the adoption of a holistic theory of meaning. Coherentism is the holistic theory; it provides what is required" (Ibid., 119-120). However, there are several reasons why coherentism is for Quine an unacceptable option in epistemological inquiry, and one of them concerns the fact that holism on which it would be based is a view that has largely become less significant in Quine's philosophy over time. Namely, by advancing naturalism, or the thesis that it is possible to provide a naturalistic explanation of the way in which we acquire language (which will be discussed in more detail below), holism underwent significant modifications in Quine's work, primarily because, as Dancy points out, it turned out that "we must be atomist somewhere in the theory of meaning, otherwise we shall make language-learning (of the radical sort) impossible". In other words, although "it is clearly possible to learn a language from scratch, since we have all done it", given that holism implies that the meaning of each sentence depends on the meaning of other sentences, the question is "how did we do it ?" (Ibid., 100).

This is evidence that scholars who found Quine's holism important, and thus, a foundation for establishing coherentism in epistemology realized that it was in conflict with the reconstruction of the language acquisition process, because in order to learn a language, "there must be some place to start, something which the learner (...) can get under his belt and use as a firm datum by which to test hypothesis about what further sentences might mean. Our holism must be tempered, then, by respect for the needs of the language-learner" (Ibid., 100-101). Given that "in his last two or three decades, Quine came to approach epistemology chiefly through the genetic project of explaining how a child might acquire knowledge and a language in which that knowledge can be expressed" (Hylton 2010: 26), this was precisely the case regarding Quine's viewpoint. On the other hand, although in the empiricist phase Quine advocated the so-called ecumenical position when it comes to choosing scientific theories, we have seen that when he adopted naturalism, he increasingly argued for the thesis that, despite the fact that we have several theories that are equally supported by evidence, only one of these theories can be true: "If there is more than one theory equally effective in handling the evidence, what are we to say about the different theories? Can we perhaps say that they are all true, or that all their members are true? It

seems that we cannot. If our different coherent sets are all of them verging on complete, if they constitute complete but different descriptions of the world, how can we admit that all the parts of these different descriptions of the world are true?" (Dancy 1989: 113).

It is precisely by adopting naturalism that Quine would no longer allow that all these coherent sets can be true. This is in favor of the fact that Quine certainly had certain views about a world that would be independent of our beliefs, and although these views are far from Kim's or Stroud's, as we shall see, I believe they are realistic enough to undermine any coherentism as an epistemological option.[46] However, the main reason why I think that coherentism is for Quine an unacceptable option in epistemological inquiry concerns above all the problem of circularity that these theories face.

Namely, although the circularity objection raised to coherence theories "is usually not taken to be fatal" (Bergström 2008: 34),[47] one of its consequences is that these theories ignore the demand for the autonomy of epistemological discourse that is important for Quine's proposal, as I pointed out by associating it with contextualism. Bearing this in mind, it could be said that the two types of normativity identified in the previous chapter differ precisely in that one of them implies the elimination of circularity. Thus Kim is not totally wrong in saying that *normativity is what Quine's program lacks in order to be epistemological*, because it seems that the type of normativity that he has in mind and which concerns knowledge has a constitutive role for epistemology as a discipline, for the simple reason that it solves the problem that every specific discipline must solve in order to be constituted as such – the problem of circularity.

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[46] Quine's realist view, according to which he allows that only one description of the world can be a *true* description is known as 'robust realism', and its specific feature, or, if we prefer, 'robustness' arise from the fact that it is "realism with regard to objects that are assumed by the accepted conceptual scheme" (Zorić 2013: 88). I believe that this is compelling evidence that even when realism prevailed in his philosophy, Quine never completely gave up some empiricist and anti-realist views.

[47] For example, scholars like Bergström deal with the objection that epistemic coherentism is circular by admitting that circularity exists, but also that it is "hardly vicious. It is not really a case of something being justified by itself. Rather, it is a matter of some ingredients of a system being justified by their coherence with other ingredients of the same system. The fact that different ingredients of one and the same system are justified by mutual coherence is typical of coherence theories of justification" (Bergström 2008: 34).

The problem of circularity of Quine's project is something that Stroud also points out, although on considerably different grounds, and Stroud's criticism is more significant here because it directly concerns the way in which I will try to interpret Quine's proposal, by abandoning coherentism: "Quine's epistemological problem is to explain the relation between the 'meager input' at one's sensory surfaces and one's 'torrential output' in the form of a body of beliefs or assertions about a physical world. But strictly speaking, my belief that I suffer impacts at my sensory surfaces, and indeed that I even have sensory surfaces at all, are themselves beliefs of mine about an external physical world" (Stroud 1984: 245-246).

9.2. Genetic approach

Therefore, what remains an enduring problem, in a manner of speaking, and what I believe to be the hardest blow that critics dealt to Quine is the problem of circularity of naturalized epistemology. This problem is close to the problem of normativity that Kim points out, but differs from it in that, unlike the problem of normativity, none of the coherence theories solves it, so it remains to be seen whether a solution can be found at all.[48]

However, first it is necessary to present more details related to Quine's proposal, which will imply, as before, referring to both Quine's views and those of his interpreters. In this regard, it should be said that some scholars who were sympathetic to Quine's epistemological project pointed out that critics like Kim, by insisting on the concept of justification, "fundamentally misinterpreted Quine's naturalized epistemology" which "simply does not have justification as

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[48] Since norms of rationality "holistically constrain (…) propositional attitudes in virtue of their contents", which is why any propositional attitude "has the content it has in part because of its location in the network of other beliefs and propositional attitudes" (Kim 1988: 393), the coherence theory that solves the problem of normativity, so to speak, is precisely Davidson's theory to which Kim refers.

its central theme, nor does it seek to replace a justification-focused theory of knowledge" (Mi 2007: 107).[49]

In other words, interpreters like Mi believe that Kim's concern that by abandoning the concept of justification, "naturalized epistemology cause epistemology to become a part of psychology and (...) disappear into psychological research (...) [is] superfluous; we need only understand, in Quine's terms, that not only is epistemology contained in natural science, but natural science is also contained in epistemology" (Ibid., 115). However, there is a good reason why Quine's critics have insisted on the concept of justification (although it may not be what Kim is directly aiming for) and it concerns the fact that, since it eliminates circularity, *justification is the component that provides the necessary autonomy for the context of epistemological inquiry.*

With this in mind, pointing out that epistemology is contained in natural science just as natural science is contained in epistemology is an answer that should be avoided, because it seems to represent better than anything else the biggest problem facing Quine's theory – the problem of circularity. However, another objection, which I believe to be more constructive than common objections to Quine's critics, points out the fact that such an interpretation "almost completely overlooks Quine's discussion of language learning and meaning in the course of constructing naturalized epistemology" (Ibid.), i.e. it "takes no note of the genetic strategy Quine uses in answering the central epistemological question" (Gibson 1988: 56) of how we acquire our theory of the world.

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[49] For example, Mi believes that the reason for doubting that Quine's naturalism or naturalized epistemology is primarily concerned with the issue of 'justification' is that "in none of his philosophical publications has he been so concerned with such issues. Furthermore, in his key work 'Epistemology Naturalized' Quine immediately made clear that 'Epistemology is concerned with the foundations of science'; from our understanding of this work, we can determine that the epistemological issue Quine is most concerned with is: 'Precisely what are the foundations of our knowledge about the natural world?', or more specifically, the question he wished to answer is 'How can we produce our scientific knowledge and theories about the world from such limited amounts of empirical observations and sensory evidence?' In this context we can at most say that justification may be a related (or connected) issue, we cannot say it is the heart of the matter" (Mi 2007: 114).

We have already said a bit about the genetic project, noting that it concerns the project "of how human beings have come by the knowledge that they have" (Hylton 2010: 96). However, for Quine's interpreters and for Quine himself, it is a project of exceptional importance because its implementation is "the best way that we have to investigate the relation between evidence and theory, a task that he sees as 'central to traditional epistemology'" (Ibid., 95). In this regard, it is necessary to point out the reasons behind this, and it makes sense to recall some of the theses advanced in Chapter 5, when it was noted that for Quine, language and theory of the world are largely coextensive, which is why acquiring one will always take place simultaneously with acquiring the other.

Namely, we have seen that Quine, *inter alia*, interpreted science as "a linguistic structure that is keyed to observation at some points. (...) [S]ome of the sentences, the observation sentences are conditioned to observable events. (...). [T]he rest of language (...) depends, for whatever empirical content it has, on its devious and tenuous connections with observation sentences; and those are the same connections, nearly enough, through which one has achieved one's fluent part in that discourse" (Quine 1975b: 74).[50] However, in addition to being "the evidence on which our theories rest and the point at which language confronts reality directly enough" (Dancy 1989: 235), one of the distinctive characteristics of observation sentences is that "under agreeing stimulation", there will be an "intersubjective agreement" about them. It follows not only that they are sentences we learn first – because "they will usually be about bodies" – but also that observation sentences have certain objectivity because they are sentences "on which all speakers of the language give the same verdict when given the same concurrent stimulation" (Quine 2008a: 535).

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[50] "(...) Quine always maintains that the evidential relation from observational evidence to scientific theory and the semantic relation from observational evidence to scientific language have the same exemption. In Quine's writings he espouses the epistemic/semantic dichotomy, by which the relationship between scientific theory and the observations used to support it can be revealed from two aspects: that of epistemology and that of semantics. (...) With respect to these double aspects, 'observation' takes on two different roles. On the one hand, 'observations' are related to the epistemological aspect of theory by way of the 'evidential relation'; in this relation, 'observations' play the part of evidence in support of a theory. On the other hand, 'observations' are related to the semantic aspect of theory by way of the 'semantic relation'; here the role of 'observation' is as the basis of empirical content and the learning of scientific language" (Mi 2007: 118).

Therefore, apart from the fact that "the channels by which (...) we acquire theoretical language are the very channels by which observation lends evidence to scientific theory" (Quine 1975b: 74), one of the arguments that Quine has used to base his thesis that the genetic project is the 'best strategy' that we have "for investigating the relation of evidential support, between observation and scientific theory" (Ibid., 75) concerns the fact that it is a project that can be carried out using objective techniques of inquiry. Given that there is an intersubjective agreement about non-verbal stimuli they are related to, as noted above, what primarily ensures the mentioned objectivity of the genetic project is the *intersubjective character of the observation sentences*, or the fact that "there is generally no subjectivity in their phrasing" (Quine 2008a: 535). Since these sentences are also connected with theoretical sentences, Quine argues that, thanks to them, investigation of how we acquire higher, theoretical levels of language/science is open to objective methods of inquiry.[51]

However, the prerequisite for actually carrying out such an inquiry in the way that Quine argues it is possible has been that sense data should no longer be viewed as something in the subject of experience, but as *publicly available stimuli* that observation sentences inform us of. In this regard, the above externalization of empiricism – according to which, thanks to their behavioral adjuncts, sense data can be studied in the same objective spirit that characterizes the methodology of natural science – will motivate Quine's view that all the evidence needed to answer the question "how the human child, subject to various stimulations of its sensory nerves, could come to acquire our theory of the world" (Hylton 2010: 27) is out 'in the open', which is why the genetic project is also a project that ultimately concerns the methodology of natural science.

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[51] "The observation sentence is the cornerstone of semantics. For it is (...) fundamental to the learning of meaning. Also, it is where meaning is firmest. Sentences higher up in theories have no empirical consequences they can call their own; they confront the tribunal of sensory evidence only in more or less inclusive aggregates. The observation sentence, situated at the sensory periphery of the body scientific, is the minimal verifiable aggregate; it has an empirical content all its own and wears it on its sleeve" (Quine 2008a: 536).

9.3. Interdisciplinarity of epistemology

Therefore, although through the learning process language will "naturally grow as a fabric of sentences" (Mi 2007: 124) most of which are related to observation sentences only indirectly, since these are sentences about which there is an intersubjective agreement – and observation sentences are also the ones that provide evidence for the truth of theoretical sentences – Quine argues that it is possible to give a naturalistic account of the process of language learning and acquiring a theory, "one that does not take for granted ideas such as meaning and understanding" (Hylton 2010: 27).[52] Thus, the common view is that with the genetic project, from the central epistemological problem – i.e. the problem of the relation between evidence and theory – two separate ones emerge: "'How are observation sentences acquired on the basis of sensory stimulation?' and 'How do observation sentences serve as evidence for theoretical sentences?' (Gibson 1988: 66). However, the important question here is which discipline or disciplines should ultimately deal with these problems?

Although Quine argues that in studying the relation between evidence and theory, it would be advisable to use all the means at our disposal that could be used for this purpose, it has also been noted that (cognitive) psychology is the discipline which should deal with answering these questions. This is the view that I will adhere to initially to the greatest extent, which was, *inter alia,* advocated by some of Quine's interpreters.

Thus, for example, by interpreting Quine's project as an explanation of "acquisition of cognitive language in a way which is, by his standards, scientific and *naturalistic*" (Hylton 2010: 82), Hylton bases the importance of cognitive psychology in epistemological inquiry on the importance that one particular concept, cognitive language, could have in such an inquiry. Since this type of interpretation as well as cognitive language will be discussed more below, I want to point out here that it is only one of the possible ways of interpreting Quine's proposal, and that

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[52] As we have seen, what will enable that ideas such as meaning and understanding are not taken for granted is the externalization of empiricism, i.e. the thesis that sense data or, in traditional terminology, impressions are 'out in the open', which is why they are also open to objective techniques of inquiry.

different interpreters considerably disagree about the direction in which the genetic project should be developed and what branches of science should be involved in its implementation.

This is the situation that is, in my view, best described by Dancy: "(...) [N]aturalized epistemology does not involve a change of subject but rather offers a new way of studying the old subject. The old problem was the gap between a 'meagre input' and 'torrential output'. But this gap can be studied in two ways, either by the study of the relation between observation sentences and theoretical sentences (...) or more directly by the study of the relation between the physical input received by the human subject – retinal disturbance, for instance, constitutes the information received by the eye – and the beliefs which the subject is thereby caused to form; those beliefs being studied physicalistically, that is by studying the neurophysiology of the brain-activity which constitutes them" (Dancy 1989: 236).

