UNIVERSIDADE ESTADUAL DE CAMPINAS

INSTITUTO DE FILOSOFIA E CIÊNCIAS HUMANAS

LEONARDO GOMES DE SOUTELLO VIDEIRA

A STUDY ON ANALYTICITY IN THE PHILOSOPHY OF QUINE

UM ESTUDO SOBRE ANALITICIDADE NA FILOSOFIA DE QUINE
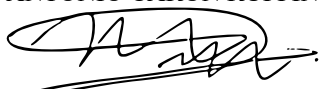
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> Dissertação apresentada ao Instituto de Filosofia e Ciências Humanas da Universidade Estadual de Campinas como parte dos requisitos exigidos para a obtenção do título de Mestre em Filosofia.
>
> Dissertation presented to the Institute of Philosophy and Human Sciences of the University of Campinas in partial fulfillment of the requirements for the degree of Master, in the area of Philosophy.

*Supervisor/Orientador: Prof. Dr.* Marco Antonio Caron Ruffino


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LEONARDO GOMES DE SOUTELLO VIDEIRA, E ORIENTADO PELO PROF. DR. MARCO ANTONIO CARON RUFFINO.


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A comissão Julgadora dos trabalhos de Defesa de Dissertação de Mestrado, composta pelos Professores Doutores a seguir descritos, em sessão pública realizada em 18 de Novembro de 2016, considerou o candidato Leonardo Gomes de Soutello Videira aprovado.

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*A Ata de Defesa, assinada pelos membros da Comissão Examinadora, consta no processo de vida acadêmica do aluno.*

*For Elidi*

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*"If my dream was true, then everything we know, everything we think we know is a lie. It means the world's about as solid and as reliable as a layer of scum on the top of a well of black water which goes down forever, and there are things in the depths that I don't even want to think about."*

Neil Gaiman, Sandman #16: Lost Hearts

# RESUMO

Sentenças analíticas foram consideradas sentenças que deveriam ser considerdas verdadeiras a qualquer custo. Contudo, o trabalho de Quine lançou súvidas sobre essa ideia. Ele mostrou que algo acerca de nosso entendimento da analiticidade estava errado. A definição da noção não era coerente com os casos que considerávamos casos de sentenças analíticas. O que tornava a noção incoerente e, segundo Quine, ininteligível. Sua sugestão foi a de que deveríamos interpretar a linguagem como um todo de maneira diferente para evitar os problemas relacionados com a noção de analiticidade. Para apoiar esta sugestão ele desenvolveu uma complexa visão holística da linguagem em termos comportamentais. Durante sua jornada para desenvolver esta teoria da linguagem, em certo ponto, ele mudou suas posições acerca da analiticidade. O objetivo desta dissertação é compilar as diferentes visões ao longo da carreira de Quine no que concerne a analiticidade. Também pretende-se explicitar os pontos em que estas visões estavam erradas e considerar suas consequências. Para isso, Eu explicitei os argumentos mais relevantes de três fases da carreira de Quine, bem como, as críticas de outros filósofos sobre estas fases.

**Palavras-Chave:** Quine; Analiticidade; Significado; Epistemologia.

**ABSTRACT**

Analytic sentences were considered sentences that should be held true no matter what. However, the works of Quine casted doubts upon this idea. He showed that something about our understanding of analyticity was wrong. The definition of the notion did not match the cases we considered analytic sentences. Making the notion incoherent  and, according to him, unintelligible. His suggestion was that we should interpret language differently as a whole in a way that the problems with analyticity were avoided. To back this view up he developed a very complex holistic view of language in behavioristic terms. During his journey to develop this language view he changed his mind about analyticity at some point. The objective of this dissertation is to compilate the different views of Quine concerning analyticity throughout his carrer. I also will make explicit the points where these views are wrong and the consider its consequences. For that, I exposed Quine's most relevant arguments from his three different phases and the criticisms of other philosophers concerning this phases.

**Keywords:** Quine; Analyticity; Meaning; Epistemology.

# Sumário

**INTRODUCTION**

There are sentences that seem to be obviously true, always true and seem to convey no new knowledge when uttered. These sentences seem to have a special epistemological and metaphysical (modal) status. They seem to be true simply in virtue of their meanings, opposed to other sentences that need to correspond to something in reality to render a truth. At least since the writings of Locke[1], philosophers try to account for this distinction between this distinct class of sentences and the other. The class of sentences that present this special status, Locke dubbed as *trifling propositions*, among were identity propositions, e.g. "a body is a body", and propositions that present part of a complex idea is predicated of the subject, e.g. "Every man is an animal" [2]. However, it seems that more sentences share this special status, e.g. "7+5=12" and "No bachelor is married".

Kant noticed that the distinction between common sentences and these special sentences did not account for all the differences between the types of predicative sentences of language. He noticed that albeit "every man is an animal" is always true and that the truth of it was known only by understanding them, some sentences like "7+5=12", that are too always true, are not knowable only by understanding it. He proposed, thus, that a more trustworthy classification of sentences should be established in two axes. One to be settled accordingly to their method of verification and the other to their capacity of been truth or false. The first distinction meant to make a wedge between *a priori* and *a posteriori* sentences. An *a priori* sentence would be a sentence that do not need any appeal to experience to be confirmed (e.g. "7+5=12" and "every man is a mammal"). The whole process of verification could be done only within the minds of the speakers through means of pure reason. An *a posteriori* sentence requires appeal to experience for verification (e.g. "My car is red" and "Celtic is winning the game"). The process of verification depends on the mind of the speakers and the state of things in the world.

The second distinction is concerned with the epistemic contribution the sentence makes to the subject of knowledge. Some sentences convey non-obvious (previously unknown) information to the subject, while other sentences are, as we saw, trifling. The class of sentences that, when are grasped by the subject, yields him new information is

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[1] (1993). IV.

[2] (1993). IV. viii.

called synthetic (e.g. "7+5=12", "My car is red", and "Celtic is winning the game"). These sentences, according to Kant, can be *a posteriori* or *a priori*, for what distinguishes them from the sentences on the opposed class is that they are not sentences that its truth is directly perceived in the act of understanding. Some procedure is needed to attribute a truth value to them, a calculus or an interpretation of sense data. The second class of this dichotomy is called analytic. This is the class of obvious truths that the only requirement to attribute a truth value to them is understand them and its constituent terms; For Kant, these sentences can be easily recognized, because when denied, they generate clear contradictions. Therefore, these sentences are, were, and always will be true[3].

Kant's criteria for classifying sentences as analytic or synthetic was problematic, so it had to be changed. Many years later, with the Fregean developments in philosophy of language, the definition of analytic sentence has changed. A sentence is analytic if it satisfies at least one of the following constraints: i) is a logical truth (e.g. "the blue car is blue", "Celtic has either won or not won the match) or ii) can be transformed into a logical truth by intersubstitution of its non-logical components for synonymous terms[4].

Later with developments of the logical positivist on matters of language, the analytic/synthetic distinction and the *a priori/a posteriori* distinction collapsed, making a very sharp distinction between one kind of sentences and the other, as we can see in Ayer's (1946), where he stated that the notions of aprioriticy, analyticity, and necessity were bonded together in opposition to aposterioricity, syntheticity, and contingency. The positivists thought that analytic sentences were true even when devoid of content. This believe culminated at the motto *truth in virtue of meaning*[5]. To be a truth in virtue of meaning meant for them, that the sentence was necessarily truth and that its truth could be attested only by the mere understanding of it.

The most well-crafted definition of the notion of analyticity, reached by all these adjustments, is made by Carnap, when he proposed a model of formal language to describe the world. Analyticity is conceived as a central piece of his theory of knowledge and of meaning. He settled some queries over the notion proposing that analyticity should be a

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[3] (2001). B11-2; B190-1.

[4] That the second criteria is clearly stated on Frege's writings, is not without controversy. Notwithstanding, that is the reading that Quine does of Frege, as we can see in the beginning of TD p. 21.

[5] pp. 71; 74; 81; 83.

feature relative to the language in question. But this brought up considerable problems – e.g. the criteria to choose between two incompatible languages that are both compatible to the facts, the criteria to define which sentences should be considered analytic and which should not, the real strength of a truth which is choose to be analytic, and not perceived analytic. This pragmatic relativity ruling his theory would ruin the most desired feature of analyticity for every philosopher so far, namely, the bond to necessity. For, as I hope to explain in section 1.5, the choosing of the meaning postulates that made statements analytic, was done by the language creator, therefore, allowing failure of definition and future corrections; besides the aforementioned problems.

By the 1950's, there were various different available definitions for the notion of analyticity: "an analytic statement is the one that is true no matter what (independent of the state of affairs in the world)", "an analytic statement is a true by definition", "an analytic statement is the one that is true only in virtue of its own meaning", "an analytic statement is an obvious statement", "an analytic statement is a necessarily true one", and so on. All these definitions are incompatible, a fact that passed unnoticed by all philosophers and scientists alike. The first philosopher that noticed that there were problems within and among every version of analyticity's definition available so far was Quine, who was already discontent with features of logical truth and *a priori* knowledge since his 'Truth by convention' (1933). The talks about his discontentment were prowling at his philosophical circle – as we can see in Morton White's (1970 [1946]) – and gathering supporters. In 1951, they reached the apex of this discontentment, when Quine published his most prestigious article 'Two dogmas of Empiricism' (TD), where he exposed several problems in the definitions of analyticity created before his time. Roughly speaking, he argued that all of them needed to recur to the notion of analyticity somehow through notions that to be defined needed the definition of analyticity itself, what is a clear case of circular definition. Quine believed that due to this circularity the notion of analyticity was hopelessly doomed to unintelligibility, like all the other intensional notions involved in the circle. So, instead of trying to show up with a new definition, he proposes that we should adopt a theory of knowledge and of signification that makes no use of analyticity, an empiricism without dogmas. He sketched, then, a holistic view of how confirmation works and how signification works, but with no richness of detail.

Several years later, Quine was still owing his readers a theory of meaning that would make sense of his holistic theory of knowledge without making use of the intensional vocabulary and, hence, dispensing analyticity. In *Word and Object* (*WO*), he developed a very detailed account of how language would work respecting those restrictions he has settled in TD. His idea was that the language would work based not anymore on the dubious and imprecise notion of meaning, but rather on speaker's behavior. This account of language may be a simpler way of explain how language works, but it presents innumerous problems in what concern predication, future and past reference, definition of language, and even in getting rid of analyticity. In fact, it even gives an account of how to make analyticity intelligible. So Quine changes the strategy from a heavy criticism on the intelligibility of the notion, to a pragmatic attitude towards it. He advises us that avoiding the notion would be a safer, simpler, and more elegant way to build a theory of language and knowledge. This change of view can be clearly seen in his latter works *Roots of Reference* (*RR*) and *Pursuit of Truth* (*PT*), although I believe – and try to show – that this view is already occult in *WO*, or at least its bases are.