It can be noted that the two types of interpretation that Dancy speaks of invoke my view that the answer to the question 'Which disciplines should deal with investigating the relation between meagre input and torrential output?' will depend primarily on how ambitiously we interpret, and what conclusions we are willing to draw from Quine's thesis on the objective character of the genetic project. In this regard, on the one hand there are scholars such as Mi who adopted a more moderate approach, emphasizing that "a naturalistic theory of knowledge not only has to merge with psychology but also with linguistics" (Mi 2007: 107). On the other hand, however, there are scholars like Gibson who were much more ambitious in their interpretation of Quine's proposal because they advocated an approach that Dancy unjustifiably attributes to Quine, according to which beliefs which the subject is forming prompted by the environment should be investigated physicalistically, 'by studying the neurophysiology of the brain-activity which constitutes them'.[53] However, I believe that the interpretation advocated by Mi is essentially vague, while Gibson's is completely unacceptable, as I will try to show in what follows.

Namely, although they do not deny the importance that cognitive psychology could have in implementing the genetic project, given the common subject, interpreters such as Mi primarily

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[53] Namely, Dancy argues that "this (...) approach is, perhaps, (...) the most characteristic of naturalized epistemology" and that, according to Quine, "we are prompted to study it" (Dancy 1989: 236). However, it is more than uncertain whether this was actually the case, as will be discussed below.

emphasize a close connection between epistemology and linguistics: "(...) [T]heory of language is central and indispensable to epistemological research", because "construction and expression of scientific theory can never be separated from our language" (Ibid., 118). In a word, Mi points out that "we not only need to make use of research in psychology or cognitive science in order to understand precisely how mankind is able to develop his plethora of scientific theories from such scant evidence", but also that we need to "apply research results from linguistics or semantics (in particular meaning holism) to understand the development process of scientific theory and language" (Ibid., 107).[54]

However, since reconstructing the way in which we acquire language and theory of the world is largely incompatible with semantic holism (as evidenced by the fact that Quine's arguments rest on it less and less over time), it seems that Mi's proposal in this regard is also completely unacceptable. On the other hand, when it comes to using linguistic results, even though Quine undoubtedly points out the connection that exists between epistemology and linguistics, it should be said that he is also somewhat hesitant about using linguistic methods: "I am interested in the flow of evidence from the triggering of the senses to the pronouncements of science; also in the rationale of reification and the credentials of cognitive meaning. It is these epistemological concerns, and my incidental interest in linguistics, that motivates my speculation" (Quine 1990: 3).

In other words, apart from pointing out some general importance – given the subject they have in common – it can be said that Quine never adopted or at least indicated which linguistic method would be the most suitable for his aim, and just what role it could play in studying 'the

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[54] The supposedly close connection between epistemology and linguistics is evidenced by the fact that Mi defines this connection as 'reciprocal': "Through the relationship between scientific theory and observation experiences, we can clearly see the reciprocal connection between epistemology and linguistics. Thus when Quine states that epistemology must merge with linguistics, he surely means that epistemology and linguistics can both take the relationship between observation experience and theory as the subject matter and focus of their research" (Mi 2007: 119).

flow of evidence, from the triggering of the senses, to the pronouncements of science'.[55] According to some interpreters (Hylton), the main reason for this is that, unlike linguists, 'Quine was primarily interested in cognitive aspects of language', or in answering questions that linguists generally do not deal with, such as "what it is for utterances to be about the world, and how the capacity to make such utterances is or might be acquired?" (Hylton 2010: 99).

However, I argue that some of the methods that linguistics has developed in the meantime are, if nothing else, at least compatible with one possible way of interpreting Quine's epistemological project (the one I will argue for), but since there is no mention of these in either Quine's work or his interpreters', based on everything presented above, I believe that the connection between linguistics and epistemology in their works is simply insufficiently defined. On the other hand, the situation is significantly different when it comes to Gibson's interpretation which is, although unacceptable in my opinion, certainly the most consistently presented interpretation of Quine's epistemological (genetic) project, which is why it will be given special attention.

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[55]Specifically, Quine pointed out the importance of the behaviorist method which was dominant in linguistics in the United States for a period of time (at around the same time). However, since it is the same method that he used, it is not clear what its specifically 'linguistic' contribution could be in the implementation of the genetic project.

10. Gibson's interpretation

Hopefully, at least some of the doubts related to Quine's project were dispelled in the previous chapter, one of them being that coherentism in epistemology which some scholars advocated (Dancy) is in fact for Quine an unacceptable option in epistemological inquiry. Also, I believe, unlike what some critics (Kim) have pointed out, that Quine's project can in principle be interpreted in a way that it concerns beliefs or 'representations', and that this view, generally speaking, was held both by Quine and some of his interpreters. However, we have seen that there is still a great deal about the project that remains open to criticism and discussion.

Namely, if the viewpoint that would concern beliefs but would not be coherentist is in principle an acceptable option for Quine, taking into account the way in which Quine approaches it – implying the use of methods of natural science in conducting epistemological inquiry – it has the problem of circularity like coherentism. On the other hand, if we were to ignore this fact and take at face value that epistemological inquiry should be an inquiry that concerns the methodology of natural science, the question is which discipline should deal with it? This might not be such a problem if opinions on the issue were not significantly divided, as we have seen.

Namely, even if we exclude the proposal that we should use all the means at our disposal in epistemological inquiry, Quine's view is that cognitive psychology should primarily be the discipline within which these studies should be conducted. On the other hand, there are scholars like Mi and Gibson, the first one pointing out that epistemology should primarily merge with linguistics, and the second – as we shall see in more detail below – with science such as neurophysiology.[56] However, despite such different views, it is important to say that they were

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[56] As one of the reasons for such different approaches, Stroud's objection can be pointed out that, apart from a general sketch, Quine did not go into the details of his proposal: "Given his quite general philosophical purposes, Quine himself is more concerned with recommending and sketching the outlines of a naturalized epistemology than with carrying it out in detail. (...) [H]e scarcely goes into the physiological and psychological facts" (Stroud, 1984:

all unanimous in their view that, instead of searching for an absolute grounding of our knowledge, epistemological inquiry should be reformulated into a "study of the ways in which language-learners actually move from an understanding of simple observation sentences to an understanding of the more complex sentences (...) of which theories are constructed" (Dancy 1989: 236).

In other words, Quine and his interpreters, both in responding to criticisms and in developing their own views on this issue, increasingly emphasized the importance that the so-called genetic project should have in these investigations, and that whatever science would ultimately be dominant in its implementation, it should primarily give us answers to two questions: 'How are observation sentences acquired on the basis of sensory stimulation?', and 'How do observation sentences serve as evidence for theoretical sentences?'.

Although I do not think that by following any of the above interpretations, I will be able to answer all the objections raised to Quine's proposal, my view is also that the genetic project is the best strategy for answering the above questions, and that, if certain assumptions are adopted (which will be discussed in more detail below), there is some room for improving it. However, as a prerequisite for this, it is crucially important to stick to a specific type of interpretation and here I have in mind primarily the original proposal according to which the genetic project should concern the science of cognitive psychology. Not only do I believe that it is the most tenable approach, one of the reasons why I opt for it is that alternative options are either insufficiently defined, or completely unacceptable.

Thus, for example, when it comes to Mi's proposal, although one would expect Quine to refer to some of the methods that linguistics has developed in the meantime – since he was interested in 'cognitive aspects of language' – this did not happen, as we have seen; this is why it can be said that a connection which Quine has made between linguistics and epistemology remained

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219-220). Although this objection was raised by Stroud before Quine could present more detailed arguments concerning his proposal, it nevertheless turned out to be valid even afterwards, as evidenced by a number of doubts, the most striking of them concerning different interpretations of which disciplines should deal with conducting epistemological inquiry.

somewhat incomplete.[57] On the other hand, although Gibson, like others, pointed out that the genetic approach is the best strategy that we have for investigating the relation between evidence and theory – and that "externalizing of empiricism that it requires [is] one of Quine's major philosophical contributions" (Ibid., 66-67) – I believe that his interpretation and its ultimate consequences are a significant departure from Quine's view, and that Gibson is in fact largely ignoring the genetic project. However, my view is that the biggest problem with Gibson's proposal is probably that it conflicts with some strong and, arguably, commonly held intuitions.

10.1. Background of Gibson's interpretation

As shown in the presentation of the main subjects of Quine's philosophy, there are certain dichotomies in his philosophy or tensions, as I called them, that are thought to threaten its unity and make its interpretation difficult. Since Quine was aware that he advocated some irreconcilable views in different periods, he tried to overcome these tensions by pointing out that ontology and epistemology are reciprocally contained disciplines, which is why answers to questions about method and evidence would have to imply answers to questions about truth or what there is and *vice versa*.

Although this proposal was at first well received by most Quine's supporters, it proved to be unsatisfactory after all, as evidenced by the fact that some of them began to give priority to ontological or questions of truth, over epistemological or questions of evidence. They justified it by pointing out that, given the dichotomies in Quine's philosophy, it was the only way to show it for what it ultimately is, i.e. "systematic, naturalistic response to the epistemological question of how we acquire our theory of the world" (Ibid., 22).

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[57] More specifically, I do not think that referring to linguistics is unacceptable in this context, but I believe that in both Quine's and Mi's cases it does not go beyond pointing out the similarities that exist between the behaviorist method in philosophy and linguistics. In other words, I believe – as suggested in the previous chapter – that it is possible to make a connection between linguistics and epistemology so that linguistic studies could really contribute in some way to epistemological inquiry, but that it would require more radical moves that neither Quine nor his interpreters really made.

In this regard, Gibson is perhaps the most significant scholar who did not give up on presenting Quine as a 'systematic philosopher' and his philosophy as a 'coherent whole', but who also thought that the precondition for such an interpretation is to give priority to ontological or questions of truth, over epistemological or questions of evidence. Gibson's grounds for this interpretation were primarily that "ontology (natural science) tells us that its only evidence is sensory evidence". Since sensory evidence is nothing but "activation of (physical) nerve endings by physical objects", ontology should also be given priority over epistemology, for whatever the way in which we acquire our theory of the world, it certainly "presupposes an ontology of nerve endings" (Ibid., 48).

Among scholars inclined to this type of interpretation (Wren, Thompson), giving priority to ontology is thought to have multiple advantages for Quine, because not only it "distances [Quine's philosophy] from the hard-line instrumentalists" (Thompson 2008: 121) to which he was bound by his empiricism, it also makes a systematic whole of it, as we shall see in more detail below. However, since it does not seem to matter whether a philosophy is systematic as long as it gives substantial answers to the questions it raises – which Quine's philosophy largely does – it seems that systematicity in itself is not a sufficient reason to adopt Gibson's type of interpretation. On the other hand, it should be noted that this interpretation is incompatible with Quine's empiricist view according to which, generally speaking, physical objects and nerve endings that Gibson refers to are nothing but posits that we use in the systematization of experience.

In a word, the interpretation that Gibson advocates conflicts with Quine's view of ontological relativism according to which different (ontological) viewpoints and assumptions about what there is (physical objects, nerve endings, etc.) are possible, in which we cannot, based on all the available evidence, give priority to any of these assumptions over the others. As shown in more detail in Chapter 4, Quine's adoption of the doctrine of ontological relativism was primarily prompted by the fact that theories are underdetermined by empirical evidence, so it follows that "if all observable events can be accounted for in one comprehensive scientific theory (...) then we may expect that they can all be accounted for equally in another, conflicting, system of the world" (Quine 2008b: 228). On the other hand, Quine reached the conclusion that we cannot

give priority to what one system asserts to exist and what is true over what another system could assert primarily through the thesis of indeterminacy of translation.

Namely, identifying systems of the world or theories with languages in which they are expressed, Quine came to the conclusion that their translations "can be set up in such ways that, while each consistent with the speech dispositions of everyone concerned, they nevertheless can have different sentence-to-sentence correlations even to the point where two translations of some sentence can be correlated with sentences having opposite truth value" (Gibson 1988: 102). As it was shown in more detail in Chapter 4, the reason for this is primarily that, being formed on pragmatic bases, these translations do not imply translation of the ontological viewpoint that is assumed to be contained in these languages/theories, and which, for all we know, can be completely different from the one we project onto it by the act of translation.

Therefore, Quine argues that each conceptual framework or theory of the world must have 'empirically equivalent alternatives' (thanks to underdetermination of theories by empirical evidence), but also that there are no grounds for giving priority to any of them for the simple reason that – thanks to indeterminacy of translation, or impossibility "of reconciling them by a reconstrual of predicates" – we cannot know what these alternatives could be. It follows that just as "there is no answer to the (pseudo-) question of which translation is the uniquely correct one", there is also no answer to the question of which of the theories is true, and Quine argues that they are all true "insofar as they measure up to the speech dispositions of all concerned" (Ibid.).

As it is commonly believed, the most important lesson of these Quine's conclusions is that speaking of objects in a stronger sense is possible only within the same background theory or language; but even then, the objects that we speak of are nothing but 'posits' whose existence is determined not 'by definition in terms of experience', but "by a theory which is a human invention: since we accept a relevant portion of each theory we accept the objects as real" (Hylton 2010: 21).[58] On the other hand, since Gibson presupposes the existence of objects or at least some of them in an absolute sense, it seems that he could give priority to ontological over

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[58] In other words, even in this case – when we move within the same background theory/language – Quine argues that there is a certain indeterminacy of objects implied by a theory, which he explained by inscrutability of reference in general (see, Chapter 4).

epistemological questions only if he largely ignored Quine's doctrine of ontological relativism. This was precisely the case, however, Quine himself is partly responsible for it.

Namely, while the period associated with Quine's reform of empiricism can be best presented through his arguing for the doctrine of ontological relativism, in the later period Quine increasingly leaned towards the viewpoint that presupposes the existence of 'facts' or 'facts of the matter' which would be independent of the question of evidence, in short, to naturalism. Although, as we shall see, this emphasis on 'factuality' has often been unjustifiably interpreted as an emphasis on factuality of natural science, it still makes Quine's later views conflict with earlier ones. In order to reconcile the resulting tensions, Quine argued that ontology and epistemology are reciprocally contained disciplines. However, the thesis of reciprocal containment of ontological and epistemological questions imply, for most interpreters, giving equal importance to naturalistic and empiricist doctrines in his philosophy.

In fact, given it focuses on the question 'What there is?', or 'What is truth?', ontology is usually identified with naturalism. On the other hand, since it tries to answer the question 'How do we know what there is?' – a question concerning method and evidence – epistemology is identified with empiricism. It follows that, by arguing that ontology and epistemology are reciprocally contained, Quine showed that he eventually attached equal importance to the two doctrines (empiricism and naturalism) he was inclined to in different periods. However, while in his empiricist phase Quine emphasized that every system of the world must have empirically equivalent alternatives none of which we can give priority to because we cannot reconcile them by reconstrual of predicates, later he claimed something that was in principle contrary to this view – that "only one such system can be correct" (Gibson 1988: 102).

In other words, Quine has increasingly argued for the so-called sectarian position contrary to the ecumenical, which was a sure sign for interpreters like Gibson that he made a choice "between the two doctrines which he tried so diligently to balance – naturalism in which truth is distinguished from and upheld over warrant, and empiricism, in which truth becomes indistinguishable from warrant" (Thompson 2008: 114). As ontology is identified with naturalism, and epistemology with empiricism, it would mean that Quine eventually gave priority to ontological or questions of truth over epistemological or questions of evidence, and it is on this assumption that scholars like Gibson base their interpretation.

10.2. Gibson's naturalism

Therefore, since naturalism is a doctrine that, as noted above, emphasizes factuality of science, it is thought that in order to adopt it, Quine "needs to have a preference for ontology distinct from the empirical concerns that motivate the ecumenical position" i.e. "he needs to have a theory of truth, factuality, and ontology that is insulated from empirical evidence" (Ibid., 121).

Although it is uncertain whether Quine ever had such a theory, a sure sign that he had the above 'preference for ontology' on which scholars such as Gibson based their interpretation is that at one point he began to advocate the so-called sectarian position, contrary to the ecumenical one. However, matters concerning the relation between ontology and epistemology, naturalism and empiricism in Quine's work are not as simple as it may seem at first, as evidenced by the fact that even Gibson showed some hesitation in his interpretation. This can be shown best through his objections raised to critics of Quine's proposal for naturalizing epistemology, above all, to Stroud.

Namely, insisting on an unbridgeable gap between what we receive through our senses and what is or is not true about the external world as the main drawback of Quine's position was for Gibson a sure sign that Stroud in his criticism "occupied only epistemological perspective", that is, he focused "only on how epistemology contains ontology, thereby failing to notice that ontology also contains epistemology" (Gibson 1988: 60). It follows that Gibson's position was essentially the same as the one held by most Quine interpreters – that epistemology "does not occur in an ontological vacuum" (Ibid.) – which is why nobody can, like Stroud does, "occupy only the epistemological perspective. The epistemological perspective, like skepticism that gives rise to it, presupposes the ontological perspective. Neither epistemology nor skepticism is intelligible outside of all ontologies" (Ibid., 153-154).[59]

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[59] In other words, although Gibson does not do it explicitly, he points out the fact that was also pointed out here – that the bi-partite conception of knowledge is in Quine's case derived from scientific investigation and reflection. It follows that although he "understands very well the sense in which ontology is contained in epistemology" (the sense assumed by the traditional approach which he identifies it with), Stroud nevertheless "completely misses the

Therefore, like most Quine's supporters, Gibson also argued that ontology and epistemology are disciplines that are reciprocally contained. However, pointing out that "epistemological perspective presupposes ontological perspective" – whereas, given that questions of truth are in naturalism separate from questions of justification, nothing similar could be said for the ontological perspective – he immediately makes it clear that questions of truth must be given priority over questions of evidence. On the other hand, even though Quine has come up with theses such as indeterminacy of translation, inscrutability of reference, and ontological relativity, Gibson argues that this interpretation does not jeopardize in any way Quine's empiricism or his epistemology, because Quine's epistemological reflections "occur within an ontological setting". Since "ontological setting [is] that of contemporary science" (Ibid., 138), the conclusion is that science as such, and not some first philosophy would be a place where reality should be identified and described.

In a word, Gibson draws attention to the fact that if we decide to give priority to questions of truth – and it seems that we would have to do it, if we accept that epistemological perspective presupposes ontological perspective – the result will be that epistemology itself will become naturalized, which is after all the reason why his interpretation makes a systematic whole of Quine's philosophy. However, while Quine tried, as we have seen, to make this transition by "replacing the old empiricist conception of 'experience' with the scientific notion of the stimulation of our sensory receptors, and construing 'our theory of the world' not as a purely mental entity, but rather as a collection of sentences to which we offer our scientific assent" (Wrenn 2008: 2), given the ways in which ontology contains epistemology, the idea of naturalizing epistemological inquiry will in Gibson's case take a fundamentally different and, it could be said, much more radical form.

Namely, although Gibson claims that the externalization of empiricism required by Quine's approach is one of his most important philosophical contributions, and naturalistic-behavioristic thesis "the central axiom of Quine's entire systematic philosophy" (Gibson 1988: 2), since ontology contains epistemology in ways that "(1) epistemology presupposes the existence of the

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other aspect of the reciprocal containment of epistemology and ontology, i.e., how ontology contains epistemology" (Gibson 1988: 59).

external world; (2) epistemology's contact points with the external world are (physical) nerve endings; and (3) the two cardinal tenets of empiricism regarding evidence and meaning are derived from science" (Ibid., 59) I believe that his naturalism implies a disregard for behaviorist assumptions in favor of naturalistic ones, or more specifically, physicalist assumptions in epistemological inquiry. Therefore, I argue that we can and must speak of two different and largely incompatible versions of naturalism in Quine's and Gibson's cases, which I will try to show in what follows.

10.3. Consequences of Gibson's ontologism/naturalism

Therefore, Gibson argues that Quine's naturalism requires us to accept as indisputable facts, or as truths independent of any evidence, that epistemology presupposes the existence of the external world, and that epistemology's contact points with the world are *physical*, i.e. *nerve endings*. On the other hand, since factuality is implied by Quine's naturalism, primarily *factuality of modern natural science* – and "the very idea of nerve endings, epistemology's contact points to the world, belong to the part of ontology called physiology" (Ibid., 48) – it seems that it has to be concluded that an adequate approach to epistemological questions would imply for Gibson purely explanatory models of modern natural science.

In a word, although Gibson does not state it explicitly, given the ways in which ontology contains epistemology and implications of factuality of modern natural science, I believe that he advocates an approach whereby "beliefs which the subject is thereby caused to form should be studied physicalistically, that is by studying the neurophysiology of the brain-activity which constitutes them" (Dancy 1989: 236). However, if we take into account conclusions of some of the most prominent scholars regarding the possibility of explaining mental phenomena in a way that such an approach would imply, it seems unlikely for now, and it is quite uncertain whether this will change in the foreseeable future.

Namely, despite the fact that mental entities such as beliefs supervene on physical ones such as certain (physical) brain states, in his criticism of reductive physicalism Davidson has come to

the conclusion that "there are no strict psychophysical laws because of the disparate commitments of the mental and physical scheme. It is a feature of physical reality that physical change can be explained by laws that connect it with other changes and conditions physically described. It is a feature of the mental that the attribution of mental phenomena must be responsible to the background of reason, beliefs, and intentions of the individual. There cannot be tight connections between the realms if each is to retain allegiance to its proper source of evidence" (Davidson 1992: 146).[60] On the other hand, scholars such as Kripke and Levin offer a somewhat different strategy for fighting reductionism in the philosophy of mind, arguing that although we can expect identification of a mental state with a certain physical brain state, such identification could not be treated *as an explanation* for the simple reason that a physicalist account would leave something out, the phenomenal properties of the mental state/event with which it has been identified.[61]

In a word, when it comes to the approach attributed to Gibson here, there is a strong and widespread tendency to think of mental entities and events as *in principle irreducible to their physical basis*, and therefore *inexplicable* in physical terms, regardless of further inquiry.

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[60] In a word, although he does not deny that mental events depend on the physical basis that includes nerve endings as its part, Davidson concludes that there is a fundamental difference between the mental and the physical realm which in principle calls into question the possibility of reducing the former to the latter: "Physical theory promises to provide a comprehensive closed system guaranteed to yield a standardized, unique description of every physical event couched in a vocabulary amenable to law. It is not plausible that mental concepts alone can provide such a framework, simply because mental does not (...) constitute a closed system. Too much happens to affect the mental that is not itself a systematic part of the mental. But if we combine this observation with conclusion that no psychophysical statement is, or can be built into a strict law, we have the principle of the Anomalism of the Mental: there are no strict laws at all on a basis of which we can predict and explain mental phenomena" (Davidson 1992: 147).

[61] A famous example used by Kripke and Levin concerns the feeling of pain as a mental state whose identification with the correlated brain state, although possible, would fail to *explain* the (mental) state in which a person is when he feels pain. In other words, these scholars base the thesis that there is the so-called explanatory gap between the physical and the mental which makes explanations of the mental by reducing it to the physical inadequate on the fact that these explanations would leave out phenomenal properties of mental sensations such as the feeling of pain. See: Levin, Joseph, "Materialism and qualia: the explanatory gap", and Kripke, Saul, "Identity and necessity".

However, this seems too easy and it has to be assumed that it is unlikely that Gibson did not take into account inherent limitations of this interpretation, as evidenced by the fact, *inter alia*, that he never explicitly argued for this position, but advocated the so-called naturalistic-behavioristic approach in epistemological inquiry: "The reading of Quine that I am advocating focuses on what I have elsewhere dubbed the naturalistic-behavioristic thesis. The thesis is naturalistic in that it makes the study of language accessible to empirical investigation, and it is behavioristic in that it relies upon behavior as the substance of observable data" (Gibson 1988: 1-2). With this in mind, it seems that more convincing arguments have to be offered that Gibson's epistemological program, unlike Quine's approach, is actually a reductionist program in the philosophy of mind, which requires us to take a few steps back, to the very basics of Gibson's interpretation.

As noted above, Gibson found the basis for his interpretation and for giving priority to ontological over epistemological questions in Quine's commitment to naturalism that was primarily reflected in the adoption of sectarian position, contrary to ecumenical one. However, since the adoption of sectarian position was inconsistent with most conclusions that Quine had reached in his empiricist phase, he was expected to justify this new, drastic change in his attitude which he did by making a "difference between fact of the matter about physics and fact of the matter about translation" (Thompson 2008: 121). In a word, Quine tried to overcome tensions between the view that only one system of the world can be correct, and the view about indeterminacy of translation by pointing out that "there is no fact of the matter to the question of which translation is the correct one, but there is a fact of the matter to the question of which physical theory is the correct one" (Gibson 1988: 102), i.e. that, unlike science, "translation [is] burdened with additional indeterminacy" (Thompson 2008: 122).

For scholars inclined to Gibsonian type of interpretation (Thompson, Wren), this was evidence that, in the context of advocating the sectarian and not ecumenical position, a theory that would also be *a true theory* for Quine would have to be natural science or physics, because "for physics to be indeterminate, there would have to be some other form of knowledge about the world other than science, and it is just this that Quine's naturalism denies" (Gibson 1982: 94). However, although Quine pointed out that 'there is no fact of the matter to the question of which translation is the correct one, but there is a fact of the matter to the question of which physical

theory is the correct one', given other views he advocated, I believe that Quine never drew all the inferences from this viewpoint. On the other hand, Gibson had to do it, which is a thesis that I ground primarily on his ontologism and the view that there are facts independent of any evidence, which would really be truths that we are informed of by modern natural science.

Thus, although in both cases there is an insistence on introducing the methodology of natural science in epistemological inquiry, in Quine's case there is a possibility of holding a more moderate and, in my opinion, more plausible behavioristic view, while this possibility is ruled out in Gibson's case. This is primarily based on the viewpoint that if we, as Gibson suggests, accept as indisputable facts what natural science tells us, then we must also have a theory of truth that is independent of evidence which is why Gibson has no choice but to claim that "translation and physics are not on ontological par", and that "physics, as ultimate ontological parameter avoids the indeterminacy (lack of factuality) that plagues linguistics" (Thompson 2008: 123). However, it seems that this assertion would be empty unless it is also assumed that the emphasis on natural science or physics has a certain advantage; having in mind the ontology of nerve endings and in general, the ways in which ontology contains epistemology according to Gibson, it seems most plausible that in epistemological context, this advantage would consist in its ability to explain, by its own means, the way in which we acquire our beliefs about the external world.

In other words, the view that Gibson's naturalism is in its ultimate consequences a variant of reductive physicalism in the philosophy of mind is based primarily on the thesis that the assertion that there is no fact of the matter about translation, but that there is a fact of the matter about science would have no content unless we also assume the possibility of reducing mental states/events such as beliefs to their physical bases such as certain (physical) brain states. On the other hand, this is not the case in Quine's philosophy, or at least it is not necessarily the case, as evidenced by the fact that Gibson would in that case be forced (at least for the sake of a working hypothesis) to distinguish between mental and physical objects to which the former would be reduced to or explained by. In short, he would have to introduce an ontological asymmetry between the mental and the physical that does not exist in Quine's approach.

Namely, although Quine often oscillated in attitudes regarding the character of mental entities and events, having in mind the genetic approach as his final view and the dominant one (at least when it comes to conducting epistemological inquiry), it has to be concluded that mental entities

were for Quine equal to physical objects in their ontological status.[62] On the other hand, if it is true that in explaining the way we acquire our theory of the world Gibson argued only for the methodology of modern natural science, *viz*. reductive physicalism, then he would also have to rehabilitate mentalism from which Quine explicitly distances himself, and which, moreover, challenges his externalized empiricism. Therefore, I think it is unlikely that Quine ever had a theory of truth or factuality that would be independent of empirical evidence as attributed to him by theorists inclined to Gibsonian type of interpretation, if for no other reason than because that theory would be inconsistent with epistemological inquiry as he sees it, in short, with the genetic approach. However, if this line of argument is followed through, it will require drawing more radical conclusions about the nature of the relation between Quine's and Gibson's naturalism.

Namely, having in mind both the naturalistic-behavioristic thesis and the thesis on factuality of modern natural science, although Gibson advocated the approach that would concern only the latter, he also believed that there was a connection between behavioral and physical levels in epistemological inquiry. On the other hand, Quine also postulated continuity between behaviorism and (reductive) physicalism, as evidenced by the fact that although he thought that, because now we do not have "detailed knowledge of the structure of the human brain, and of particular events in particular brains more or less speculative answer, or at least a very incomplete answer [is] the best that we can hope for", he still believed that "we may, however, know enough about a brain and its workings to be able to make it plausible that the detailed story would be more of the same, an extension of our knowledge along the same [behavioristic, A/N] lines" (Hylton 2010: 97-98).