This shift of views is what guided my research and will be the conductor line of this dissertation. My goal is to show that Quine was wrong in criticizing the intelligibility of the notion and to doom it to obscurity, nonetheless he was right to suppose that the notion has a lesser epistemic force than his predecessors believed it has[6]. He was wrong about the way language works, but he was right in saying that analyticity – even if language lies in the notion of meaning – must not be that central in a theory of knowledge, as its defendants believed it should. To do so, I intend to expose Quine's views on its different phases, respectively followed by the criticisms that I thought were most relevant historically (e.g. Grice & Strawson's and Chomsky's) or interesting criticisms that are commonly neglected by scholars (e.g. Evans').

To defend my views, in chapter 1, I perform a very thorough analysis of Quine's major arguments against the intelligibility of the notions of the intensional vocabulary contained in 'TD' and 'Carnap and Logical Truth'. I shall also examine his early version of holistic theory of language and knowledge, which is intimately bonded to his criticisms. Holism is Quine's substitute theory for the current theory of meaning and the theory of

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[6] Nowadays it is believed that analyticity plays an interesting role in justification, thus, an epistemic relevant role, which is more that Quine seemed disposed to accept.

knowledge. Since his writings on holism are very murky and there is no consensus on how it should be interpreted, I will put forward a reading of it that is quite personal, however, in its spirit does not drives the reader into what most scholars consider Quine's aims.

In chapter 2, we will consider objections made by other philosophers to Quine's views, like Grice & Strawson, Slensis, Boghossian, Putnam, Fodor & Lepore, and Carnap's defense. The main point for these philosophers is to defend the intelligibility of the notion of analyticity, even if it is intelligible in a weak sense. Nonetheless, I shall consider objections to holism also.

In chapter 3, I shall examine Quine's *Linguistic behaviorism*, which is Quine's doctrine of meaning from where he built his new views against analyticity. In addition, I shall examine the substitutes of the intensional vocabulary in this new framework, which I will call *stimulus notions*. These notions are equivalent ones to the notions of the intensional vocabulary in what concern explain the phenomena of language. However, they are radically different in what concerns their role in the theory of knowledge, at least is what Quine intended them to be. To make the case for the adoption of this *stimulus vocabulary*, he presents two arguments, namely, *pressing from below* and *pressing from above*. In this chapter, I will examine these two arguments in depth. I shall also stress the relation between Quine's holism and this doctrine of *stimulus notions*.

In chapter 4, I will consider another set of objections that concern mostly his linguistic behaviorism, for at this point Quine's motives for arguing in favor of the abandonment of analyticity is not because of its intelligibility, but because he believes his account of language is a better one than the other available ones. The objectors chosen are Chomsky and Evans. I also hope to explicit the reasons why I think that, although Quine does not state his acceptance of the intelligibility of the notion and its possible usefulness, he provides sufficient conceptual tools to do so.

Finally, in chapter 5, I intend to expose some of Quine's latter views on the matter of analyticity, for in his latter writings he does acknowledge clearly the intelligibility of the notion – notwithstanding considering it a useless notion from the epistemic point of view – and he settles the basis for the notion of analyticity that we have nowadays.

Summing up, this dissertation has as its main objectives (I) present Quine's arguments for the unintelligibility of analyticity, (II) explain – based on other philosopher's

arguments – why he was incorrect in dooming analyticity to unintelligibility, (III) present his alternatives of linguistic and epistemic frameworks (holism and linguistic behaviorism), (IV) explain – based on other philosophers' arguments – why his alternatives fail or, at least, are unfit for play their role, and, finally, (V) present his late views on the matter.

# CHAPTER I

## Analyticity unintelligible

In this chapter, I shall expose and analyze the  arguments contained in TD against the most relevant attempts to clarify what analyticity is through the story of philosophy, namely, the Kantian definition, the truth in virtue of definition approach, the Fregean definition (or interchageability definition), the necessity approach and, finally, Carnap's definition. After that, I shall consider some possible readings of the article as a whole. This different readings, certainly influenced the way criticisms against TD were built.

## 1.1 Kant's definitions of analyticity

In his *Critique of Pure Reason*, Kant defines an analytic sentence (or *judgment* in his jargon) making use of two different criteria. The first I will call *a containment criterion*, the other one I will call the *impossibility of negation criterion*. The first one is explained by Kant in the introduction of the book:

> Either a predicate B belongs to the subject A as something that is (covertly) contained in this concept A; or B lies entirely outside the concept A, though to be sure it stands in connection with it. In the first case I call the judgment analytic, in the second synthetic. (1998, B 10)

And the second one at the second chapter:

> (…) We must also allow the principle of contradiction to count as the universal and completely sufficient principle of all analytic cognition; (…) 'A thing = A, which is something B, cannot at the same time be non-B, although it can be easily both (B as well as non-B) in succession. (*Ibidem*, B191-2)

To illustrate that, think of the sentence "A bachelor is an unmarried man". Analyzing it through Kant's first definition, we can say that the sentence is analytic because the concept of unmarried man is already contained in the concept of bachelor. Many concepts are already contained in the concept of bachelor, (e.g.) mammal, man, free to pursue a companion, etc., and are directly invoked together with bachelor when we understand "bachelor". Analyzing it through the second definition, we can say that is absurd to negate

"A bachelor is an unmarried man". If we deny the property of being an unmarried man of a bachelor, we have a contradiction, an unimaginable situation.

As we saw in the introduction, Kant thinks that there are two divisions to be made, one concerning the method of confirmation, the other concerning the epistemic contribution to the subject. For him "7+5=12" is *a priori*, because I can confirm that it is truth only through reasoning, i.e., just with the information inside my mind; but it is not analytic, because "equals twelve" is not directly invoked when one understands "seven plus five", according to Kant. Therefore, this sentence is *a priori* and synthetic. However, we can attest that "7+5=12" becomes a contradiction when denied. "Seven plus five is different than twelve" is an absurdly wrong statement and there is no different way to see it! Therefore, if we apply the criterion of the impossibility of negation argument, the sentence should be considered analytic (*a priori*). Thus, there is clearly something wrong with Kant's account of the analytic/synthetic distinction.

The problem is partially solved by Ayer[7], when he identifies analyticity with apriority, and with necessity; and syntheticity with aposteriority and contingency. In addition, he explains that in equations like "7+5=12" the predicate does not come up with the subject when we understand it, because our intellect is limited. However, if we had an infinite intellect we would easily see that the predicate is within the subject[8]. Although we cannot automatically foresee the result of a complex calculation just by acknowledging the subject, that is not a good reason to consider it synthetic, for the sentence is still true no matter what, still impossible to deny, still – in his view – necessary; and that is what Kant was looking for. In doing this, Ayer is fusing epistemic notions with metaphysical ones[9]. I will deal with this latter when I talk about Boghossian's criticisms.

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[7] I cannot attest certainly, whether Ayer was the first to make this move or whether other logical positivist did it before, however what must be clear is that the logical positivists had this in mind. For more information on Ayer's and other positivist views of analyticity, Cf. Juhl & Loomis (2009), sections 1.7; 1,8; 3.9 and 5.2.

[8] (1936) pp. 81-2. Maybe with the equation 7+5=12 is not clear, because the equation is too simple and we have seen it so much we are used to it. Ayer gives us a more complex equation, 91x79=7189, which no one could do it just by looking at it.

[9] In Kant, this fusion can be managed depending on the interpretation. It is not clear that Kant is searching for a way to describe the necessary character of some sentences in opposition to the contingent character of others, because when it comes to arithmetic Kant denies it, but it seems to be his goal. In addition, he clearly states that analyticity and apriority cannot are not about the same things.

Quine presents another line of criticisms. He claims that the concept within a concept criterion only works as a metaphorical illustration of what Kant would be really willing to explain, because it is not clear what it means for the concept of unmarried man to be within the concept of bachelor[10]. Quine does not make too much effort to understand how this can be understood with the apparatus of modern philosophy of language. The other problem that Quine brings up with this account is that it just accounts for sentences of the form S is P (or S is not-P). It does not account for complex statements like "If p then q, and p; therefore, q" or "All As are Bs and all Bs are Cs, therefore, all As are Cs". At that time, the notion of analyticity was already fused with necessity, so an analytic statement was often conceived as "a statement that is truth no matter what", "a statement that cannot be false", which makes those complex statements analytic too, and Kant's criteria does not account for them. Therefore, he simply dismisses the explanation of analyticity through this criterion, and nobody seemed to care at the time, because the Kantian view already had too many problems to be saved.

The impossible negation criterion may still be up to something, if we fuse it with apriority and necessity. It certainly would explain sentences of the form S is P and the more complex logical truths. Moreover, this was the call made by the philosophers that followed Kant.

## 1.2 Definitions

Quine seems to have no problems with logical truths, truths of the form "A=A"[11]. However, this is not the only kind of sentence considered analytic, we commonly consider sentences of the form "A=B" as analytic too. How do we explain cases like the latter? A *prims face* response commonly given is: "well, it's truth because one term is the definition of the other". Quine considers, then, some possible accounts of hat means for sentences to be true by definition. He examines three types of definitions that could explain what an analytic sentence is or, at least, explain the relation of synonymy, namely, the *lexicographer definition*, the *putative definition*, and Carnap's *explanation*.

The lexicographer definition is the one contained in dictionaries and encyclopedias. Usual definitions that helps one to have a better grip on notions previously unknown. It is

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[10] Cf. TD p. 21.
[11] For a more detailed definition of logical truth, see section 1.5. pp. 18-9.

comprehensible that an instinctive answer for the question of what is an analytic sentence is to say one that can be created through definitions like in the dictionaries. However, Quine objects in a rather simple way. He asks: Well, are lexicographers truth manufacturers, then? And aswers: Of course not. An analytic truth is not true because a linguist is cataloging meanings and uses of words that already exist. The job of the lexicographer is just to create a compilation of pre-existing definitions already in use. Therefore, they cannot be the reason of the analyticity of such sentences. Additionally, we might say that whether they are the reason of the analytic truth of these sentences, how would one explain cases of incompatibility among definitions? What if a lexicographer is mistaken about a definition? Certainly, these cases show that this is a dead end.

Another sort of definition that defenders of analyticity recur to is the Carnapian explanation. According to Quine, Carnap proposes that philosophers and scientists alike, in their most philosophical activities, engage in the activity of explaining concepts, which means basically present a very refined *definiens* (that is at least more refined than the common definition of the dictionaries) to a determinate *definiendum*, hence settling not just the potential general usages of a term, but also the most precise and specific usages of this term. Quine claims that, notwithstanding, this special type of definition suffers the same problems as the first, namely, it is also based in a pre-existing synonymy relation. Two *definientia* might be incompatible among each other, but be compatible the *definiendum*. The explainer may also be mistaken about the definition. Additionally, Quine might have said that when a scientist or a philosopher are explaining something, they are just providing a description of a thing they are standing for. In other words, the identity between the *definiendum* and the *definiens* is already established by the identity of the *definiendum* and the thing it applies to.