In other words, given the view that 'nothing happens in the world without some redistribution of micro-physical states', both Quine and some of his interpreters who, generally speaking, did not share Gibson's beliefs (Hylton) nevertheless believed in continuity between behavioral and

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[62] Although it is undoubtedly unlikely that mental entities could have any role in 'working a manageable structure into the flux of experience' as physical ones do - which explains the observed differences between them – since they are now also out in the open, accessible to inter-subjective techniques of inquiry, the same behavioral identity criteria that apply to physical objects would also apply to them. In short, we would be informed about both of them by the so-called observation sentences on which there is general agreement.

physical levels in epistemological research.[63] However, I argue that there can be no question of continuity, and that Quine advocated one type of interpretation of the program of naturalized epistemology, and Gibson another one.

First of all, if we take into account the ways in which ontology contains epistemology, and in general, Gibson's suggestions about factuality of modern natural science which strengthen our belief that explanatory models of this science would be for him the only acceptable ones in the context of epistemological inquiry, the question is *in what relevant sense* it could have anything to do with studying "the ways in which language-learners actually move from an understanding of simple observation sentences to an understanding of the more complex sentences (...) of which theories are constructed" (Dancy 1989: 236)?

In a word, although they both point out that the genetic approach is the best strategy we have for answering questions 'How are observation sentences acquired on the basis of sensory stimulation?', and 'How do observation sentences serve as evidence for theoretical sentences?', it is not clear what place the assumptions about nerve endings and even about truths that we are informed of by modern natural science such as neurophysiology could have in it. On the other hand, since the behavioral level would not require any assumption about facts that would go beyond the available evidence, it seems that there is no reason why Quine should argue – as he had – that there is no fact of the matter about translation but that there is a fact of the matter about science, and which would make him committed to reductive physicalism, as we have seen above. This is why I believe that there is no connection or continuity between these levels and that – having in mind primarily the genetic project that Quine advocated in carrying out epistemological inquiry – he did not need any assumption about facts that would be independent of evidence.

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[63] Thus, for example, although Hylton points out the difference between behavioral and physical levels in explanation of language, he also emphasizes that these "levels are linked. A behavioural account is an account in terms of dispositions to behaviour. Such dispositions are physical states of the organism (…). So behavioural account is also, by Quine's lights, a physicalistic account" (Hylton 2010: 106).

11. Defense of Quine's naturalized epistemology

Therefore, although they shared some common beliefs such as the necessity of naturalizing epistemological inquiry, I argue that there are sufficient grounds for concluding that Quine advocated one type of interpretation of the naturalized epistemology project and Gibson another type, and that there is no continuity between the assumptions on which these projects would be based. However, if it is really the case that Gibson had to opt for physicalism and Quine for behaviorism,[64] the question remains why and on what grounds has Quine argued that only one system of the world can be correct?

This is a very difficult question, as evidenced by Gibson's recognition that neither Quine's critics nor his defenders can agree on how to interpret the thesis behind his adoption of the sectarian and not ecumenical position – that there is no fact of the matter about translation, but that there is a fact of the matter about science. For example, when it comes to critics, there are scholars such as Chomsky who argue that language and physics should be epistemologically equal, since the criteria for evidence are the same for both, which is why it is not clear how Quine's ultimate position could be sectarian. On the other hand, although Rorty argues that 'there is a fact of the matter both about science and about translation', without going into his reasons, it seems that the consequence of such Rorty's view is also that Quine could not have genuinely held the view that only one system of the world can be correct.

In any case, it is evident that tensions do exist, and interpreters inclined to Gibsonian type of interpretation argue that the way out of this situation lies in answering the question of what Quine ultimately gives priority to: naturalism or empiricism, ontology or epistemology? In this regard, Gibson points out that the reason why authors like Chomsky asked "why there is a fact of

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[64] We should not think that abandoning physicalism and retaining more moderate behaviorism would imply that Quine abandoned at least minimal naturalism, especially if we have in mind that the requirement for introducing objective techniques of inquiry that characterize natural science would be met in this case.

the matter about physics and not a fact of the matter about translation, mainly because they have misunderstood Quine's arguments regarding this issue. Understanding the difference is a simple matter of understanding Quine's commitment to naturalism" (Thompson 2008: 121).

As we have seen, Gibson interpreted Quine's commitment to naturalism primarily as a commitment to the view that physics is the "final arbiter in answering the question of what reality is and what facts exist", which is why ontological or questions of truth should be given priority over epistemological or questions of evidence. However, although in one period Quine undoubtedly had a certain inclination towards naturalism, given other views he advocated, I believe that he never had nor could have had an inclination towards ontology and natural science that Gibson argued he had. When it comes to epistemological inquiry, in addition to the reasons I arrived at through critical analysis, other, more immediate reasons could testify to this which primarily concern Quine's views regarding "restrictions (...) which we cannot hope to escape in the foreseeable future", and which make us focus "on behavior rather than on brains" (Hylton 2010: 102).

In other words, even though Quine argued that "when we talk of mental states (...), we can rest assured that we are not just bandying words", i.e. that "there is a physical state of the matter, a fact ultimately of elementary physical states" (Quine 1979: 167), he thought about the physiological level in the way which I believe is the only correct one – "as unavailable for the explanation of language" (Hylton 2010: 102). However, while for Quine and his interpreters such as Hylton the physiological level is unavailable primarily because 'our knowledge is limited', that is, "given the complexity of the organ", there is a "difficulty of knowing in detail what is going on in a living brain" (Ibid., 102), I believe that, in the context of epistemological inquiry as Quine had to see it, it is in principle unavailable.[65] On the other hand, even if it turns out that I am wrong about this, there remains an important fact that Gibson's interpretation is profoundly inconsistent with some of the main principles of Quine's philosophy, and to show this, some conclusions reached at the beginning of Chapter 8 have to be recalled.

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[65] In this regard, it should be said that there are some observations in Quine's work that are in favor of this view. For example, he points out that there is a 'difference in the nature of the subject' that makes the physiological level unavailable for the explanation of language, i.e. he makes a point that "language is social and public", while its complete explanation in neurobiological terms "would be individualistic and eccentric" (Hylton 2010: 98).

Namely, since its adoption has been interpreted here as a prerequisite for adopting as a coherent the idea of any inquiry, including epistemological one (see, Chapter 8), I pointed out Quine's rejection of any infallible knowledge as one of the most important points of his entire philosophy. In this regard, I interpreted Quine's criticism of the positivist program from the perspective of its disagreement with fallibilism, which would result in reducing epistemological inquiry to adherence to the norm. However, since it seems that if we were to give priority to questions of truth over questions of evidence, we would thereby exclude the possibility of counterevidence, it is not clear in what sense there could be any inquiry in Gibson's case except in the broadest sense, which would certainly be unsatisfactory for Quine's standards.[66]

In other words, although Gibson's interpretation does not imply reducing our knowledge/beliefs to infallible reports on sensory impressions, but to certain (physical) brain states, I believe that it is very close in its main features to the strategy of logical positivists, as evidenced, *inter alia*, by the fact that both programs rejected Cartesian skepticism as meaningless (although on different grounds). On the other hand, we have seen that there are viewpoints that accept Cartesian skepticism, and these include both Kim's and Stroud's views, as well as contextualism. However, although with regard to these programs one could speak of the existence of counterevidence, and thus, also of inquiry, since this evidence would include the possibility of error that, except for the skeptical ones could be neutralized by the usual verification procedures, I believe that they would also have to include the assumption of the existence of truths independent of any evidence. This brings us to an extremely important point in this discussion.

Namely, although the above approaches have been divided into two groups based on the differences between them, I believe that they would have to share a thesis about the existence of a world independent of our beliefs, which is why, in Quine's terminology, the questions of truth in each of them should be given priority over the questions of evidence. In other words, despite the significant differences, I believe that *the unifying characteristic of these programs is that they are realistic*, and since Gibson's approach has been the last resort when it comes to

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[66] This would probably not be the case if there was continuity between the behaviorist and physicalist levels of epistemological inquiry, but as shown in the previous chapter, I believe that there can be no such continuity.

interpreting Quine's proposal in this way, it seems that there is no other option but to try to interpret it in an anti-realist manner.

It has been already indicated that my task here would consist in trying to show whether an epistemological program is possible which would not assume the existence of a world independent of our beliefs (see, Chapter 8), and in which questions of method and evidence would have a dominant place (see, Chapter 5),[67] but the advantage is that I tried to define Quine's empiricism which would thus come to the fore as anti-realist from the beginning (See: Chapter 4). However, not only will this classification of Quine's view into anti-realist camp have to be explained in more detail, the important question here is whether it makes sense to sacrifice a good part of his philosophy for the sake of this interpretation, as it seems to be necessary in that case.

I should point out straight away that this move does not seem to be wrong in any sense when it comes to the whole of Quine's philosophy any more than the one which Gibson has made in giving priority to questions of truth over questions of evidence. On the other hand, I believe that Quine's realism is specific and limited in scope, which is why I concur with Chomsky and Rorty who argued that, given other views that Quine advocated, he could not have genuinely held the view that there is a fact of the matter about science but not about translation. Moreover, it is more than uncertain whether Quine ever had an inclination towards ontology and modern natural science that Gibson's interpretation implies, as evidenced by the fact that some scholars who followed Gibson, generally speaking, eventually attributed to him a view which, in my opinion, cannot be sectarian in any sense.

Namely, although Thompson advocated the interpretation according to which "whatever facts there happen to be is going to be determined by physics" (Thompson 2008: 122), when it comes to advocating the sectarian position, he came to the conclusion that 'questions of truth and falsity

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[67]The basis for this assumption can be found, *inter alia*, in the fact that only in this case would Quine's project make sense, because otherwise – i.e. if questions of truth are given priority – this fundamental level of inquiry to which Quine would have to aspire with his proposal would be called into question. On the other hand, although it would no doubt be preserved in approaches that tolerate (Cartesian) skepticism, one should not forget that these approaches imply speculative methods of inquiry that Quine intended to eradicate from epistemological inquiry.

for Quine should not even arise about foreign global theories', or that foreign global theories would have to be, if not false, then certainly meaningless from his perspective : "At times, Quine explains the sectarian position as the claim that one of these theories is true, while the other is false. However, in his final account, he claims that the other theory is meaningless until we enter it. I think this latter position is the correct position for Quine to hold. If Quine takes his naturalism seriously, he should only be assigning truth-values from within his current global theory of the world" (Ibid., 114).

Therefore, Thompson argues that from the perspective of Quine's realism, rival theories should be meaningless rather than false, and his interpretation is an example of the disagreement not only among critics, but also among Quine's defenders that Gibson complained about – disagreement over the interpretation of the thesis that there is no fact of the matter about translation, but that there is a fact of the matter about science. Nevertheless, I believe that this would be a truthful account of realism that Quine advocated (the so-called robust realism), to which I have nothing to add except to note how difficult it is to say in what way such a view could be realist in the sense Gibson implies.

In other words, I believe that Quine's realism cannot be in any sense strictly associated or identified with natural science as it is commonly understood and as Gibson understands it; the strongest argument for this is that even when naturalism prevailed in Quine's philosophy, he never completely gave up some empiricist and instrumentalist (anti-realist) views.[68] However, before I bring these views to the fore in an attempt to defend Quine's interpretation of the epistemological project, it is necessary to say more about the methodological basis on which they will be implemented.

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[68] I called for caution in this matter, i.e. in the matter of interpreting Quine's realism in Chapter 6, where I pointed out that Quine never completely abandoned holism, but also never managed to separate on more solid grounds (modern) natural science from science in general and from commonsense assumptions (see, Chapter 6).

11.1. Underlying mechanisms of language learning

Like most Quine's interpreters, I believe that the genetic project is the best strategy we have for investigating the relation between evidence and theory; nevertheless, I will try to defend naturalized theoretical epistemology from the standpoint that it is "pretty much indistinguishable from cognitive science, the scientific study of cognition and of information-processing in general" (Wrenn 2008b: 83).

Generally speaking, 'cognition' is a common term for psychological processes that concern acquisition, organization, and use of knowledge; since for Quine knowledge is "embodied in language" (Hylton 2010: 11), it follows that in epistemological inquiry, the term 'cognitive' would primarily refer to psychological processes, or to the underlying mechanisms of language learning, as I will call them below.

There are several reasons why I opt for this type of interpretation. Namely, not only would interpreting Quine's project as a project that focuses on the inner mechanisms of language learning be consistent with his empiricist views (which will be addressed below), it seems that it would also neutralize objections such as Stroud's. On the other hand, and perhaps more important than anything else, this interpretation, if plausible, would solve the problem of circularity which I have identified as the most difficult problem faced by Quine's proposal. However, since the externalization of empiricism was a prerequisite, and behavioral psychology a medium for conducting epistemological inquiry (the genetic project),[69] the question is how to move from behavioral to cognitive psychology in these inquiries?

In other words, given Quine's emphasis on behavior as well as distrust of any form of mentalism that the thesis on inner mechanisms seems to imply, the question is whether Quine left room for this type of explanation. To answer this question, it should first be noted that, although

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[69] "The externalization of empiricism amounts to focusing on the relation between observation sentences and stimuli and the relation between these same observation sentences and theoretical sentences. (...) In the former case sentences are conditioned to other sentences, in the latter case sentences are conditioned to other sentences. (…) Behavioral psychology is the medium for this inquiry" (Gibson 1988: 82).

Quine advocated an approach which, generally speaking, does not imply a hypothesis about the inner mechanisms of language learning, such a hypothesis would not necessarily be incompatible with his epistemological (genetic) project. On the other hand, it seems that Quine himself left open the possibility of formulating it, as evidenced by the condition that, even if we were to assume the existence of something like the inner mechanisms of language learning, these mechanisms are "bound to conform to the behavioral character of language learning: the dependence of verbal behavior on observation of verbal behavior" (Quine 1970: 4). However, it should also be pointed out that it is commonly believed that the only inner mechanisms which Quine could accept are those concerning 'a physical make-up that the organism arrives in the world – a brain and nervous system in particular' (see, Hylton 2010: 106).

As I have already noted above, Quine saw our knowledge embodied in language, which is why experimental situation for studying the way we acquire it is the situation in which a child finds himself when acquiring language. In this respect, Quine distinguishes between two general methods that the child uses in the process. The first is the method of ostension which refers to the learning of a primitive vocabulary of observation sentences, developed from the observation of adults' verbal behavior and their approval or disapproval of the child's attempts to independently respond to non-verbal stimuli. On the other hand, the method that concerns acquiring higher, theoretical levels of language/science would be the so-called analogic synthesis, which would, generally speaking, involve "parts of sentences already learned" (i.e. observation sentences, A/N) that the child "linked together to build new sentences, the function and placement of those parts being determined by analogy with their function and placement in previous sentences" (Gibson 1988: 3).

Thus, since the analogic synthesis would be adopted based on the successful adoption of the method of ostension which would, in turn, be based on acquisition of the mechanism of conditioned response to non-verbal stimuli, if we interpret the whole process from the perspective of a hypothesis about the inner mechanisms that Quine could accept, it means that the way in which the child would respond to stimuli and thus acquire language would imply "changes in its make-up" which would lead to "changes in the way it will react to future stimulations, either by overt responses or by forming yet further dispositions" (Hylton 2010: 106). However, since it has been shown in the previous chapter that there is no relevant

connection between the behavioral and physical levels, it is not clear how the inner mechanisms concerning biological facts, although not necessarily incompatible, could be consistent with the behaviorist character of language learning, and thus undertake the desired transition from behavioral to cognitive psychology in epistemological inquiry. On the other hand, while Hylton argues that these mechanisms are the only ones that Quine could have accepted, the fact is that he provides a basis for a different interpretation of what they would refer to.

Namely, Hylton points out that the child would first have to acquire cognitive language as a prerequisite for learning a language. However, since 'not every noise that we emit is part of our cognitive language' but only sentences that are somehow connected with sentences which 'respond to sensory stimulations', this means that the acquisition of (elementary) cognitive language for Hylton goes "hand-in-hand with acquisition of at least a rudimentary theory of the world" (Ibid., 82). Since this rudimentary theory primarily concerns learning of a primitive vocabulary of observation sentences, Hylton defines cognitive language as a language which 'issues in predictions of observation sentences', or at least 'plays some sort of role in such predictions': "A sentence counts as cognitive if it is a necessary element in a significant body of sentences which, taken as a whole, issues in predictions of observation sentences and is answerable to the success of those predictions" (Ibid., 14).

Therefore, pointing out that "integral part of the (epistemological, A/N) enterprise is to show what it is for some noises to amount to cognitive language, potentially true of the world" (Ibid., 81-82), Hylton suggests the possibility of a kind of non-physicalist interpretation of the inner mechanisms that would be consistent with the behaviorist character of language learning: "We respond to sensory stimulation in all sorts of ways: brain cells fire, chemicals are released into the bloodstream, the blood pressure rises or falls, and so on. None of these responses, however, are even candidates for being part of language. Cognitive language consists of public responses to stimulation, responses which can and sometimes do affect others" (Ibid., 114). However, although he assumes the existence of these mechanisms – as evidenced (apart from the belief that such mechanisms 'must surely be present') by the use of term 'cognitive' in defining the segment of language which the child has to acquire before any other – the truth is that there is nothing in Hylton's interpretation that would make epistemological inquiry an inquiry into psychological processes. The reason for this is primarily that the mechanisms which Hylton talks

about are purely *acquired* or *a posteriori*, and as such, *only added as consistent with the existing methodological basis*.[70]

In other words, to bring to the fore questions about the inner mechanisms of language learning, and thus, make epistemological inquiry indistinguishable from the scientific study of cognition and information-processing in general, it seems that, in addition to the thesis about the acquired mechanisms, we also need a hypothesis about the so-called *innate or a priori mechanisms of language learning* – although like the acquired ones, these mechanisms cannot concern the biological facts which we are born with.[71] However, since both Quine and Hylton assume continuity between different language levels or segments, the question is on what grounds can such a hypothesis be based?

Even though, according to Hylton, the segment of language that the child should learn first is not the one that is directly connected with fixed ranges of nonverbal stimulation, but the one which 'issues in prediction of observation sentences', Hylton believes, like Quine, that the acquisition of theory is a process that takes place simultaneously with the acquisition of language, and which implies a kind of continuous growth – from more elementary to increasingly complex concepts. However, although no one will contest this continuity or the phased nature of the process described by Quine and Hylton, scholars such as Mi and Gibson point out that the method built on the model in which observation sentences play such a crucial role "does not carry the child very far in his learning"; thus, the question is "how, then, does the

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[70] After all, Hylton himself admits this. Namely, although he says that "a sentence counts as cognitive if it is a necessary element in a significant body of sentences which, taken as a whole, issues in prediction of observation sentences", he adds that "because of the vagueness of 'significant' this is not a usable criterion of the cognitive" (Hylton 2010: 14). In addition, Hylton's explanation is somewhat circular since he argues, *inter alia*, that "by seeing what has to be learned in order for the infant to acquire cognitive language, we see what cognitive language is" (Ibid., 82).

[71] This is, in my view, precisely the case with Gibson's interpretation. Namely, although we come to the facts concerning our physical constitution *a posteriori*, i.e. through scientific inquiry and observation, as a result of giving priority to questions of truth over questions of evidence, or more specifically, by excluding the possibility of any counterevidence, truths or facts which Gibson talks about would have to be interpreted as *a priori* dispositions.

child learn to formulate and appropriately respond" to the sentences that "are not tied, even derivatively, to any fixed ranges of nonverbal stimulation?" (Gibson 1988: 3).[72]

In other words, by pointing out that there is a big leap from learning a primitive language to learning a theoretical language which no hypothesis about *a posteriori* mechanisms can explain, Mi and Gibson argue that, in addition to the thesis about the acquired mechanisms, a hypothesis about the so-called innate or *a priori* mechanisms of language learning should also be introduced into epistemological inquiry. In this regard, although Quine may not have brought it to the fore, he also did not deny the fact that, apart from continuity, language acquisition also includes "irreducible leaps of analogy which, if traced backward, will not reveal a smooth derivation of theoretical language (...) from observational language" (Ibid.) as evidenced by the fact that he sometimes calls the method which concerns the acquisition of these higher, non-observational language levels analogic synthesis, and sometimes the hypothetico-deductive method.

Although, generally speaking, both methods refer to the learning of the same segment of language, there is an important difference between them which is that, unlike the analogic synthesis, the hypothetico-deductive method concerns "a speculative inquiry into the linguistic mechanism of objective reference which could be seen as representing a major leap from the learning of primitive language towards the learning of theoretical language" (Mi 2007: 122). On the other hand, the fact is that neither Quine nor his interpreters have said much to refer to when it comes to efficiency of this method, but what they have said will be useful here.

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[72] In other words, although for Hylton the segment of language that the child should learn first is not the one which is directly connected with fixed ranges of nonverbal communication, but the one which 'issues in prediction of observation sentences', learning of a primitive vocabulary of observation sentences would be of key importance for him, as evidenced best by the claim that the acquisition of (elementary) cognitive language would have to go hand-in-hand with the acquisition of at least a rudimentary theory of the world.

11.2. Quine's empiricism and coherentism

Therefore, instead of investigating the relation between evidence and theory, Quine's proposal for naturalizing epistemology will be interpreted as a project that focuses on psychological processes related to language acquisition. The prerequisite for this is that, in addition to the thesis about the acquired mechanisms, a hypothesis about the so-called innate or *a priori* mechanisms of language learning will also be introduced into the inquiry.

Contrary to popular belief, Quine had certain views about these mechanisms which do not concern biological facts, as evidenced by the fact that he postulated the hypothetico-deductive method as a method that aims to "account for the learning of language that lies beyond the range of ostensive learning and simple analogical learning" (Ibid., 122). However, since in reconstructing the way in which we acquire a theory of the world he primarily advocated an approach which, generally speaking, does not require any hypothesis about the inner mechanisms of language learning, the question here is whether referring to the hypothetico-deductive method is a sound basis for interpreting Quine's program as a program that focuses on the inner mechanisms of language learning.

To answer this question, first it should be pointed out that it is not clear how this interpretation would be a departure from what Quine defined as the most important mission of epistemology as a discipline, i.e. to give an answer to the question of how we acquire our theory of the world. On the other hand, although the view that observation sentences are directly correlated with the real world and provide evidence for theoretical sentences is incompatible with this type of interpretation, this view was not predominant in all phases of Quine's philosophy, not even when it comes to the reform of epistemological inquiry.

In fact, the thesis that a sentence is observational "if our verdict depends only on the sensory stimulation present at the time" (Quine 2008a: 534) was, as we know, predominant only in Quine's later philosophy when he advocated genetic approach in studying the way we acquire our theory of the world. However, in the phase that preceded it (which we associate with the period following the criticism of the positivist program of rational reconstruction of knowledge), Quine advocated the view that statements, including observation sentences, do not have their

own empirical content or a set of empirical consequences. Moreover, in the article "Epistemology naturalized" which is Quine's first significant contribution to the reform of epistemological inquiry, he argues that our judgment about whether a sentence is observational cannot depend only on the stimuli to which we are exposed at a given moment, but also on the accompanying information that we already have: "The very fact of our having learned the language evinces much storage of information, and of information without which we should be in no position to give verdicts on sentences however observational" (Ibid., 85-86).

Therefore, although Quine eventually adopted a notion of observation sentences similar to the positivists' one – i.e. as sentences that are directly correlated with the world – the fact is also that Quine began his project of reforming epistemological inquiry in a phase when his philosophy was still dominated by empiricist and holistic views. However, one of the problems related to the ideas that he presented in this period is that they remained insufficiently developed, or, as Stroud says, that Quine was "more concerned with recommending and sketching the outlines of a naturalized epistemology than with carrying it out in detail" (Stroud 1984: 219). Nevertheless, I believe that one of the tendencies present in them is in line with the interpretation that I argue for, which is why this attempt could also be described as bringing to the fore precisely the views which are justifiably considered to had been suggested by Quine before they were abandoned, and which mainly concern his empiricist postulates. However, since the common view is that the return to empiricism in Quine's work also entails epistemological coherentism (Dancy), first I need to disassociate myself once more from the model of justification that I believe to be unacceptable for him, according to which our beliefs do not gain support from the relation to the world, but through the relation in which they stand to other beliefs within the system.

Namely, since the relation between scientific theory and observations used to support it can be revealed from two aspects, that of epistemology and that of semantics, let us recall that Quine pointed out that our belief system must establish a semantic connection with our linguistic system, but also an epistemological connection with our epistemic system (see, Chapter 5). With this in mind, the reason I find the coherentist model of justification, whether Neurath's or Davidson's unacceptable to Quine is that it gives up the epistemological aspect which implies the idea of the world, or more precisely, *truths independent of our beliefs*, which is why even its supporters cannot meet the requirement for maintaining the connection between these systems.

However, since he did not give up either the concept of truth on the one hand, or the concept of coherence on the other hand, but also did not attribute central importance to either of them, the question is what remains an alternative for Quine?

Given that, in Quine's view, empiricist verification theory is 'the best bridge' connecting our linguistic and epistemic systems (see, Mi 2007: 119), it is usually believed that the answer to this question should be sought in Quine's adherence to verificationist procedures. However, since verificationism characteristic of Quine's empiricist phase implies that the 'unit of meaning is large', or that 'a whole theory or at least a big part of a theory' must pass the test of sensory evidence (see, Misak 1995: 138), this is a model of justification that coherentists could also refer to, especially since it is not clear how sensory evidence could be against a belief which is coherent with the rest of the system.[73]

In a word, the question is how to preserve holism and at the same time not succumb to the coherentist model of justification which I believe to be unacceptable for the above reasons. To answer it, it may be helpful to point out that the views regarding the reform of epistemological inquiry that Quine presented in this period draw on the views that will be held by Michael Dummett later on, who believes that the central concept in the theory of meaning is not the concept of truth – or coherence, for that matter – but rather verification. However, we shall also see that Dummet's view has certain characteristic features that make his approach significantly different, but also that Quine could have and should have adopted these features – at least when it comes to the way I interpret his epistemological project, by relying predominantly on his empiricist postulates.

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[73] This is, in my view, precisely the case with Davidson's approach, although he did not, strictly speaking, refer to verificationist procedures. Namely, not only does he argue that the coherence theory "is not in competition with a correspondence theory", Davidson goes a step further and claims that "coherence yields correspondence" (Davidson 1986: 307). Thus, he also points out that Quine's demand that "a hypothesis, in order to be legitimate, must be a part of a theory which answers to sensory evidence for and against it" (Misak 1995: 138) loses its strength, because the concept of sensory evidence on which it rests is also included in the belief system that we presuppose to be coherent; see: Davidson, Donald, *A Coherence theory of truth and knowledge*.

11.3. Dummett's argument from the acquisition of language and holism

Thus, although in his empiricist phase Quine has argued that our statements cannot be justified by comparison with the world they are about, even then, in the context of conducting epistemological inquiry, he did not give up verificationist procedures, "for epistemology remains centered as always on evidence, and meaning remains centered as always on verification" (Quine 2008a: 536). With this in mind, given that Quine gave priority to questions of truth in his naturalistic period, it may be expected that he would have done the same in his empiricist period when it comes to questions of evidence.

However, the reason why Quine did not take this step is that, as we have seen, verification is not particularly helpful when the unit of meaning is the entire language or science, and when we are forced to keep a balance between questions of truth and questions of evidence which results in the adoption of the coherentist model of justification. In other words, although Quine argued that evidence is verification, it seems that in order to preserve verificationism, he had to opt for giving priority to questions of truth as well, which he eventually did by adopting naturalism – although not necessarily in the way Gibson has suggested. However, Michael Dummett has shown that it is possible to give up the concept of truth as a central concept in justifying our statements, and at the same time remain faithful to verificationist procedures.