There is a third sort of definition commonly recurred to, that presents a different profile, namely, the conventional introduction of novel notations, or in other words, the putative definitions. E.g. The introduction of the notion of Meter, the reformulation of the notion of Kinetic Energy[12]. In cases like these, Quine says, "(...) *the definiendum becomes*

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[12]Quine present no examples, but see Putnam (1975) p. 42-6. About this last specific example, although there was a pre-existing notion of Kinetic Energy in use, a new putative definition is established apart from the old one; therefore, it is a new definition.

*synonymous with the definiens simply because it has been created expressly for the purpose of being synonymous with the definiens. (...)*"[13]

Quine acknowledges that in these cases there is a clear case of truth in virtue of definition. Cases where the truth is made off. He says: "(...) *here we have a really transparent case of synonymy created by definition; would that all species of synonymy were as intelligible. (...)*". Here Quine unintentionally admits that analyticity, or at least truth in virtue of meaning, can be intelligible. The problem is that the correct definition of analyticity was not found yet, but if one pursues it through the same path of conventional introduction of notation, one may find a reasonable definition. However, Quine does not believe this would be possible and that even this type of truth by definition is not only truth by convention. There must be something behind the curtains to support them. It can be facts or a metaphysical structure of the world that we have no access to, but the pure convention cannot be a truth maker[14]. Nevertheless, even if one can account for these cases of truth in virtue of definition (conventional introduction of novel notation), this account cannot be applied to other kinds of sentences we usually say also analytic. So one shall keep searching for a reasonable definition.

The truth of a definition can be attested because the *definiendum* is equal to the *definiens* in the sentence. It is too a logical truth, or at least, it is easily transformable into a logical truth by the intersubstutibility of terms by their synonymous transforming a sentence of the form "A=B" into "A=A". However, this intersubtutibility is possible only because the terms are synonymous. Therefore, we shall search for an account for synonymy and, perhaps, we would be able to account for definition.

Synonymous expressions are the ones that share the same meaning. However, what are meanings? This question still has no clear and undisputed answer nowadays. A natural response commonly given is: "it is a word's definition", which is not a good answer, for it would bring us to a vicious circle: to define the notion of definition we would have to use it in the *definiens*. Synonymy, then, is probably based in other notions that we shall consider in the next section.

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[13] TD. p. 26.
[14] See Quine (1966i).

### 1.3 Fregean analyticity: intersubstitution *salva veritate*


The most influential definition of analyticity is perhaps the intersubstitution *salva veritate* one, latter dubbed[15] the Fregean definition. Quine spends a considerable number of pages attacking it, probably because it is a very simple, solid and a widespread definition of the notion. Fregean analytic truth is basically a logical truth – e.g. "All Bs are Bs", or "P or not P" – or any statement that can be transformed into a logical truth by intersubstitution of the non-logical components with synonymous words– e.g. "every bachelor is a bachelor" and "every bachelor is an unmarried man" (the latter can be transformed into the former by interchanging "an unmarried man" for "a bachelor") [16].

In "On sense and reference", Frege wishes to explain how a logical truth of the form A=A can be obviously true while a sentence of the form A=B about the same object (i.e. a sentence in which both the terms A and B refer to the same thing) is not obviously true. This is known in the literature as Frege's puzzle and is solved in that article by the introduction of the notion of sense. For the sake of the argument we will treat what Frege calls sense as the same thing Quine calls meaning (however different they are), which is the thing that allows us to see that both terms – A and B – share the same reference, allowing a transformation of A=B into A=A (in all contexts but propositional attitudes reports). Meaning is a quite obscure notion, and Fregean sense is not different. The account of what Fregean sense is comes in a very strange Platonism from Frege's part. However, this kind of metaphysical justification for the notion of sense (or meaning) was not acceptable for Quine and neither for most analytic philosophers of his time. Therefore, Quine refuses to accept the use the notion of meaning to explain analyticity, because a clarification based on a more obscure notion would clarify nothing, according to him.

Since he does not accept the use of the notion of meaning, there is no point in talk about sameness of meaning. Quine, hence, claims that we are really searching for is not synonymy, but *cognitive synonymy*, for which he does not concedes a more detailed

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[15]  This label is not proposed by Quine, but it is the one that stuck in the literature. See Boghossian (1997) and Haack (1977). However a case can be made against this label, for it is not clear that what Frege was proposing is this that Quine (and Quine's commentators) is claiming he does.

[16]  It is controversial that for Frege a sentence that is not a clear logical truth (a sentence that can be transformed in a logical truth through intersubstitution) can be considered analytic.

explanation of what this is supposed to be until his late works where he talks about *cognitive content*[17]. Thus, Quine suggests that a fair account for language that, perhaps, might be used to explain analyticity, without making use of the notion of meaning, is an extensional language. An extensional language is one that synonymy can be accounted for by the use of referents and extensions of terms only. For example, "Aristotle" and "the author of the Nichomachean Ethics" are synonymous, because they both refer to the same person; "unmarried man" and "Bachelor" are synonymous, because they both have the same extension, in other words, they refer to the same set of the things.

However, Quine claims that an extensional language would generate some undesirable situations like the following one: "creatures with kidneys" and "creatures with hearts" have the same extension. Every animal with kidneys is an animal with heart; therefore, one is allowed to substitute one term by the other in identity sentences like:

(1) "Every animal with kidney is an animal with kidney"

and

(2) "Every animal with kidney is an animal with heart"

and account for the truth of (2), because it is analytic.

Both terms may apply to the same extension, but the truth of (2) is obviously not established by a relation of synonymy, but rather by a coincidence of nature. Quine concludes, then, that intersubstutibility *salva veritate* in an extensional language is not a warranty of truth in virtue of cognitive synonymy. To make an explanation of analyticity through intersubstutibility *salva veritate*, the notion of meaning is needed. Otherwise, one can only speaks for truths that depends rather on the observation of facts; hence, it cannot properly explain analyticity. However, to save the extensional language account one may appeal to the modal notion of necessity

## 1.4 Necessarily true

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[17] See chapter 5.

Quine considers the possibility of saving the account of intersubtutibility *salva veritate* using the notion of necessity. "A is B" would be analytic only when A is necessarily B. Therefore, (2) is not analytic, for it is not necessary that every animal with kidney is an animal with heart, though (1) is analytic, because every animal with kidneys is necessarily an animal with kidneys! However, Quine demands an explanation of what does it mean for something A to be necessarily B. He does not develop this point further in TD, however it is important to stress why necessity cannot explain analyticity. Additionally, as we saw in past sections, analyticity was fused with necessity and apriority. Nevertheless, whether one wants to have analyticity bonded with apriority she cannot have it bonded with necessity.

Necessary statements are often defined through possible worlds and the notion of possible world is not without controversy, therefore we will not use it, since Quine does not even mention it. Although, another way of defining "necessary" is by the Aristotelian notion of essence. However, Quine considers it too an obscure notion and one that would lead us to undesired metaphysical commitments or would lead us back to the notion of meaning. Aiming to avoid undesired metaphysical consequences, we shall use a more simple definition of "necessary".

In section 1.1, we considered that because analytic sentences were bonded to necessity they were sentences that are true no matter what comes or sentences that cannot be false. So for the sake of argument, let us consider a necessary sentence as a sentence true no matter what, a sentence that cannot possibly be false. (e.g. "7+5=12", "Aristotle is Aristotle" and "it's raining or it's not raining"). Which unfortunately is also a bad definition for it makes use of the notion of impossibility which can't be defined without the use of the notion of necessity, for a thing that is possible G is defined as a not necessarily not-G. On the other hand, an impossible G is a necessarily not-G. Hence, one cannot explain possibility without necessity and vice-versa. Quine considers that by analyticity only it is possible to explaining what necessity is. For him, to suppose that a language is rich enough to use the adverb "necessarily" is to suppose that analyticity is already clear.

Which makes us rely on the definition of analyticity, driving us into a circular argument again[18].

Another way of explaining necessity is as the factual impossibility of imagining a contradiction. One could simply argue that there are statements in which the content is not simply false, but impossible even to be conceived! This would open a breach to explain what impossibility is, and through this impossibility, one would be able to explain necessity. However, to talk about content one would have to talk about meanings and Quine, as we saw, would not accept this. Additionally, one could claim that a born blind man would be justified in saying that when we talk about colors we are talking about inconceivable things, therefore, impossible things; which is clearly incorrect.

Quine considers necessity a notion fully dependent on the notions of essence and meaning. Things have essences, which when divorced of things and wedded to linguistic forms are called meanings[19]. Thus, he will not accept necessity as a mean to analyticity.

On the other hand, *a priori* sentences, as we also saw previously, is a property concerned with the method of confirmation of sentences. An a priori sentence is a sentence such that its truth value can be attested without any empirical help. (e.g. "7+5=12", "No Bachelor is married" and "F=m.a").

As we shall see in section 2.2, there are *a priori* sentences that might be considered true at a certain period and later considered false (e.g. Kinetic energy definition). This happens because term's definition may change depending on new empirical data available or even on arbitrary change of convention. Thus, it is possible that we have a sentence that is knowable *a priori*, though it is not necessary. The most widespread example of it is the meter stick example from Kripke[20]: The length of the stick S at time t is one meter. Therefore, it is conventional that a meter would be the length of the stick S at time t. No empirical evidence is required to make it truth, for it is a convention. However, the convention could be different, the length of stick S could be different or they could have chosen stick $S_{258}$ to be the metric standard.

Both examples, the meter definition and the kinetic energy definition, were cases commonly accepted as analytic sentences, thus, either analyticity is something separated

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[18] TD pp. 29-30.
[19] TD p. 22; *PT* p. 73-4.
[20] Kripke (1980) pp. 54-6.

from necessity or both examples were wrongly considered analytic sentences. The former seems to be more plausible. Analyticity, then, has to be something else of what its champions believed it to be. Unless the necessity they linked it to is not this metaphysical necessity, perhaps, it is something more simple than that, perhaps, they were defending a linguistic necessity. Maybe analytic sentences are necessarily true because of the way language is built. This is what Carnap had in mind.

## 1.5 Carnap: meaning postulates

Based on Frege's ideals of a perfect language and on the logical positivists' desire to extinguish all obscurity and meaningless metaphysics from our theory of knowledge, Carnap tried to develop a perfect language for science that would end all ambiguities, obscurities, and non-sense in philosophy and science once and for all. Amidst the developments proposed by him, we find the latest and most complete and detailed definition of analyticity available in the 1940's and 1950's, just before Quine writes *TD*. Therefore, it was this definition that he was most worried to successfully criticize. Perhaps, this explains why he spends so little time criticizing Kant's definitions and the definition through the notion of definition. For Carnap, analyticity should be understood as a feature of sentences of what he calls a "*semantic language*", which is basically an artificial language used to describe the world properly, which in some contexts should substitute natural language[21]. Whether a sentence should be considered as analytic or synthetic, according to him, depends on the language the sentence are inserted.