Namely, like Quine, Dummett also investigated the ways in which we acquire language, but since he did not claim that our theory of the world is contained in it, his aims in this matter cannot be said to be epistemological. In any case, the view advocated by Dummet is known as 'argument from the acquisition of language' and it implies referring to "evidential conditions (...) under which the speaker is warranted in accepting the statement in question" (Misak 1995: 119-120), conditions which cannot go beyond what we can observe, but can go beyond the conditions under which the sentence is true: "[Dummett] holds that one must either take truth (and truth-conditions) as the core notion of meaning or take verification (and verification-conditions) as the core notion. He opts for the latter and sees that his task is then to 'either jettison the notion of truth altogether, or seek to explain it in terms of the core notion of verification'. His choice is to refuse to draw a distinction between the concept of truth and that of assertability" (Ibid., 147).

Therefore, although Dummett's interests could not be said to be epistemological in character, just like Quine, he investigated the paths we take when we acquire language. However, what Dummett primarily tried to do by refusing to make a distinction between the concepts of truth and verifiability, and which is one of the specific features of his approach, is to formulate a theory that aims to give an answer to the question 'What a speaker knows when he knows a language?'. Since he points out evidential conditions according to which, *in order to be adopted, a concept must be connected with experience that the learner can have*, in his answer Dummet associates meaning with verification, i.e. *with evidence that justifies assertion of the sentence*: "The grasp of a concept must be acquired by acquiring dispositions to fit one's utterances with evidence. We come to understand a concept by learning when, i.e. under which evidential conditions, it is appropriate to apply it. This argument – an argument from the acquisition of language – leads directly to verificationism" (Ibid., 121).

In other words, pointing out that "an understanding of a statement consists in a capacity to recognize whatever is counted as verifying it" (Dummett 1976b: 110), what will enable Dummett to give up the concept of truth as central but not verificationist procedures is the fact that "the central notion in [his] theory of meaning is clearly tied to the speaker or understander" (Misak 1995: 119). On the other hand, to support the thesis that Quine not only could, but also had to refer to a theory that highlights evidential conditions under which a statement is acceptable and which would or could go beyond the conditions under which it is true, the fact is that in his empiricist phase he pointed out that "we must relax our definition of observation sentences to read thus: a sentence is an observation sentence if all verdicts on it depend on sensory stimulation and on no stored information *beyond what goes into understanding the sentence* (emphasis added)" (Quine 2008a: 535).

Thus, not only do they both "agree (...) that whatever there is to meaning must be traced back somehow to experience, the given, or patterns of sensory stimulations" (Davidson 1986: 313),[74] my view that Quine's approach had "all of the ingredients for the acquisition argument upon

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[74] This is evidenced by the fact that Quine also believed that language acquisition is 'entirely a matter of acquiring a set of dispositions to fit one's utterances to observable situations', and that the native speakers, just like the field linguists "has to go on the encouragement and discouragement of their utterances in observable situations" (See: Misak 1995: 133-134).

which Dummett's verificationism rests" (Misak 1995: 133) is based, *inter alia*, on the fact that he also had to determine *what it is that goes into an understanding of a sentence*, be it observation sentence or not. However, the problem here are quite different understandings of what this could be, because for Dummett a sentence "possess an individual content which may be grasped without a knowledge of the entire language" (Dummett 1978: 302), while Quine argues that only an entire language or theory can possess it.

It has already been discussed above how Quine's standpoint leaves room for different interpretations, but also that it would be most accurate to interpret the unit of meaning presupposed by his holism as a comprehensive theory of the world that is implicitly contained in language. On the other hand, although Dummett takes "inferential connections between statements to be relevant to the explanation of the meaning of most statements" (Misak 1995: 136), he points out that "individual sentences carry a content which belongs to them in accordance with the way they are compounded out of their own constituents" (Dummett 1978: 222), and that, generally speaking, "one knows the language by knowing the meaning of each sentence of the language taken separately" (Ibid., 378). With this in mind, Dummett can be seen as the successor to the atomistic tradition that Quine rebelled against, and who expressed serious doubt that 'the kind of strong holism' to which Quine once adhered could provide "a credible account either of how we use language as an instrument of communication, or how we acquire a mastery of language" (Dummett 1973: 598).

The reasons why it is commonly believed and why Dummett also believed that holism cannot provide a plausible explanation of how we acquire language competence mainly concern drawing attention to the fact that "no one knows an entire language and, on the holistic view, it seems to follow that no one knows the meaning of any sentence" (Misak 1995: 136). Although this observation is perfectly correct in my view and does not need further explanation,[75] it should be noted that I do not intend to interpret Quine's holism in the way it is commonly done in which it is susceptible to this type of objection. In other words, given the goals set here, I believe that

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[75] "I cannot know anything that a man believes until I know (or guess) everything that he believes" (Dummett 1973: 599).

verificationism which Dummett refers to can become part of a modified holism that I will attribute to Quine, but to achieve this, I have to go back to the basics of this interpretation.

11.4. Verificationism, cognitive language and the hypothetico-deductive method

As noted above repeatedly, in his most elaborate approach to the way we acquire our theory of the world, *viz.* the genetic project, Quine pointed out that in learning language we actually learn the truth conditions of sentences, where "ranges of nonverbal stimuli become evidence for the truth (i.e. justification) of various observation sentences, and these sentences, in turn, become evidence for theoretical sentences" (Gibson 1988: 82).[76] However, the problem with this type of interpretation as we have seen is that it is inconsistent with the insight that, apart from continuity, language acquisition also includes irreducible leaps of analogy which speak in favor of the existence of the so-called innate or *a priori* mechanisms of language learning, in addition to the acquired ones. In this regard, what gave me the impetus to interpret Quine's project as a project that focuses on the inner mechanisms of language learning was that he postulated the hypothetico-deductive method which aims to explain the acquisition of the segment of language 'that lies beyond the range of ostensive learning and simple analogical learning', and for which it would be plausible to assume that it concerns innate mechanisms of language learning.

However, having said that neither Quine nor his interpreters left much to refer to when it comes to efficiency of this method, there are doubts as to whether its emphasis is a sufficient basis for the interpretation I am advocating here. Nevertheless, what is important when it comes to the hypothetico-deductive method (on which both Quine and his interpreters mostly agree) is

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[76] We have seen that Hylton basically believed this too, even though, generally speaking, he argued for a somewhat different interpretation: "For observation sentences (…) the point is more or less straightforward. They are 'the link between language and the real world that language is about'. This link is vital both for the child's acquisition of language and for the fact that the finished theory is answerable to evidence, and thus about the world" (Hylton 2010: 95).

that it is a method that is "dominating our acquisition of higher reach of language" where it is "doomed to work as a whole – as a man made fabric of sentences variously connected to one another and to non-verbal stimuli by the mechanism of conditioned response" (Mi 2007: 123). With this in mind, I believe that, in a phase when his philosophy was still dominated by empiricist views, Quine could have adopted the idea that the whole of language which it concerns functions on an unconscious level, and thus implies innate or *a priori* mechanisms of language learning.

Generally speaking, my modification of Quine's holism indicated above consists precisely in attributing this idea to him. However, even though, as we shall see below, Quine gave certain, important indications based on which it could be concluded that he left some room for this idea, the truth is that Quine never adopted it. The reasons for this should be sought primarily in the fact that it would have entailed even more decisive abandonment of verificationist procedures than in the case of giving priority to questions of evidence over questions of truth. Nevertheless, when it comes to investigating the way we acquire our theory of the world, in retrospect, I believe that this idea could, apart from preserving holism (albeit in a slightly modified form) be supported by a version of verificationism – precisely the one that Dummett argued for.

In other words, instead of a project of reconstructing the way in which we acquire our theory of the world and which centers on the truth of observation sentences, my intention is to interpret Quine's program as a program aimed at postulating a tenable hypothesis about innate mechanisms of language learning. On the other hand, this does not mean that I am giving up the genetic project *per se*, although it might seem that way; I adopt primarily the hypothesis *about the phased nature of the learning process* that Quine and his interpreters pointed out, which I believe to be compatible with the interpretation that I will argue for: "Holism sets in when simple induction develops into the full hypothetico-deductive method" (Quine 1986: 364). In this regard, in order to present the standpoint that I want to take in interpreting Quine's project which would involve drawing on Dummet's view, I believe it will be crucial to contrast my interpretation with the interpretation advocated by one of Quine's most prominent critics.

Namely, let us recall that Stroud pointed out, given the bi-partite conception of human knowledge Quine is committed to, that the major drawback of his program is that he cannot answer the question which should be fundamental in epistemological context, namely 'How is

our knowledge of the world possible?'. However, since it turns out that in Stroud's case this question is indistinguishable from the question 'How can we know that our knowledge/beliefs about the world are true?' (see, Chapter 9), his criticism mainly boils down to Quine's failure to answer the first question simply because he cannot answer the second one. In this way, Stroud associates Quine's program with the Cartesian program which has the same problem, thereby assuming that Quine's approach centers on validation of our knowledge claims; but we have seen that this is not true, because verificationist procedures that Quine refers to play quite a different role in his program than they do in Cartesian-inspired programs.

In other words, drawing attention to the assumed gap between meager input and torrential output that makes Quine unable to answer the question 'How can we know that our knowledge/beliefs about the world are true?', Stroud completely ignores (as already noted by interpreters like Mi and Gibson) the genetic strategy that Quine uses in answering what he believes to be the central epistemological question, i.e. the question of how we acquire our theory of the world. However, although this fact makes Quine's program significantly different from the Cartesian, it seems that *as long as the concept of truth is at its center, and Quine and his interpreters do not find more solid foundation for epistemological inquiry than behaviorism*, critics like Stroud will have reason to question any of the beliefs which they claim to be true by referring to non-verbal stimuli.

Thus, even if Quine's program is not interpreted as an investigation into the relation between meager input and torrential output, but rather into the way in which we adopt our theory of the world, the problem of circularity remains which behaviorism based on it cannot solve; this is, in my view, the key reason why that program is open to interpretations like Stroud's.[77] However, if we were to reverse everything noted above, so to speak, and instead of the idea of observation sentences and their truth assume that the central thesis is that the level on which language functions as a whole concerns unconscious psychological processes, I believe that not only

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[77] This problem could be presented in the following way. Namely, as long as there is an ontological symmetry between behavior in observable circumstances on the one hand, and mental entities or events such as beliefs on the other hand (as there is in Quine's case) it will not even be clear which of the two should have priority, that is, whether mental entities should provide evidence for behavior, or behavior should provide evidence for mental entities.

would Stroud's demands be discredited, but this would also provide a basis for showing that verificationism which Dummett has in mind, and the thesis about the innate mechanisms of language learning which I highlight can go hand-in-hand.

As expected, the first step in this direction would be to eliminate the privileged status of the so-called observation sentences; in this regard, I believe that Quine's view that sentences which are directly connected with non-verbal stimuli are "the ones we are in position to learn to understand first, both as children and as field linguists" (Quine 2008a: 536) is only semi-correct, i.e. that it accurately describes only the situation of a linguist who already has a certain *ontology*. On the other hand, when it comes to a child who does not have it, it seems that the initial phase should characterize the adoption of certain beliefs "whose ontological involvement", as Quine puts it, "runs deep" (Quine 1957: 9), and which, in addition to statements that are directly correlated with the world, would also imply certain statements that are not.

In other words, given that I want to interpret Quine's project as a project that concerns cognitive psychology, although I argued that Hylton's interventions in this regard were neither clear enough nor radical enough, I believe that in his approach to the problem of "how the ability to use cognitive language – to emit the appropriate sorts of noises – is or might be acquired" (Hylton 2010: 82) he did make one important distinction: "Not every noise that we emit is part of our cognitive language. The distinction between relevant and the irrelevant here cannot be taken for granted. On the contrary: an integral part of the enterprise is to show what it is for some noises to amount to cognitive language, potentially true of the world" (Ibid., 81). However, since Hylton defined 'the relevant' primarily as acquisition of the ability "of emitting noises which have the right sort of relation to stimulations and to other noises" (Ibid., 82), this will result in cognitive language being virtually indistinguishable from language in general. In this respect, I am tempted to define cognitive language as the segment of language whose ontological involvement runs deep (to use Quine's terminology), but which would, to draw on Hylton's interpretation and his distinction between relevant and the irrelevant, refer to the acquisition of the so-called rudimentary theory of the world: "By seeing what has to be learned in order for the infant to acquire cognitive language, we see what cognitive language is, what it amounts to. (...) Acquisition of elementary cognitive language, on this account, goes hand-in-hand with the acquisition of at least a rudimentary theory of the world" (Ibid., 82).

Therefore, apart from ruling out many observation sentences as relevant, it can be noted that the interpretation I am arguing for – according to which cognitive language and a rudimentary theory of the world are practically identified, rather than going hand-in-hand – also entails the introduction of certain theoretical statements when it comes to initial steps that the child takes in acquiring language, and thus theory of the world. On the other hand, it seems that these statements would refer, given the assumed fundamental character that would no longer concern the direct correlation with the world, but the assumption that their ontological involvement runs deep, precisely to the statements that Peirce and Wittgenstein claimed, in their own way, to have a special status in our belief system.

Namely, I have already noted that some of Quine's predecessors offered essentially pragmatist solutions for neutralizing Cartesian demands that Stroud has in mind in interpreting Quine's program; I refer here primarily to Pierce and his idea of so-called background knowledge that would be immune to doubt because doubt about it would block any inquiry (See: Chapter 7). A while later, Ludwig Wittgenstein developed this thesis further by pointing out that there are statements "which we affirm without special testing; propositions, that is, which have a peculiar logical role in the system of our empirical propositions" (Wittgenstein 1972: § 136). As some of the examples, Dancy lists statements like "that [we] have two hands, that men do not fly to the moon, that the sun is not a hole in the sky, that the earth has existed during the last century and that our hands do not disappear when we are not paying attention to them" (Dancy 1989: 83). With this in mind, it seems that in modifying Quine's genetic project which I am undertaking here, the statements whose examples Dancy lists and which have a special logical role in the system of our statements are precisely the statements that concern the rudimentary theory with which the learning process begins.

However, although I believe that, at least when it comes to the situation in which the child is when he starts to learn a language, these statements quite accurately describe the rudimentary theory that he would have to acquire first,[78] the assumption that they require no justification and

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[78] It can be observed that, given that they are directly correlated with the world, some of these statements belong to the so-called observation statements, while others – which concern higher, non-observational language levels – are the so-called theoretical. However, since the adoption of a belief such as that the sun is not a hole in the sky which, as a statement, would be a highly theoretical statement for Quine would have the same place or, at any rate, would

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to which they owe their special status would in no way protect us from criticism such as Stroud's. Accordingly, instead of saying that this first level would include statements which do not require justification, in the context of current discussion and the attempt to link Quine's with Dummett's view, it seems more appropriate to say that *the so-called principle of bivalence* which Dummett uses to demarcate realist approaches such as Stroud's from anti-realist ones such as his, *does not apply to them*: "The touchstone of realism ought to be whether it is held that we possess a notion of truth for statements of the given class relative to which they satisfy the principle of bivalence – the principle, namely, that every statement is determinately either true or false" (Dummett 1996: 379).

Therefore, instead of the assumption that statements which children 'learn to understand first' are statements which require no justification, and which, *at least from the epistemological perspective*, we should take on faith, I opt for the interpretation that these are statements to which Dummett's principle of bivalence would not apply.[79] However, we should keep in mind that the reason for this is not that this approach, unlike Pierce's or Wittgenstein's would protect us from Stroud's criticism – because it would not – but above all that this interpretation would be consistent with the idea that I argue for and which, in my opinion, is the only one that could do so.

In other words, in order to discredit Stroud's demands, as repeatedly pointed out above, it is necessary to postulate as autonomous the fundamental level of inquiry such as epistemological which would thus rest on completely different assumptions than the ones on which Cartesian approaches rest. In this respect, since I want to turn things around in interpreting Quine's genetic project and propose as his primary goal, instead of reconstruction of the way in which we acquire

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be very close to the adoption of a belief that we have two hands, this should support my hypothesis that a certain combination of *relevant observation and theoretical statements* constitutes this initial stage in language learning which we define as a rudimentary theory of the world.

[79] "The very minimum that realism can be held to involve is that statements in the given class relate to some reality that exists independently of our knowledge of it, in such a way that that reality renders each statement in the class determinately true or false, again independently of whether we know, or are even able to discover, its truth-value. Thus realism involves acceptance, for statements of a given class, of the principle of bivalence, the principle that every statement is determinately either true or false" (Dummet 1982: 55).

our theory of the world, formulation of a tenable hypothesis about innate mechanisms of language learning, I believe that this would enable us to adopt an overriding assumption that the level on which language functions as a whole concerns innate mechanisms of language learning. On the other hand, this should in no way imply giving up verificationist procedures and the genetic project in general, but rather their modification which would primarily consist in linking Quine's with Dummett's view.

12. Anti-realism and the innate mechanisms of language learning: Concluding remarks

Therefore, I do not intend to make my interpretation of the genetic project too specific in content because I do not consider it to be crucial. As I have already noted – given that holism sets in only later – I adopt *the phased nature* of the learning process it refers to, and that the first phase in this process would be the acquisition of a rudimentary theory of the world. On the other hand, this rudimentary theory of the world has been defined as a theory which concerns statements that Pierce has claimed to belong to the so-called background knowledge, and Wittgenstein to have a peculiar logical role in the system of our propositions. However, while these scholars have argued, defending against skeptical objections, that statements which concern this background knowledge do not require justification, I opt for the view that the so-called principle of bivalence does not apply to them, which does not jeopardize the criterion I used to define the rudimentary theory of the world they offered.

The reason I opted for this approach is not only that it entails preserving verificationist procedures – the ones that would imply discrete language units such as statements instead of the whole language – but primarily because these procedures would no longer refer to their truth to which approaches such as Pierce's and Wittgenstein's *de facto* bring us back. In a word, verificationist procedures that I have in mind when it comes to Quine's project are procedures which refer to *conditions that concern understanding of a statement*, and theories like Dummett's which center on this concept are referred to as anti-realist: "The anti-realism is the theory of understanding (...). The anti-realist holds that our understanding of the sentences in our language must have been acquired in situations which we learnt to take as warranting the use of those sentences" (Dancy 1989: 19).

Thus, apart from verificationist procedures which both theories imply, I found the basis for associating Quine's empiricist view with Dummett's anti-realist one in the fact that in both cases,

a speaker or understander would have to be at the center of these procedures. However, although it is believed that anti-realist theory "offers a perspective from which not only is there no possibility of a global scepticism about understanding, but also (and for the same reasons) there is no room for a global scepticism about justified belief either" (Ibid., 20), we have also seen that they cannot defend us from criticism such as Stroud's.

In a word, even though it seems plausible that the acquisition of a rudimentary theory discussed above would be the beginning of the process of language learning, and that the so-called principle of bivalence would not apply to statements concerning it, we have also seen that none of this would help us avoid Stroud's objections as long as Quine and his interpreters do not provide more solid grounds for epistemological inquiry than the behaviorist one. With this in mind, in order to specify distinctive characteristics that my interpretation should have compared to both traditional epistemological approaches and approaches which are neither epistemological nor could be, in my view, called epistemological, it is important to point out not only similarities, but also the differences between Quine's and Dummett's anti-realism.

Namely, just like Peirce and Wittgenstein have argued that only some of our statements/beliefs do not require justification, Dummet likewise does not completely deny the importance of the concept of truth in the process of language acquisition, but believes that the principle of bivalence does not apply to certain classes of statements: "Only if we might recognize whether the sentence is true or false does it have a truth-value"; otherwise "it is neither true or false" (Misak 1995: 123). In other words, the verification theory of meaning advocated by Dummett implies that reality is indeterminate in certain aspects, or that there are some of its regions where the principle of bivalence does not apply to statements concerning them for the simple reason that we can understand those statements even though we could not determine whether they are true or false.[80] However, while Dummett includes in them statements that by definition elude the usual verificationist procedures – such as, for example, statements about the past – I believe that for Quine these would really include all statements. In the context of the

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[80] Specifically, Dummett's view on this matter is that there are so-called "gaps in reality", i.e. "that there are meaningful statements, which we can understand, and whose truth or falsity we can therefore conceive of establishing, but for which, nevertheless, the question whether they are true or false has no answer; they concern a region of reality that is simply indeterminate" (Dummett 1992: 146).

genetic project as I interpret it, this would mean that however we define the phases in the process of language acquisition, if the principle of bivalence does not apply to statements which concern the first of them and which would constitute the content of the so-called rudimentary theory of the world, then it would not apply to any of the subsequent ones.

Therefore, just like Quine argues in his naturalistic phase that reality is determinate, referring to natural science and physics, while in the empiricist phase he pointed out that statements are true only in relation to a certain conceptual framework – which is by no means the interpretation that they can be *determinately* true – I believe that in this phase he could have adopted the view that reality is indeterminate. On the other hand, we should bear in mind that this would in no sense undermine the verificationist procedures that Quine would definitely have to refer to in the context of epistemological inquiry, because they would no longer center on the concept of truth, but on understanding of statements. However, what is crucial here and finally enables this kind of anti-realist interpretation of Quine's empiricism is primarily the redefinition of this context which, instead of investigating the relation between evidence and theory, now involves formulating a tenable hypothesis about innate mechanisms of language learning.

In other words, bringing to the fore this idea will enable us to interpret Quine's epistemological project as well as Quine's empiricism as anti-realist, which would further entail that the skepticism which Stroud has in mind loses the application it had, and his criticism is completely beside the point. On the other hand, not only would this idea take over the constitutive role that skepticism had in epistemological inquiry, its adoption would also constitute the key difference between Quine's and Dummett's approach which is, strictly speaking, free from epistemological pretensions. However, perhaps even more important at this point is that this fact would also result in a difference compared to coherentist approaches which, unlike Dummet's, are usually referred to as epistemological.

Namely, it has been noted in the previous chapter that the problem with coherentist approaches, since they give up the idea of a world independent of our beliefs, is primarily that their supporters are unable to meet Quine's demand for maintaining the connection between our linguistic and epistemic systems. On the other hand, if we accept that in Quine's case the principle of bivalence would not apply to any statement without exception, it seems that this would not be possible even with the interpretation I argue for. However, it should be kept in

mind that I interpret Quine's project so that it primarily concerns proposing tenable hypotheses about the innate mechanisms of language learning, hence it follows that although it would no longer contain the idea of the world independent of our beliefs, *this project would certainly preserve the idea of truths that would have to be truths.* Since none of the coherentist theories takes this into account, according to the adopted standards they could be called epistemological only in the broadest sense, and we should better refer to them as theories of justification.[81]

In other words, since its supporters give up the idea of truth that would be independent of what we believe, broadly speaking, I argue that coherentism advocated by Dancy is unacceptable in the context of epistemological inquiry. On the other hand, we have seen that other interpretations of Quine's project are also unsatisfactory, and I refer here not only to the interpretation advocated by scholars such as Mi – who believes that questions of truth and questions of evidence are mutually contained – but especially the one advocated by Roger Gibson, who argues, as we have seen, that the former have priority over the latter.

Namely, when it comes to interpretations which emphasize that epistemology is contained in natural science just as natural science is contained in epistemology, I have already noted that they are unacceptable for the simple reason that, like the coherentist ones, they cannot solve the problem which I have identified as the most difficult problem faced by Quine's proposal, i.e. the problem of circularity. On the other hand, I believe that solving this problem is of vital importance, as evidenced by the fact that some of the interpreters who argued that natural science is contained in epistemology and *vice versa* often tried to find normative elements in Quine's approach: "Quinean epistemology is thus not engaged in considering the justification of our attempts at knowledge as a whole: it is not, as we might say, globally normative. (...) However, we will find with Quine himself, that some normative elements survive. Quine takes the idea that prediction is the test of a hypothesis", and that "the goal of knowledge is thus given;

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[81] We have seen that this is indeed the case by examining Kim's critique of Quine's proposal, where the conclusion was that, contrary to what Kim claims, justification is not the only specifically epistemic component in the classic, tripartite definition of knowledge, but that it is also the concept of truth (see, Chapter 9). Although this definition is not directly relevant to my interpretation, since it is relevant to the Cartesian approach which is constitutive of epistemology as (autonomous) discipline, then it must be indirectly relevant not only to my proposal, but to any program that aspires to take its place – which Stroud has pointed out best.

epistemology is normative because it tells how we should best act to achieve this goal" (Hylton 2010: 84).[82]

Therefore, it turns out that some scholars who advocated the view that ontology and epistemology are reciprocally contained share my intuition that this approach is unsatisfactory in the context of epistemological inquiry, as evidenced by the fact that some of them eventually drew attention to certain normative elements in Quine's program. However, even if normative elements could be found in Quine's work as it is thought, I believe that these elements could not provide us with what is necessary, i.e. postulating as autonomous the fundamental level of inquiry such as epistemological.[83] On the other hand, when it comes to Gibson's interpretation that seems to be able to do this, apart from inherent limitations faced by this interpretation which make doubts about its tenability more than justified, we have also seen that Quine never advocated such a strong version of realism that Gibson attributed to him and on which he based his interpretation.

Namely, although Quine oscillated in his views on this matter (as I have repeatedly pointed out), we have also seen that he was never strict in the way Gibson was when it comes to factuality of modern natural science and the place it should have in epistemological inquiry. In other words, in addition to enthusiasm, Quine also showed certain reservation about the interpretation offered by Gibson as evidenced by the fact that, when it comes to factuality of science, he sometimes spoke of it in the way that Gibson did, and sometimes he drew on views which are essentially inconsistent with the interpretation advocated by Gibson: "When I cite

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[82] As evidenced by the above quote, the view that there are normative elements in his approach has been sometimes emphasized by Quine himself: "For me normative epistemology is a branch of engineering. It is a technology of truth-seeking, or, in a more cautiously epistemological term, prediction. Like any technology, it makes free use of whatever scientific findings may suit the purpose. (. ..) There is no question here of ultimate value, as in morals; it is a matter of efficacy for an ulterior end, truth or prediction. The normative here, as elsewhere in engineering, becomes descriptive when the terminal parameter is expressed" (Quine 1998: 665).

[83] One of Hylton's examples can be given in support of this: "Aeronautic engineering can be thought of as normative in one sense; it tells us how we should construct airplanes in order to have them fly safely, efficiently and so on. Epistemology, for Quine, is normative in the same sort of way: it tells us how we should act so as to obtain successful theories" (Hylton 2010: 84).

predictions as the checkpoints of science (...) I see it as defining a particular language game, in Wittgenstain's phrase: the language game of science, in contrast to other good language games such as fiction or poetry" (Quine 1992: 20).[84]

<p style="text-align:center">*</p>

Therefore, if we adopt the idea that the level on which language functions as a whole belongs to the speaker's unconscious psychological processes, we will realize that the goal of Quine's epistemological project which is consistent with his empiricist postulates concerns formulating a tenable hypothesis about these innate mechanisms of language learning. On the other hand, since these hypotheses would have to be *in principle* independent of what we believe – which is why they should not be confused with so-called propositional attitudes such as desires, intentions, beliefs, etc. – they would also have to aspire to truth. However, certain problems regarding my interpretation can be brought up here.

Namely, I pointed out that, after giving up realist interpretations, my task here would consist in trying to examine whether an epistemological program which would not contain an assumption about truths independent of our beliefs is possible. Given that hypotheses about the innate mechanisms of language learning would have to be such, it seems that this program is not possible after all. On the other hand, since it is evident that these hypotheses, despite aspiring to truth, could neither be confirmed nor refuted by any verificationist procedures, it seems that the

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[84] In other words, although in his later, naturalistic phase, Quine argued that unlike natural science or physics, translation is burdened with indeterminacy, this also supports the claim that, unlike Gibson, he never actually unequivocally adopted the idea of truth independent of evidence. Namely, the only reason why Quine could argue something like that, and why he may have argued it seems to be that such an assumption would in principle neutralize the problem of circularity otherwise faced by his project. However, we have seen that epistemological project based on physicalist (reductionist) assumptions would be inconsistent with some of the key tenets of Quine's philosophy – primarily with his fallibilism – and that, having in mind the views of some of the most important contemporary scholars regarding the possibility of reducing the mental to the physical which such an approach would *de facto* imply, there are very convincing arguments against it being tenable (see, Chapter 10).

interpretation I argue for would entail a return to speculative methods of inquiry that Quine intended to eradicate in epistemology. However, just like statements concerning these hypotheses should not be confused with so-called propositional attitudes, I also believe that they would be in principle exempt from verificationist procedures: "Still there remains a helpful thought, regarding epistemology in general, in that duality of structure which was especially conspicuous in the foundations of mathematics. I refer to the bifurcation into a theory of concepts, or meaning, and a theory of doctrine, or truth; for this applies to the epistemology of natural knowledge no less than to the foundations of mathematics. The parallel is as follows. Just as mathematics is to be reduced to logic, or logic or set theory, so natural knowledge is to be based somehow on sense experience. This means explaining the notion of body in sensory terms; here is the conceptual side. And it means justifying our knowledge of truths of nature in sensory terms; here is the doctrinal side of bifurcation" (Quine 2008a: 529).