> The difference between analytic and synthetic is a difference internal to two kinds of statements inside a given language structure; it has nothing to do with the translation from a language to another (…) the analytic synthetic distinction can be drawn always and only with respect to a language system. (1990 pp. 431-2)

This already shows us a strange feature of Carnap's idea. If analyticity has nothing to do with translation, but only to questions inside the linguistic framework of interest, it is fair to say that a sentence that describes an event E can be considered analytic in one language and synthetic in another. This is an undesirable conclusion for the defendants of analyticity, for it shows that analytic sentences are not immune from revision.

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[21] Cf. Creath (2006) p. 50.

The version of analyticity that Carnap is more inclined to agree with is the "truth in virtue of meaning" one, however he still desired that analytic sentences still enjoys the high degree of certainty. He still thought one could match analyticity with apriority and necessity.

Carnap's views on analyticity changed as his philosophy evolved. His relationship with Quine and with Tarski made him produce, at least, two attempts to explain analyticity[22]. The essential characteristic that both views had is that Carnap believed that he could make analyticity intelligible for artificial languages. However, in TD Quine presents consistent objections to both of them successfully.

He believes they are truths known purely in virtue of their meanings, in virtue of the way the language that they are inserted was built. During the process of building the language, the architect of such language should establish semantic rules that would separate the sentences between these classes.

The first critique of Quine is to a simpler version of Carnap's explanations. His criticism goes like this: imagine an artificial language $L_1$ and a statement $S_1$ within this language. According to Carnap, for one to say "$S_1$ is analytic in $L_1$" it is needed that the statement $S_1$ appears within the foundations of this language under the set of semantical rules that define which are the analytic statements. The semantical rule is "is analytic in $L_1$" and the members of the set of sentences that obey this rule is $\{S_0, S_1, S_2, S_3...\}$. All statements that are not in this set are synthetic statements.

However, this does not explain much. It just tells us which sentences are analytic and how to identify a non-analytic sentence. This does not explain *why* these sentences are analytic. To say that a statement is analytic because it is in this set of analytic sentences is a *petitio principii* fallacy, for we can ask, then, and why does this statement is in that list? Because it is analytic. To be precise, Carnap believes that which statements should be inserted in that set and which not is in the language architect that built the language to decide. The reasons to justify this choice is not very clear, we will get back to this topic later, when talking about *internal* and *external* questions.

The other explanation, which is more detailed than the first one. appears in an appendix to (1956). Carnap asks us to imagine an artificial semantic language $L_0$ such that

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[22] Cf. Juhl and Loomis. (2009), chapter 2.

its vocabulary is composed of the common logic connectives ($\rightarrow$; $\neg$; $\wedge$; $\vee$; $\leftrightarrow$), individual constants (a; b; c…), descriptive constants – or descriptive predicates – (P; Q; R; W…) and a standard syntax.

With this in mind, he asks us to consider two types of sentences that are paradigm cases of analytic sentences:

(1) "Pa $\vee$ ¬Pa"

and

(2) "Rb $\rightarrow$ ¬Wb"

(1) is a logical truth – or an L-truth as Carnap prefers –, while (2) is a type of sentence that can be analytic or not depending on the meanings of its terms. (e.g. to be a bachelor implies to be not married analytically, but to be a crow implies to be in a cage is not an analytic implication).

Carnap claims that any of these sentences can be used as the *definiens* for L-truth of a sentence $S_1$ of $L_0$[23]:

D1) The open logical formula corresponding to $S_1$ ($\Psi\alpha \vee \neg\Psi\alpha$) universally valid (i.e. satisfied by all values of the free variables). (Presupposing that $L_0$ contains corresponding variables for all descriptive constants.)

D2) The universal logical statement corresponding to $S_1$ ($\Psi$)$\wedge$($\alpha$)/($\Psi\alpha \vee \neg\Psi\alpha$) is true. (Presupposing that $L_0$ contains corresponding variables for all descriptive constants.)

D3) $S_1$ ($\Psi\alpha \vee \neg\Psi\alpha$) is satisfied by all values of the descriptive constants occurring.

D4) $S_1$ ($\Psi\alpha \vee \neg\Psi\alpha$) holds in all state-descriptions. (A state-description is a conjunction containing for every atomic statement either it or its negation, but not both, and no other

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[23] These definitions are almost the same as the contained in (1964) pp. 223-4, but for some notation changes and omissions.

statements. Presupposing that $L_0$ contains constants for all values of its variables and, in particular, individual constants for all individuals of the universe of discourse.)

In addition, according to Carnap, to make sentences of the type (2) analytic, the language must contain some semantic rules called *meaning postulates*[24]. These meaning postulates are rules that establish the primitive meanings of the words of the language vocabulary. By means of these rules the speaker of the language would be able to decide just by understanding which sentences are true in every case and which would depend on empiric data to be confirmed and which sentences are well formed, not syntactically, but semantically (avoiding categorical mistakes). Let us say that the meaning postulates of our artificial language are:

P1 $(\alpha)$ $(R\alpha \rightarrow P\alpha)$ (e.g. to be a raven implies to be a bird)

P2 $(\alpha)$ $(R\alpha \rightarrow Q\alpha)$ (e.g. to be a raven implies to be black)

P3 $(\alpha)$ $(R\alpha \rightarrow \neg W\alpha)$ (e.g. to be a bachelor is to be not married)

and so on and so forth. Let us call the set of all these meaning postulates $\Gamma$. Carnap extends the meaning postulates to relations, by the introduction of relational descriptive constants (e.g. Tab = a is taller than b), and inductive logic, by the introduction of other L-operations (e.g. L-falsity, L-implication, L-equivalence) derived from the notion of L-Truth.

For Carnap, then, a sentence is analytic in $L_0$ when it is in accordance with its syntax – i.e. to be an L-truth – or when it is in accordance with $\Gamma$. Therefore, Carnap's definition of analytic sentence is one that is in accordance to the laws of $L_0$ and the postulates of $\Gamma$. That is basically the Fregean definition of analyticity, but instead of a natural language that depends on meanings as entities, it depends on the set $\Gamma$ pre-established when the language is built.

Although this explanation is very interesting and rigorous, Quine's objections still maintain. He asks what are these meaning postulates that enables $(R\alpha \rightarrow \neg W\alpha)$ (e.g. to be a bachelor is to be not-married) to be in the set of meaning postulates and $(K\alpha \leftrightarrow H\alpha)$ (e.g.

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[24] The semantic rule contained in the first explanation was too simple and too obviously incorrect. In (1956) and (1990) Carnap presents this more detailed explanation. Thus, I believe that the first explanation is a straw man created by Quine, though, at the end of the day Quine's objections still valid.

an animal with kidneys is an animal with heart)? According to Carnap, they are a set of semantical rules established in the construction of a language. But, what is (or are) the criterion (or criteria) to choose between the sentence aforementioned about bachelors and exclude the one about animals with kidneys? It cannot be just because it is a true sentence, for if it were, the synthetics would have to be there too. It cannot be because it is analytic too, for this would beg the question, similar to Quine's objection to the first explanation. Carnap, then, would have to appeal to meanings, as the Fregean would. However, as we saw, Quine would not accept that, unless Carnap presents a clear account of the notion of meaning.

Carnap's way to deal with this critique is to say that these questions are *external*, which he believes are questions about the system of language as a whole. These external questions are considered not important, for Carnap, because they lie in an extra-linguistic (or at least meta-linguistic) realm devoid of significance. He believes that the reasons for the architect of language to choose one postulate rather than another can be economy, simplicity, clarity or whatever pragmatic reason one may prefer. On the other hand, we have *internal* questions, which are, in his eyes, genuine questions about the world[25]. Creath calls this move, in (2004)[26], Carnap's proposal gambit. This gambit permits Carnap to account not only for the synthetic analytic distinction, but also for the distinction between the choice of a language and the choice of theories within a language. For him, what happens (or should happen) in science and philosophy is that we first establish a language and then within this language, we can chose among different theories. For him, this wedge precisely distincts what is the real work of philosophers and what is work of scientists. Questions about what language, which syntactical rules, which meaning postulates should we choose, in other words, the external questions is a work for philosophers. Science, on the other hand, shall be concerned with the internal questions, questions about what is true and what is not[27].

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[25] For more on the distinction of internal and external questions, Cf. Jhul and Loomis (2009) chap. 2.

[26] p. 50

[27] Here I should stress that I am not sure that for Carnap philosophy is concerned only with external question, for he also said that the aim of philosophy is to promote clarification of concepts through explanation. That explanation described in section 1.2. Since one can possibly make a notion clearer by using only semantical and syntactical rules he already knew (therefore, within his language and theory), one seems to be able to make philosophy when answering internal questions.

Quine seems open to accept Carnap's view, since he agrees with most of Carnap's proposals concerning behaviorism, empiricism and the role of philosophy. However, Quine believes that Carnap does not go far enough. He says:

> Carnap, Lewis and others take a pragmatic stand on the questions of choosing between language forms, scientific frameworks; but their pragmatism leaves off at the imagined boundary between the analytic and the synthetic. In repudiating such boundary I espouse a more through pragmatism. (TD, p. 46)

He is looking for something more radical, he aims to develop a naturalistic view of science and philosophy, where there is no boundaries between internal and external questions, no boundaries between language and theory. For Quine, Philosophy is just an extension of the scientific enterprise. For him, there is no sharp wedge between philosophy and science, no sharp wedge between the choice of a language and the choice of a theory; since language is something that happens in the world, like any other event, he believes we shall look at it like any other event.

### 1.6 Empiricism without dogmas: Holism

The idea of sentences that are true no matter what comes, according to Quine, still could be saved by relying on the other dogma of empiricism, namely, reductionism. Roughly speaking reductionism is the idea that every sentence of a language is reducible to another sentence in a sense-data language. This sense-data sentence would give us the truth conditions that must be matched in the world if the sentence were to be considered true. Another way to put it is to say that "*reductionism is the doctrine that statements are analytically connected to their confirmation conditions*"[28] (e.g. "'the cat in on the mat' means 'the cat is on the mat [in sense-data language]'"), which is an idea that Quine clearly would not accept. Because if this idea were correct, one would be able to utter sentences, in which the truth conditions are always – and always will be – matched, like "I'm here now" or "something exists", and others of the kind. Sentences of this type could be rightfully called analytic, or true in virtue of their meaning, because their truth conditions are always matched! Quine cannot allow that.

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[28] Fodor & Lepore (1992) p. 51.

Among the consequences of the criticisms to the second dogma, we can list: 1) no sentence can be said to be reduced to a sense-data language, 2) no sentence can be said to signify independently of all the other sentences of the language, 3) no sentence can be confirmed or infirmed without *all* the other sentences of language, and 4) it is possible to hold the truth or falsehood for any sentence in the language, if the necessary adjustments in the language were given.

Quine thus needs to explain how should empiricism work without intensional notions, without appealing to sense-data language, and without attributing semantic and epistemic independence to sentences. These constraints leave us pretty much with only the sentences and the immediate sense data available, which is perhaps enough to describe present events, which are perceived by the senses, from a directly referential perspective, something like naming the events. In that scenario, all knowledge would be *a posteriori*, synthetic, and contingent, but unfortunately incommunicable and with a very low level of reliability, because there are no meanings for people to share and people do not share the same perceived sense-data, therefore, they could not name the same events. One cannot explain in that way such a vast amount of knowledge available in science, which enables another vast amount of successful predictions of events. Quine's alternative is a holistic approach.

Holism is a notion firstly used in biology that says that the idea that all elements in a certain universe are directly or indirectly linked in a certain way that a change in one element will reverberate to others changing the structure of the whole system. We can talk holistically about medicine, ecology, mechanics, etc., we can think about knowledge holistically, namely, epistemic holism (confirmation holism), and we can think about semantics holistically, namely, semantic holism (meaning holism). Quine's step is that not only we can think about these issues holistically, but also that holism is the correct way of understanding knowledge and language in opposition to the localism defended by Carnap and his predecessors.

Confirmation holism is the idea that no statement is given a truth value in absence of a backlog theory. Which means that the truth or falsehood of a statement is influenced by the sum of all other statements of our world view, or in Quine's words, "*statements about the external world face the tribunal of sense experience not individually, but only as a*

*corporate body*"[29]. For example, the statement (1) "Celtic F.C. never won a world football championship" it seems to be a sentence easily confirmed by looking at FIFA's world championship's records or be old enough to claim to have watched all football world championships so far. And we tend to believe that this is all that is needed. But that is not true. This simple act of empirical confirmation is not the only action needed to attribute truth to the sentence in question, because one can raise the following objections (not necessarily together):

(I)     the future may already exist and somewhere in the future Celtic win a world championship, we just don't know yet;

(II)    "Celtic F. C." is vague, it can mean lots of different things like "The '66-'67 adult men's Football team from Glasgow", or "the nowadays adult men's Football team from Glasgow", or "the under 17's men's football team from Glasgow", or even "the sum of all the teams that play with white and green shirts based in the Celtic Park at Glasgow's east end".

Objections of the same type (I) shows us that to confirm that (1) is true, we also have to attribute truth to "the future is not real" or to "though the future may be real, we should not count it as a historical relevant fact for this matter, because we do not have access to it" and lots of other sentences linked directly or indirectly to that, which compose the world as we know it. Of course we do not have to empirically confirm all of them, but we have to assume their truth to confirm the statement in question. Even the most basic and obvious sentences like "When a name is used to reference to a thing it the thing keeps the name trough different times and contexts", which if it's not true may cause the disconfirmation of (1), for one could say: "well, when I said that Celtic F.C. wasn't a world champion, was truth, but now it's false, because Celtic is not that team anymore, now it's the red shirted team from Manchester". Even sentences like "2+2=4", which although apparently has nothing to do with (1), depends and also supports (1) indirectly. The way one sentence depends and supports another is not obvious, but think that 2 summed with itself is equal 4

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[29] TD p. 41.

is an evidence that 2 is different than 0, because 0 summed with itself is not 4, therefore, the number of Celtic's world titles is different then 2.

Objections like (II) shows that we also have to attribute truth to "'Celtic F. C.' means 'the collection of all adult men's teams of all times that are based in Celtic park in the east end of Glasgow'. Otherwise if the under 15's from Celtic F. C. had won a world championship, all Celtic fans would be boasting that they are world champions. And this team is not what is at stake in discussions of world champions in football. So the meaning (or the signification) of the words in the sentence, must be given and the statements that give these meanings to the words must be taken as true. This class of statements, which are definitions, are linked directly or indirectly with all other statements of language.

As these definitions are linked with all other statements of the language, their meanings, and the meanings of their component expressions are also linked with the meanings of all the other statements and terms of language in a manner we can notice with the Celtic example. If "Celtic F.C." doesn't mean "the such and such football team" anymore and we as a society decided that it's going to mean "tea spoon measure" the sentence "Celtic F. C. has never won a world championship" makes no sense anymore and the sentence "Could you please, put a Celtic F. C. of sugar in my coffee?" would start to make sense. But this kind of radical change in the meaning of terms would reverberate through the vocabulary and cause massive changes in the meanings of other terms like "Celtic (F.C.) match" would probably now refer to the grouping of matching teaspoons, not a football game anymore. So we can say that meanings are linked in a holistic way such as statements. That we call meaning holism.

In TD, Quine does not make clear which holism he is talking about, and there are lots of different interpretations. The most widespread interpretation is that he is proposing an epistemic holism that has semantical implications[30]. Some scholars defend that he is proposing that epistemic holism implies semantic holism[31], while others defend that he is

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[30] Hookway (1988); Fodor & Lepore acknowledge that is a possible reading (1992).

[31] Also Fodor & Lepore acknowledge that as a possible reading (*Ibidem*).

[32] Kemp (2006).

only proposing an epistemic holism[32], and some do not even differentiate between them[33]. I do believe that all interpretations find textual support, for Quine is very unclear. However, I think that both holisms are essentially bonded together and hope to make my reasons clear in the next paragraphs and in section 2.6.

In the context of TD, we can say that Quine is talking about confirmation holism, at least, because he states clearly that "*our statements about the external world face the tribunal of sense experience not individually but only as a corporate body*"[34] and because this is a paper about empiricism after all. Nonetheless, based on the following passage I believe that Quine is also claiming a semantic holism:

> (...) The statement, rather than the term, came with Frege to be recognized as the unit accountable to an empiricist critique. But what I am now urging is that even in taking the statement as unit we have drawn our grid too finely. The unit of empirical significance is the whole of science.[35]

Fodor & Lepore point as good evidence for believing that Quine is also claiming a semantic holism: (i) the comparison with Frege, who was rather worried about unity of significance than unity of confirmation, (ii) the fact that theorists of meaning holism trace their roots back to Quine, and (iii) the fact that, since reductionism is viewed as an epistemic and a semantic doctrine, Quine should be proposing an alternative to both semantic and epistemic aspects of it[36]. Also, I think a fourth point is welcome: (iv) analyticity is believed to be a semantic and epistemic feature of statements[37]. Aside from (ii), that is quite irrelevant to the matter, for all the meaning holism defendants can be misinterpreting Quine, all the other reasons seem pretty convincing. However, as I said before, Quine is not clear about that in TD. Thus, all these can be reckless typing from Quine.

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[33] Hylton (2002); (2015). Hylton does not make any clear distinction about semantic holism and epistemic holism, in Quine's thought, though he writes almost interchangeably that holism is about cognitive meaning and knowledge. He also often treats it as "Quine's holism", with no further predicates. So it would not be absurd to interpret him as proposing that both holisms are two sides of the same coin.

[34] TD. p. 42.

[35] *Ibid*.

[36] Fodor & Lepore (1992) pp. 40-1.

[37] Analytic sentences are *truths* in virtue of *meaning*. Therefore, the notion has semantic and epistemic power.

Another evidence for believing that Quine is also proposing a meaning holism is his reply to an article by Putnam called 'Meaning Holism'[38], where Putnam writes widely about the shift of the meaning of meaning in Quine's philosophy. The essay starts with the following words: "*Quine's argument for meaning holism in 'Two Dogmas of Empiricism' is set out against the meaning theories of the positivists.*"[39] And is followed by Quine's reply that starts like: "*Much to my satisfaction, Putnam has written understandingly, approvingly, and persuasively of my strictures on the notion of meaning and of the holism that underlies them.*"[40] The excerpts talk for themselves. Quine approves a reading of TD that interprets him as a meaning holism proponent.

On the other hand, it is reasonable to say that Quine's criticisms against the notion of meaning and related notions of the intensional vocabulary present good reasons to adopt a reading in which he is not claiming a semantic holism. The problem is that, as we just saw, he is not clear at all in TD and does not deny the possible relation between semantic holism and epistemic holism in his latter works[41]. Another point in favor of this view is that, in *PT*, he talks about holism as an important insight to decide between accepting some hypothesis or abandon it in face of a recalcitrant situation[42](stressing that holism, then, has epistemic importance), and only that. However, in the same book, in a section concerned with meaning, section 22, he does talk about holism, but just to show how it would solve the problems of avoiding analyticity. There is no relation between holism and significance. Therefore, it shows no clear relation between holisms. Nonetheless, I think his theory of significance and the introduction of his *stimuli concepts* corroborates the reading of holism as a semantical and epistemological doctrine, as we shall see in next chapter.

The only thing that is clear about holism in TD is its effect, which is often the preferred way to explain Quine's view on holism. The effect is the possibility of choice, when faced with a recalcitrant experience, between giving up a determined statement or giving up another statements of the same theory to save that statement from revision. Let's say we state $S_1$ (which describes $E_1$) and if it is true, then we shall observe $E_2$. But we are

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[38] In Hahn and Schilpp (1986) pp. 405-26.

[39] (1986) p. 405.

[40] *Ibidem* p. 427.

[41] As we shall see in the following sections, he does admit a notion similar to meaning, thus he could also admit a relation between semantic and epistemic aspects of holism.

[42] *PT* pp. 13-4.

faced with the experience $E_3$ when expecting the experience $E_1$. Holism gives us the choice of giving up the truth of the statement $S_1$ – that if was true, should lead us to $E_2$ – or to giving up the truth of other related statements of the same theory $S_2, S_3, S_4...$ so that we can rearrange our system of believes to accommodate that recalcitrant experience as true, thereby, saving $S_1$[43].

## 1.7 Possible readings of 'Two dogmas'

Before passing to the objections of TD, I would like to examine some possible readings of the criticism contained in TD. Paul Boghossian brings up two interpretations in his (1997), namely, the Non-Factualist (there are no facts about meaning, therefore analyticity is unintelligible) and the Error Thesis (analyticity is intelligible, but there are no clear examples of analytic sentences). Boghossian claims that TD readers have been divided about which reading is the correct one. However, I failed to find even one commentator championing the Error Thesis reading and Boghossian does not mention any names. Which means that like him, me and all other TD readers that I know are advocating for the Non-Factualist reading.

The Non-Factualist reading claims that in TD Quine is arguing for the view that no coherent property is expressed by "is analytic", for it is not a clear and determinate property of a sentence to be analytic, since we cannot define what analyticity is. In other words, analyticity is unintelligible, therefore, its understanding is compromised, and hence, its use cannot be made correctly or even coherently. I think that Quine's efforts in TD were meant to show that all notions of the intensional vocabulary that could be used to explain analyticity can only be explained by analyticity or are more obscure than analyticity, and hence, cannot clarify what analyticity is.