Therefore, even though by adopting naturalism Quine eventually argued that questions of truth and questions of evidence belong to different disciplines – the former to ontology, the latter to epistemology – comparing them with mathematical ones, in his empiricist phase he put forward a thesis about *the structural duality of epistemological inquiry* according to which they both belong to epistemology. In this regard, although by giving up realist interpretations Quine's definition of *what would be the doctrinal and what the conceptual side of epistemological inquiry* is also abandoned, it should not be thought that the idea of its structural duality is thereby abandoned too. On the contrary, this idea is exceptionally and strategically important here, and it greatly sheds light on the way I interpret his epistemological project.

Namely, the way I see it, *the doctrinal* or questions of truth would be questions which concern proposing a tenable and thus true hypothesis about the innate mechanisms of language learning; on the other hand, conceptual inquiry would primarily concern the assumption about the phased nature of the language/theory acquisition *process* which, given the argument developed here, would at some point have to justify the thesis postulated by the doctrinal side. Having this in mind, when I noted that hypotheses about innate mechanisms of language learning could not be verified – or more specifically, falsified – the reasons for this should be sought primarily in the structural duality of epistemological inquiry which has the effect that verificationist procedures –

whether the usual ones or the Dummettian ones referred to here – can concern only the conceptual side, because access to the doctrinal one would be impossible due to this bifurcation.

In other words, since doctrinal inquiries, unlike conceptual ones would be responsible for postulating the fundamental level of inquiry such as epistemological as autonomous, it would be by definition exempt from verificationist procedures. However, it may seem that since it has been determined what the doctrinal side would consist of, there is no need for any interventions when it comes to the conceptual side, or that verification procedures could be implemented on the existing methodological base which would center not on the concept of truth, but on the concept of understanding of statements. However, just as the way I interpret the thesis about the structural duality of epistemological inquiry is the key to understanding the approach I argue for, the distinctiveness of my interpretation can be identified in the reasons why I had to modify Quine's genetic project, and its most important feature is the transition from behaviorist to cognitive psychology as the dominant paradigm in epistemological inquiry.

Namely, I have already noted that in reconstructing the process of acquiring our theory of the world, Quine advocated an approach which assumes that the relation in which they stand to nonverbal stimuli is evidence for the truth of various observation sentences, while these sentences, in turn, are evidence for the truth of theoretical sentences. In other words, the acquisition of language as well as a theory of the world is for Quine a continuous process, from acquiring elementary to increasingly complex concepts, but in which questions of truth and their relation to nonverbal stimuli, no matter how complex these concepts are, play a crucial role. However, the problem with this type of interpretation is that it is not clear how such a process could eventually lead to the acquisition of language levels which are in no way connected with sensory evidence, which is why it has been assumed that there is a difference in the process of language acquisition that Quine did not make, i.e. a difference between a linguist on the one hand, and a child on the other.

In other words, Quine's explanation of the way we acquire a theory of the world is incompatible with the (cognitive) approach I argue for, and strictly speaking, I believe it is applicable only to a linguist who is translating/learning an unknown language. However, it is certain that the language he would thus translate/learn could not function on an unconscious level as his native language presumably does, which is supported, *inter alia*, by Quine's observation

that he would project onto it from the beginning his own ontological viewpoint or the theory he had adopted as a child. I believe that this would have to be evidence (although indirect) that the method used by the linguist which Quine claims to be universal could not produce the above effect even in a child. In a word, it seems that the learning process would have to imply a significantly different methodology in this case. This is why I put forward the thesis that the initial steps taken by the child would involve the acquisition of the segment of language 'whose ontological involvement runs deeper' than the one implied by purely observation sentences, because it would have to contain the germ for setting in motion the so-called innate mechanisms of language learning that are at the heart of my interpretation.

Broadly speaking, my justification for the thesis put forward at the beginning is based on this – that the epistemological project which Quine had in mind and which would eventually satisfy most of the demands that he himself set more or less explicitly would have to draw on Kant's work which implies *a priori* categories of thought as a condition of all knowledge. On the other hand, one should not think that epistemological inquiry would thus become what Quine would never have allowed, i.e. 'a matter of a priori philosophical discussion'. I believe that, if 'holism sets in when simple induction develops into the full hypothetico-deductive method', the implementation of this method, as well as *a priori* mechanisms of language learning would, just like in Kant's work, in Quine's work also largely depend on experience and ultimately, on verification in the broadest sense.[85]

In other words, just like Kant pointed out that we reach knowledge only by the synthesis of experience with *a priori* categories of thought, thus not underestimating the importance of experience in general, I believe that Quine does not underestimate it either, at least according to the interpretation I argue for. However, far more controversial question is whether Quine would allow the existence of any *a priori* justification implied by such an interpretation. Apart from my

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[85] Although I have to admit that I am not even close to offering a reconstruction of this process that would match Quine's in terms of rigor, I do not think that this is of decisive importance. Moreover, I believe that going into the details of this reconstruction, because of its complexity, would go beyond optimism that Quine had about it. Nevertheless, I believe that it is possible to give a basic outline that would imply as the first step in this process, apart from the hypothesis about the innate mechanisms of language learning, the acquisition of the so-called rudimentary theory of the world or, as I interpret it, 'cognitive language'.

belief that the introduction of the above justification is necessary for formulating an epistemological program which would be diametrically different from the Cartesian one, and as such, immune to criticism presented here, I also believe that, at least when it comes to Quine's empiricism, there are indications that Quine left room for it.

Namely, although there is no doubt that he never advocated the type of interpretation which I argue for, and that by adopting naturalism he opted for an approach that is largely incompatible with this one, it has already been noted that in his empiricist phase Quine advocated certain attitudes that could support this interpretation: "Our retinas are irradiated in two dimensions, yet we see things as three-dimensional without conscious inference. Which is to count as observation – the unconscious two-dimensional reception or the conscious three-dimensional apprehension? In the old epistemological context the conscious form had priority, for we were out to justify our knowledge of the external world by rational reconstruction, and that demands awareness. Awareness ceased to be demanded when we gave up trying to justify our knowledge of the external world by rational reconstruction. What to count as observation now can be settled in terms of the stimulation of sensory receptors, let consciousness fall where it may" (Ibid., 534).

On the other hand, the following lines offer support for the thesis on the epistemological project as a search for what is *a priori* and what would thus be universal: "This rubbing out of boundaries could contribute to progress, it seems to me, in philosophically interesting inquiries of a scientific nature. One possible area is perceptual norms. Consider, to begin with, the linguistic phenomenon of phonemes. We form the habit, in hearing the myriad variations of spoken sounds, of treating each as an approximation to one or another of a limited number of norms – about thirty altogether – constituting so to speak a spoken alphabet. All speech in our language can be treated in practice as sequences of just those thirty elements, thus rectifying small deviations. Now outside the realm of language also there is probably only a rather limited alphabet of perceptual norms altogether, toward which we tend unconsciously to rectify all perceptions. These, if experimentally identified, could be taken as epistemological building blocks, the working elements of experience. They might prove in part to be culturally variable, as phonemes are, and in part universal" (Ibid., 536).

Thus, although Quine did not advocate the thesis attributed to him here – that the level on which language functions as a whole belongs to the speaker's unconscious psychological

processes – it is obvious that, when it comes to their place in epistemological inquiry, he was at some point willing to give priority to the unconscious over the conscious psychological processes. On the other hand, pointing out that it is likely that 'outside the realm of language there is probably only a rather limited alphabet of perceptual norms towards which we tend unconsciously to rectify all perceptions', however cautiously he did it, this is evidence that Quine also left some room for *a priori* justification.[86] Having all this in mind, it is tempting to associate the approach that I advocate in interpreting Quine's epistemological project – which obviously has a basis in his empiricist thought – not only with Kant's project, but also with other, more recent manifestations of Kantianism which, despite strong philosophical implications, still go beyond the scope of purely philosophical inquiry.

Namely, studying transformations at the level of surface sentence structures that concern specific sentences, Chomsky presupposed the existence of the so-called deep structures which would be 'more fundamental' since they govern linguistic competence, and as such, *a priori* or innate. On the other hand, analyzing the rich ethnographic material related to the areas of mythology, systems of kinship, etc., Lévi-Strauss put forward a hypothesis about the innate mechanisms of the human mind that, roughly speaking, works on the principle of binary oppositions, while Jung, through studying different traditions, but primarily through his own clinical practice postulated autonomous psychological forces or so-called *archetypes*. In a word, when it comes to 'philosophically interesting inquiries of a scientific nature' that could perhaps become part of the theoretical-methodological apparatus of a different epistemology which Quine advocated one way or another, I have in mind, in addition to Chomsky's linguistic inquiries, Lévi-Strauss' anthropological research, as well as Jung's psychological inquiries.

It should be noted that, in addition to satisfying Quine's demand for interdisciplinary character of epistemological inquiry, if it could be acceptable to incorporate the above

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[86] Some other scholars argued that, if nothing else, Quine did not reject this kind of justification: "If 'a priori' means 'prior to or independent of experience', there is no explicit repudiation of a priori justification in Quine's work. And it is hard to see why such repudiation should be implied by naturalism. Rather, epistemological naturalism can be expected to tolerate a priori justification to the extent that this is tolerated in science. (...) On the other hand, if 'a priori' is taken to imply infallibility, it would have no place in Quinean naturalism. Quine believes that no element in our total theory of the world is immune to revision" (Bergström 2008: 27).

approaches or *at least some of their elements* into the program I argue for, it would also be in the spirit of shifting from behavioral to cognitive psychology, or perhaps better, the cognitive paradigm in epistemological inquiry.[87] On the other hand, this abandonment of behaviorism should not be understood as an abandonment of naturalism in general, as evidenced by the way Chomsky saw his project which, at least in general intent, is equally applicable not only to his and Lévi-Strauss's, but also to Quine's project as I interpret it: "More intriguing, to me at least, is the possibility that by studying language we may discover abstract principles that govern its structure and use, principles that are universal by biological necessity and not mere historical accident, that derive from mental characteristics of the species" (Chomsky 1975: 4).[88] However, the most serious problem with my interpretation lies precisely in the fact that the epistemological program I argue for would have many similarities with the above ones, which is why I pointed out at the beginning that it is unlikely that Quine would have supported it.

Namely, such a program, just like the approaches which can be associated with it would have a lot of philosophical baggage that Quine wanted to get rid of at all costs, which is undoubtedly one of the reasons why he never advocated it, although he gave certain indications. However, given everything that has been said so far, it seems that the only possible way to reconcile Quine's demand for fallibility on the one hand, and the demand for formulating the fundamental

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[87] Although none of the above programs is epistemological, strictly speaking – because none of them aims to overcome the gap between the data we receive through our senses and our knowledge of the external world – evidence for the thesis that they could provide some kind of contribution to Quine's program is that these contributions would be of unequal intensity. In this regard, they would certainly be the weakest and perhaps most questionable when it comes to Jung's analytical psychology primarily because, unlike Quine's program which concerns *both language and representations*, this program concerns only representations in an extremely indirect and limited sense. The next one would certainly be Chomsky's which takes into account language but not representations, while Lévi-Strauss's approach would in my opinion, be closest to Quine's since it applies equally *to language and to representations we project onto reality*.

[88] Also, it should not be thought that the above abandonment of behaviorism in the interpretation I advocate would be definitive, but it would be its abandonment only as a dominant paradigm in epistemological inquiry. In other words, behavioral evidence, or more specifically, externalized empiricism would still have an important role in reconstructing the way we acquire our theory of the world, but now it could concern only the conceptual side of these inquiries, like verificationist procedures which are closely related.

context of inquiry which would be essentially different from the Cartesian one on the other would consist in adopting certain presuppositions which, although it might be justified to advocate them, would still have to be largely taken on faith: "In a particular discipline there will be certain quite general presuppositions that serve to give that discipline its characteristic shape and subject-matter. I like to call them 'methodological necessities'. Together, they determine the disciplinary meta-context for all inquiries of a certain genre" (Williams 2004: 332).

Although, at least when it comes to other disciplines, defining their context of inquiry as a meta-context may not be the most appropriate, whether it is the Cartesian one or the Kantian one I argue for in interpreting Quine's epistemological project, given a certain, by all accounts, high degree of *speculative* in it, it seems that this context would justifiably be called meta-context. Nevertheless, I believe that the process of formulating *tenable* hypotheses about the innate mechanisms of language learning can still be part of a relatively non-arbitrary and thus acceptable framework, and that apart from adopting the methodology described above, a prerequisite for this would be to see it as a kind of abduction: "To understand how knowledge is acquired according to the rationalist view that Peirce outlined, we must penetrate the mysteries of what he called 'abduction' and we must discover that which 'gives a rule for the abduction and so puts a limit upon admissible hypothesis'" (Chomsky 2006: 80).

Namely, Pierce believed that "the search for the principles of abduction leads us to the study of innate ideas, which provide the instinctive structure of human intelligence" (Ibid.). Since Quine emphasizes bridging of a gap between the data we have and our knowledge of the external world as a distinctive feature of epistemological inquiry in general, it seems that it would be possible to associate it with abductive reasoning which we use, in Peirce's opinion, whenever we are faced with missing premises in the process of inference. In other words, whether we speak of the gap that should be bridged by the use of the hypothetico-deductive method, or the one where proposing tenable hypotheses about the innate mechanisms of language learning should do it, it seems that in either case it would be a method that, according to scholars like Chomsky, could finally give us an insight into what Quine claimed to be the main goal of epistemological inquiry – an explanation of how we acquire our theory of the world: "It is a matter of scientific fact, or theory, that our only avenue of information about external objects is through the irritation of our sensory surfaces by forces emanating from those objects. There is thus a wide gap between our

data and our knowledge of the external world, and it takes bold [abductive, A/N] inference to bridge it" (Quine 1979: 2).

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