The Error Thesis reading claims that there is a coherent property expressed by "is analytic", however, there are no instances of this property, therefore, all sentences with the form "S is analytic" are false. Although I found no one advocating this view I can see reasons why one would adopt the Error Thesis instead of Non-Factualism.

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[43] *PT* p. 13-5; Hookway (1988) p. XX; Kemp (2006) p. 26;

First, I believe that people that defend the Error Thesis must have started reading Quine from *WO*, and then, have read his other writings. As I shall make clear in the next chapters, his views on analyticity are rather different over the years. In *WO*, he did not openly admits the intelligibility of analyticity, however, he presents the first signals that one can understand what "is analytic" means. My guess is that people that defend the Error Thesis reading are interpreting TD in the spirit of his latter writings, but I think this is an exegetical mistake. My opinion is that TD is a very radical piece of writing and Quine changes his views later.

Also, the Error Thesis seems to fit better a passage that is absolutely incompatible with the Non-Factualist reading. When Quine criticize the explanation of analyticity by definition, he shows the case of stipulative definitions, which do not fit quite well a Non-Factualist reading:

> The *definiendum* becomes synonymous with the *definiens* because it has been created expressly for the purpose of being synonymous with the definiens. Here we have a really transparent case of synonymy created by definition: would that all species of synonymy were as intelligible. (TD, p. 26)

To be fair, the admission of this case is inconsistent with both readings, for it admits a case in which analyticity is intelligible, so there is at least one fact about meaning – that it can be created by stipulation – and there is at least one instance of analytic truths, stipulative definitions. However, the Error Thesis can be changed in a way to accommodate this adversity. Boghossian suggests that advocates of the Error Thesis believe that, if changed, it can trespass the obstacle of the aforementioned passage. The Adapted Error Thesis claims that there is a coherent property expressed by "is analytic", but it is uninstantiated, apart from cases generated by stipulational mechanisms. The Non-Factualist view cannot adapt to make this adversity fit, for to admit that there is an intelligible case for "is analytic" is to undermine the thesis of unintelligibility.

The adaptation seems to me an ad hoc solution to save a thesis that, in my opinion, is not what Quine is proposing. I believe that the correct reading is the Non-Factualist and the passage is a flaw in Quine's thesis, which shows that it is an incorrect thesis. This does not make the article any less important or brilliant, just makes it wrong. Moreover, it is not the only place where Quine goes wrong, as we shall see with Grice and Strawson's critique

of his example of the green dot and, in the last chapter, with a more charitable reading of Kant's containment criterion.

Another possible reading of TD, exposed by Grice and Strawson[44], is that Quine would be claiming that there is no difference at all between analytic and synthetic statements. This is a possible interpretation of TD and since Quine is very economical in his considerations, it is an often accepted reading. However, taking into account the other works of Quine, one would say that what he is proposing is more like what Grice and Strawson also acknowledge as a possible reading, namely, the reading that says that: "*the nature of, and reasons for, the difference or differences are totally misunderstood by those who use the expressions* [analytic and synthetic]*, that the stories they tell themselves about the difference are full of illusion*"[45]. This seems to be a less radical reading compatible with both non-factualist and error thesis. The notion is unintelligible, but we can see a clear difference between some types of statements, therefore, although it is not possible to draw a sharp distinction, we would still be able to see some difference between statements. This reading seems clearly the correct one after Putnam shows, in (1975), that there are more categories of statements apart from analytic and synthetic, and Quine speaks approvingly of Putnam's reading of TD[46].

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[44] (1956); Putnam (1975) also acknowledges this reading.
[45] (1956) p. 143.
[46] See Quine's reply to Putnam in (2008).

# CHAPTER II

## Objections to the arguments of 'Two Dogmas'

TD was probably the most influential philosophical paper of the last century. It was received with joy and support from some[47] and with disapproval and criticisms from others; many whom disagreed deeply with Quine's arguments and conclusions tried to expose philosophical flaws of TD and argumentative impostures of Quine. This chapter will be dedicated to cover these criticisms. Too much was written about and against TD, thus, a choice of what criticisms to put in this dissertation was necessary. I choose Grice and Strawson, for it is by far the most well know critique of TD; Putnam was chosen, because I think is the fairest critique of two dogmas and the most interesting; and, finally, Carnap's response, for I think it is interesting to see how he reacted to the critiques to his own work.

## 2.1. Grice & Strawson

Although Grice and Strawson acknowledge some lack of clarity of the distinction between analytic and synthetic statements and the ambiguity involving the understanding of the term analyticity (as we saw often conflated with apriority and necessity), they believe that there are not enough reasons to abandon the distinction. They even concede that Quine can manage to develop a theory of knowledge without the distinction, though to acknowledge that the distinction is useless is also to acknowledge that it exists. Therefore, the move Quine does in TD seems too radical for them.

They point out that the analytic/synthetic distinction is widely spread in the philosophical tradition and the terms are applied to more or less the same cases, they are withhold to more or less the same cases and there is a gray area between the two categories that people tend to hesitate to more or less the same cases. Like many other distinctions

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[47] White (1970); for more information on the impact of TD, Cf. Juhl & Loomis (2009) and Burge (1992).

(e.g. morally right/morally wrong, true/false), this one is not very clear, with certain dubious limit cases in the gray area, though this is not reason enough to abandon it, according to Grice and Strawson. The distinction is not only applicable to cases people learned to dub sentences as analytic or synthetic, it is applicable to unforeseen cases too. Thus, it seems clear that there is some criterion operating in the classification of sentences.

One of the fundamental pillars of Quine's article is the claim that of the notion of synonymy, or more specifically cognitive synonymy, which is the notion that holds the key o analyticity, cannot be explained without recurring to the notion of analyticity itself or to the more obscure notion of meaning. Grice and Strawson argue that though criticizes the obscurity of the notion of meaning, he cannot say that there is no notion like it operating to convey information and to signify thing meant by the speakers. Otherwise, Quine would be incurring into a paradox.

One might not be able to explain what meanings are, though one cannot deny that sentences mean something. The same goes for predicate-expressions. They convey some information, they create some imagery in our heads and they often yield an expected behavior from our interlocutors. One is understood when says "this means $x$" and also when says "$x$ means the same as $y$"; and certainly is understood differently when says "this is truth for $x$" and when says "$x$ is true as just the same object as $y$". "Bachelor" means the same as "unmarried man", but "creature with kidneys" clearly does not mean the same as "creature with heart", though they are true for the same objects. This clearly shows up that co-extensionality and co-intensionality must be different things. Thus, according to Grice and Strawson, it seems possible to explain synonymy of expressions by this reasoning: Two expressions, E and E', are considered synonymous if and only if, when upon the question "what does it [E or E'] mean?", the answer that is true for one is true for the other too. To be more precise, one could reformulate the definition and say that two expressions are synonymous if and only if the answer is true for both of them in all situations, past and future; which is more or less what Quine does when he proposes his *stimulus synonymy*[48], in *WO*.

Strawson and Grice believe that if Quine does not accept that, he is incurring in a paradox:

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[48] Cf. Chapter 3.

> Instead of examining the actual use that we make of the notion of *meaning the same*, the philosopher measures it by some perhaps inappropriate standard (in the case some standard of clarifiability), and because it falls short of this standard, or seems to do so, denies its reality, declares it illusory. (1956, p. 147)

I must admit that it is not clear to me that this is a paradox, this is clearly a mistake, a fallacy, but not a paradox. Nonetheless, we can clearly see a paradox in Quine's argument because in giving up the notion of synonymy, he would be giving up the notion of significance itself, but he would be doing all that by a reasoning composed of meaningful sentences, sentences that signify something, therefore, incurring into a performative contradiction.

A point worth stressing about this quotation is that they interpret Quine as claiming that the notion of analyticity is not real, illusory, which is not what he does. It is true that he is quite obscure about which are his aims in TD. As we saw in the last section, there is a lot of space for interpretation, however, the interpretation that says that Quine is clearly claiming that the notion is not real or illusory is not correct – though is a common one. Quine claims that the notion is unintelligible, not inexistent. Thus, their point of showing that there is a notion widely used by the tradition is not inconsistent with what Quine is really claiming.

Quine claims that analyticity is unintelligible, because it is not clear what we meant by "is analytic". The definitions and clarifications presented by Quine do not fit his criteria of clarification (or at least the way he presents them, do not), for to clarify analyticity it is needed to do it by the explanation of the other notions of the intensional vocabulary, which in turn are only clarifiable by the notion of analyticity. What he asks for, according to Grice and Strawson, is (I) an explanation that does not make use of any expression of vicious circle of definitions of the intensional vocabulary and (II) the explanation has to present some feature that is common and particular to all cases considered analytic, in other words, it must present a necessary and sufficient cause for analyticity[49].

Grice and Strawson take Quine to be proposing the following slippery slope:

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[49] They say that (II) is not explicit in TD, nonetheless he does not even consider the possibility of other sort of clarification (e.g. ostensive definition or negative definition).

(SS) Since it is not possible to present a satisfactory explanation for analyticity, then analyticity does not make sense.

They argue that it is hardly possible to present such a strict definition. They doubt that such a definition accounting for (I) and (II) is possible. But considering that for some simpler notions they are, it is not the case of "analytic" and many other fundamental notions that even Quine makes use of, like "true", "false", "statement", "fact", "assertion", and many others extremely relevant to the daily life and philosophical activities alike (e.g. "morally wrong", "time" etc.). It is unlikely that one can define any of these notions without making use of correlated notions and yet Quine does not claim that they are illusory or senseless.

On behalf of Quine, as I said before, what is often said is: He does not claim that analyticity does not exist or that it makes no sense. He claims that nobody could make enough sense of it and since it is unintelligible, we should abandon it. However, then, why does not he abandon these other notions too? The reason Quine put forward, is that his alternative, namely, his holism, is simpler and one should always choose the simpler among the alternative theories[50]. In his view, one would need not to postulate unnecessary entities as meaning and a division between analytic and synthetic to explain how science and language are possible. It seems, then, that holism is the cause for all this theoretical gymnast, not the effect of it. Reading TD, one may have the impression that holism is the solution that is forthcoming for this problem found in our theory of knowledge and language, since Quine does not present a fully embodied positive view, but just a sketch. Nonetheless, what seems to be the case is that this problem is created to justify the adoption of a new framework.

Back to the point of the clarification of analyticity, Grice and Strawson present a story to illustrate how it is possible to make a notion intelligible at least to the point of someone unacquainted to the notion becomes a competent user of it. The notion in question is *logical impossibility* and the story goes as follows: Imagine two conversations, one with subject X, the other with subject Y. X says: "My neighbor's three-year-old child understands Russell's Theory of Types." For what you would probably answers something

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[50] For more on Quine and simplicity and the epistemological irrelevance of analyticity, see Creath (2006) pp. 58-62; and Quine (1991) p. 269.

like: "You mean the child is a very intelligent lad." And X would reply: "No dude, I mean what I said – the boy really understand it, with all that set talk and paradox and stuff." You would be inclined to say: "No way! It's not possible." Then X brings you the lad, which explains to you the theory correctly with all the talk of sets and the paradox and so on. You would be shocked, but you would see that it was possible and in fact, it was true.

Now imagine the conversation where Y says: "My neighbor's three-year-old child is an adult." You would inquire: "You mean he is uncommonly mature or very advanced for his age?" For what would reply: "No dude, I mean what I say." And you would say: "Perhaps you mean that he won't grow up any more, or he's a sort of freak, fully developed with a beard and a thick voice." For what he would say: "no man, he is not a freak, he is just an adult." At this point, anyone would be inclined to believe that Y does not understand what he is really saying and he probably does not know the meaning of "adult" or "child". For it is logically impossible even to conceive something being a child and adult, in the literal sense, at the same time. Meanwhile it is conceivable of something to be a child and, at the same time, to understand Russell's Theory of Types.

The case of Y's conversation is a logical impossibility, for it is impossible in fact and impossible to imagine it. Meanwhile, the case of X' conversation is just a physical impossibility, for it is not going to happen in fact, though it is possible to conceive. This explanation is somewhat like an ostensive definition, a definition learned by the grasping of an instance of the *definiendum*. Most of our vocabulary was acquired like this[51] and it seems fair to say that analyticity can be acquired like this too. If not, one can certainly use logical impossibility, which that we just made intelligible, to develop an explanation for analyticity.

Yet, there is another way to make the notion intelligible, and Quine is aware of that, he just simply dismiss it as an invalid one. He explicitly says that definition cannot be a path to reach synonymy and analyticity, because "*definition – except in the extreme case of the explicitly conventional introduction of new notation – hinges on prior relationship of synonymy*"[52]. Grice and Strawson notice that he admits that there is a clear case where. He explicitly asserts this:

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[51] Quine would probably agree with that, given his theory of stimulus meaning.

[52] TD, p. 27.

> Here the definiendum becomes synonymous with the definiens simply because it has been expressly created for the purpose of being synonymous with the definiens. Here we have a really transparent case of synonym created by definition. (TD, p. 27)

Although, it is an uncommon case, according to Quine, it is a clear case where synonymy through definition happens, therefore, it seems that there is a link between the two notions and it is possible to explain this link, contrary to what Quine defends. Perhaps it is not a strict explanation, as the one he demands, but it certainly makes the notions somewhat intelligible. It seems evidence enough for not abandon this line of thought and keep looking for better definitions.

Before I pass to the next critique, there is one more interesting point that Grice and Strawson stress that is worthy to bring up, namely, the green dot example. At the end of TD Quine says:

> I do not know whether the statement 'Everything green is extended' is analytic. Now does my indecision over this example really betray an incomplete understanding, an incomplete grasp of the 'meanings', of 'green' and 'extended'? I think not. The trouble is not with 'green' or 'extended', but with 'analytic'. (TD, p. 32.)

Strawson and Grice argue that the problem of deciding whether the sentence 'everything green is extended' is analytic or not is not caused by the non understanding of 'analytic', like Quine says, but by the fact that the sentence is not a clear case of analytic sentence. It may not even be true. They ask us to consider a green dot of light. A green dot of light should be considered extended? Some may think it does not. Some may think it does. The point is that this example is a very unfair example[53], for the issue about what can count as green and as dot can be also be considered extended is more complex than the way Quine puts it here.

## 2.2. Putnam

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[53] Carnap brings up the same point in (1990) pp. 427-8.

Although Quine was wrong in his views about the intelligibility, he was correct about the dichotomy analytic/synthetic. The dichotomy is far-fetched after all. Although one can understand what an analytic sentence is and what a synthetic sentence is, Putnam claims that there are innumerous shades of gray between one category and the other. Moreover,he shows that many statements thought to be analytic, are indeed not. And because of that, he believes that Quine is far more correct than his critics. In (1975), Putnam intended to show that the aftermath of TD's discussions is positive and Quine had a point, though his theory was wrong. He claims that if we follow Quine in abandoning the analytic/synthetic distinction and we will not be wrong about philosophical issues, but if we base our theories on this distinction we will certainly be mistaken.

Putnam defends that there are clear cases of analytic sentences like 'No bachelors are married' and this is not open for discussion, however, this cases are simply uninteresting. One can easily find statements of this kind, but what are they good for? Or as he puts it "*The real problem is not to describe the language game we play with words like 'meaning' and 'understanding' but to answer a deeper question, 'What is the point of the game?*'"[54] He points out that the cases we normally consider interesting cases of analytic sentences are those cases of scientific definitions, which are not analytic. For example, the definition of kinetic energy or the definition of straight line. By showing this difference inside the category of analytic statements itself, he intends to show that the overrated idea that analytic statements are reliable because they are somewhat like rules of language or principles of some framework.

Putnam asks us to consider the case of how the definition of kinetic energy have changed within the changing of the framework of physics. According to him, before Einstein's works, kinetic energy was arbitrarily defined as half of the mass times the square of velocity ($E = \frac{1}{2}m.v^2$). This is clearly a putative definition where the *definiendum* is introduced  as an abbreviation of the *definiens*, such as those cases even Quine acknowledge as clearly synonymous cases, as cases that Quine acknowledged as clearly analytic statements. After Einstein, many statements of physics had to be revised and changed to fit the new framework, the definition of kinetic energy was one of them. It was arbitrarily settled as '$E = m.c^2 + \frac{1}{2}m.v^2 + 3/8m.v^2...$'.

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[54] Putnam (1975) p. 36.

He also invites us to consider the case of discovery of non-Euclidean geometries. According to Putnam, before this discovery, a 'triangle' was defined as a 'three sided polygon (a plane figure formed of straight lines) which the sum of the internal angles is 180º' and a 'straight line' was defined as 'the path of a light ray'. Both definitions, of triangle and of straight line, were considered analytic. As any statement of mathematics, they were as analytic as a statement can be. However, after the Einstein's developments it became clear that the path of a ray light could be curved, therefore, a polygon formed of three straight lines may have less than 180º, making the triangle definition false[55].

Both cases certainly would be considered clear cases of analytic statements by any defendant of the notion of analyticity, for they were truths in virtue of definitions. However, as we just saw, they were not 'true no matter what comes', they were not non-revisable. So, at this point, the champion of analyticity faces two alternatives: (i) he can accept that analytic sentences are revisable and their truth is not that special as he thought it was, or (ii) he can say that these cases were not analytic statements, they are synthetic. The less harmful alternative seems to be (ii), but to day that these two cases are to be considered of the same class of statements as 'my car is red' and 'Celtic is winning the match' is very discomfortable. Putnam, then, suggests that they are not in the same class as these statements. Synthetic statements can be proved false by a simple experiment that contradicts them. This seems not to be the case to statements like the definitions of physical laws and geometry rules. In Putnam's words: "*These principles play several different roles; but in one respect they are alike. They share the characteristic that no isolated experiment (...) can overthrown them.*"[56] These principles are something else than analytic or synthetic. They are definitions of a very special sort of notions, which Putnam will call *Law-cluster concepts*.

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[55] Maybe the most appropriate definition for 'straight line' would be 'the less distant path between two points in a plane', which also would not save the triangle definition from revision, for in a curved plane the sum of the angles would also be different of 180º. However, using this definition one would not have to appeal to physics, which would make the definition seem more 'pure'. For reasons of economy (and because Putnam also does no follow this path) I will not follow through this 'pure'way of account for the non-analyticity of geometry in non-Euclidean planes, but this could also be easely done.

[56] (1975) p. 48.

Some notions (or concepts) do have some kind of definition core that cannot be changed without making the notion lose its meaning, e.g. 'Bachelor is an unmarried man'. Putnam acknowledges that there are statements like this in science and they are immune to revision[57]. These statements should be considered analytic, according to him. On the other hand, there are concepts (or notions) that are defined by a large complex description, a bundle of properties that are instantiated in the object that it defines. Occasionally, turns out that one or another of these properties of the bundle that defines that concept is not present in all the instances, nonetheless the concept doe not lose its meaning; e.g. 'crows are black'. To find a blue crow (*corvus*) would not make 'crow' lose it it meaning, for the definition of crow is something like 'an omnivorous stout black flying bird of the *corvidae* genus with strong beaks and legs (with such and such genetic code)'. The blackness is just one of the many identifying properties of the crow. If we see a being with all the other properties, but the one of being black, would we not call it a crow? I believe one could say that it is a blue, or gray, or white crow, but nevertheless a crow. Concepts like this one are called *cluster concepts*. The cluster 'crow' may lose a branch (e.g. 'black') or even gain one (e.g. 'blue') and still be identifiable as the same cluster. To make a cluster to lose its identity, one world have to take of too many branches. The exact number of properties that must be added or subtracted is not clear, which makes cluster concepts somewhat obscure (however, still intelligible).

The Law-cluster concepts are very much like cluster concepts, as Putnam puts it:

> Law-cluster concepts are constituted not by a bundle of properties as are typical general names like 'man' and 'crow', but by a cluster of laws which, as it were, determine the identity of the concept. (...) in general, any one law can be abandoned without destroying the identity of the law-cluster concept involved, just as a man can be irrational from birth, or can have a growth of feathers all over his body, without ceasing to be a man. (1975, p. 52)

or, as we said before, the crow might be blue feathered or be incapable of flying, but still be a crow. A concept like 'kinetic energy' is defined by the many laws in which it appears in within relations with other concepts. He also stresses that, when talking about definition statements of concepts like this, it is unfortunate to talk about the intentions of the

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[57]*ibid*. p. 49. This is the precise point where he disagrees with Quine.

concepts, for this suggests that there is one defining law or property that the concept has, when actually it makes no sense of asking for this to such a concept.

Summing up his point, statements like the definition of straight line, triangle, and kinetic energy are truths by definition in some sense, however, as we saw, they are not non-revisable; one can reasonably forfeit such statements. Both features are clearly incompatible with each other, therefore, Putnam suggests that analyticity is something stronger than truth by definition. He suggests that analytic sentences are those that it is never rational to give up, which has a paradigm case 'all Bachelors are married', while there are many other categories hold statements that are not so strong as this one but not so weak as 'There is a book on the table'.

Putnam believes that even adding more classes and finishing the dichotomy, there will be problems to classify sentences. Not just because of borderline fuzziness, but because the way the model of natural languages built. Some sentences may be in fact analytic, while others are just construed as analytic. And the same goes for synthetic statements and statements of other classes[58]. Putnam does not say it explicitly, but what it seems that he is trying to say is that as language evolves, some statements might change category and pass from analytic to synthetic or synthetic to analytic. He tries to settle what an analytic sentence is by stating this criteria:

> (1) The statements has the form: 'Something (Someone) is an A if and only if it (he, she) is a B', where A is a single word.
> (2) The statement holds without exception, and provides us with a *criterion* for something being the sort of thing to which the term A applies.
> (3) The criterion is the only one that is generally accepted and employed in connection with the term.
> (4) The term A is not a 'law-cluster' word. (*ibid*. p. 65. emphasis in the original)

These criteria, according to Putnam, present necessary and sufficient conditions for something to be considered of the class it does and it gives means for people to determine if

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[58]*ibid.* p. 64-5.

something is of that class. However, I believe that these criteria are not enough. Gillian Russell in her (2008) presents a much more detailed and broadening set of criteria than these four here[59]. But we can see that they are not enough simply because they do not capture definitions of regular cluster concepts (he only mentions law-cluster concepts) and as he said there might be many other classes like those which we don't know yet and which are not mentioned here.

## 2.3. Carnap

The last criticism against Quine I want to discuss shortly is the one by Carnap. It is an short paper called "Quine on Logical Truth" (1997) in reply to Quine's "Carnap and Logical Truth" (1966j) and TD. In this paper, Carnap puts forward at least three interesting objections to Quine. He disagrees with the doctrine of logical truth as truth by convention; he questions Quine's criticism on semantical rules, for not him, or nobody else before, had complained about the assumption of syntactical rules or axioms; and finally, he criticizes Quine's demand for empirical criteria to accept intensional notions.

Carnap claims that Quine's characterization of his view on logical truth as a linguistic doctrine of truth by convention is incorrect. He claims that the idea of convention is misleading, for it brings up the idea that the convention can be changed without any consequence to essential features of the language in question; or the misleading idea that one can ascribe or not to the truth of a sentence like one can choose to use the metric system or the imperial system. This is not correct. According to Carnap there are facts about meanings that are relevant to the establishment of these conventions. Carnap uses the example of the sentence "all black dogs are dogs". It is not a matter of pure convention that it is true; there is a logical relation among the meanings of terms that makes it true. Thus, he believes that Quine's characterization of his view is not correct.

Quine is prompt to accept this, as soon as Carnap explains – in his own use of the word – what are these relations. However, Carnap does not present any reason different than logic itself. Hence, Carnap is troubled by the fact that Quine is asking for a justification for logic. An interesting thing that worth mention here is that this claim that

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[59]Cf. (2008) chapter 3.

Carnap is relying solely on convention to account for logical truth is used by Haack against Quine himself. She claims that Quine's apology for logic depends on the conventional meanings of the logical vocabulary[60].

Carnap, like Grice and Strawson, is troubled by the fact that Quine criticizes the acceptance of meaning postulates and semantical rules, claiming that to accept this rules as simply true is makes no sense, but demands no explanation syntactical rules and axioms of mathematics. However, this seems to be false. In (1966i), Quine questions logic itself. I believe that in questioning logic, in a certain way, one is questioning the basis of the syntax of our language. Lewis Caroll also questioned logic in (1895). Additionally, at the discovery of non-Euclidean geometry, more than a century before, mathematicians were questioning axioms of mathematics. Therefore, as unreasonable Quine's criticisms may sound, unreasonable and unprecedented they are not.

As Grice and Strawson, Carnap reacts negatively to Quine's demand for empirical (behavioral) criteria for the acceptance of analyticity and synonymy, but not for the acceptance of other semantic notions, like Truth. Moreover, Carnap is arguing for an artificial language, therefore, it cannot present any behavioral criteria, unless we start using it. But yet, Carnap presents an argument to rebut Quine's argument that the lexicographer have no criteria to choose among possible translation of a term (or a sentence), which should count as behavioral evidence for meaning attribution. The argument follows like this: imagine that two linguists are studying how the speaker X uses the language L. Suppose that L consists of some English words and English sentences, among them:

($S_1$) "All ravens are black".

Both linguists agree about the use of "all" and "are" in the usual sense, according to previous use of them by X. Since X has repeatedly used $S_1$, they have enough evidence to believe it right. Hence, one of the linguists put forward the following hypothesis:

(H) "$S_1$ is analytic in L for the individual X."

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[60] Cf. Haack, pp. 130-1.

The other linguist denies this hypothesis. In order to obtain relevant evidence for the acceptance of (H), the proponent linguist asks X: "We have seen a white raven yesterday. If we show it to you, would you unsubscribe $S_1$ of your list of true sentences?" Consider one among many possible answers of X:

($A_1$) "I would not believe such a thing. However, if you show me one, I would unsubscribe $S_1$."

($A_2$) "There cannot be a white raven. If a bird were not black, I would never call it a raven. If you are not joking with me and the raven is not black, then your use of "black" or your use of "raven" is different than mine."

Whether X reply something like $A_1$, the linguists have an empirical – and behavioral – evidence that (H) is incorrect. However, whether X reply something like $A_2$, they would have evidence that (H) is in fact analytic for X in L. This argument seems very convincing and, I believe, Quine would accept it, for this is more or less what he does in *WO* when he introduces his notions of *stimulus meaning* and *disposition*, as we shall see in the next chapter.

**CHAPTER III**

**Analyticity unintelligible?!**

If we are to espouse Quine's Socratic skepticism about meaning and other intensional notions, he owes us an account of how successful communication, reference, translation and other linguistic phenomena are supposed to work without intensional notions. Quine is well known for being influenced by Skinner's behaviorism. In *WO* and the writings of the following decades, Quine championed a purely behavioristic account of language where the notions of the intensional vocabulary are dispensable. This is a very particular notion of behaviorism, which is called *Linguistic Behaviorism*[61], for he believed that language should be studied with the same spirit of other natural sciences like Psychology. According to Linguistic Behaviorism, since I do not have access to other minds, I cannot suppose that other people mean the same as I do when we say "There! It is a white rabbit!" or even that we intent to refer to the same objects (that rabbit). This incapacity to reach certainty of meaning and of reference, leaves, therefore, as only alternative an explanation of language in a safe way, free of misunderstandings (such as believe people are talking about the rabbit, when actually they are talking about rabbitness instantiated), through the behavior of the speakers.

In this chapter, I shall examine Quine's arguments favoring this view, through the tale that he presents in the second chapter of *WO*. We shall also look at some more mature arguments called "Pressing from Above" and "Pressing from Bellow", found in latter writings. Then we shall appreciate how this new theory of language tries to dodge the objections against his criticisms of analyticity, which brings us to his new views on analyticity. Finally, we shall examine objections to this new approach of language proposed by Quine.

**3.1 The alien language tale: The pressing from bellow argument**

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[61] It shall not be understood in the naïve and simplistic sense that Harman proposes in (1975), as we can see in Quine's response to him in the same book.

In chapter two of *WO*, Quine expose his so called thesis of indetermination of translation. He presents a fictional scenario where a linguist makes contact with a civilization unknown to us so far, that speaks a language with not even a minimal resemblance to any language known by us.

Aiming to communicate with this alien-to-him culture the linguist starts to work on a manual of translation, a dictionary Alien/English. For this, he proceeds as we all should do when trying to teach/learn new languages when inserted in an alien culture or dealing with very young toddlers, through *holophrasis*; i.e. using one word sentences that convey the most relevant information that is intended to share. E.g. when pointing at the mother of the toddler and say "mummy", so he learns that that individual is supposed to be called "mummy". So the linguist picks a word that he heard from the natives and that he thinks might mean something related to some rabbits passing by, points to a rabbit and utters it: "Kuelio!". And the natives reply: "Yak, yak! Kuelio!". Then he points to the direction of a tree with no rabbits nearby and utters: "Kuelio!" and the natives reply: "Nie! Nie kuelio!". The linguist then repeats the same process pointing to different rabbits and different objects that are not rabbits and have the same replies. So far he is content to say that he knows at least that "Kuelio" signifies the same as the English word for 'rabbit', and 'yak' and 'nie' the same as 'yes' and 'no' respectively. Or at least to say that he has very good reasons (evidence) for believing that. Because every time a rabbit is nearby the natives seem to react positively when confronted with the expression "Kuelio?".

The sum of all these positive reactions and the dispositions of the speakers to prompt assent to the expression when confronted by a situation where they are in contact to a rabbit are called by Quine the *positive stimulus meaning* of the uttered expression, and the sum of the denials and dispositions to denial when in a situation where they are not confronted by a rabbit are called *negative stimulus meaning*. The sum of all those situations when the native assented or negated the term "Kuelio", plus their dispositions to assent or deny in the future or in hypothetical situations is what Quine will call *stimulus meaning* of that term.

One could object that stimulus meanings are not precise: what if the natives are assenting to the rabbit fleas? Or what if there is always a specific movement in the grass that is made by rabbits? Or if "Kuelio" actually signifies a characteristic pattern of

movement of the rabbits? This kind of adversity is called collateral information. Quine thinks that all stimuli are infected with them, but proposes that we can work out a method to increase the precision of the meaning avoiding as maximum as possible the collateral information. According to him, we shall limit a *modulus* of stimulation, that is, the relevant stimuli that should correspond for the expression "Kuelio" is all the sounds, lights, smells, tastes, skin sensations that are generated in the speakers during a few moments – e.g. half second before the utterance of "Kuelio" to half second after the utterance of the expression (the *modulus* can be longer or shorter, according to Quine, we should not attribute an inflexible amount of time to it). So the stimulus meaning of a sentence is relative to a certain *modulo n* for a subject *a* in a space *l* and at a time *t*.[62]

One could also raise another kind of objection concerning other kinds of collateral information that apparently cannot be avoided simply by limiting what is relevant to the stimuli: what if they are assenting to an instantiation of the rabbitness, or to undetected parts of rabbit? For Quine, this is a valid objection and the very reason for doubting that *rabbit* is the meaning of 'kuelio'. This sum of dispositions of assents and denies just gives us a behavioral criterion to confirm that the use of the term 'kuelio' seems appropriate when asserted of something in the presence of rabbits. In other words, it doesn't give us the *meaning* of 'kuelio' as we and his predecessors were looking for. Because we might be using this term to talk about rabbits, but it could mean the *rabbitness in its mundane form* or *unattached parts of rabbit*. But for Quine that is the best one can expect from linguistics. Also the only thing he was asking for in the final chapter of TD was for behavioral criteria, so one can talk about meaning without appealing to obscure notions. That seems to undermine his criticisms of TD, because he is solving the problem he had posed; but as we going to see below it doesn't. To conclude, he thinks that is possible to give an explanation to how language works, without having to postulate a notion like *meaning.*

This problem of the lack of a criterion for signification is known as Quine's thesis of *indeterminacy of translation*. Which is basically the thesis that since there are no evident facts about the existence of meaning, and signification and communication must be based on that *stimulus meaning*, when we face two different manuals of translation for a given

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[62] Quine does not mention the time when he explicitly talks of what the stimulus meanings are, but during the whole explanation he makes this very clear. (*WO*, p. 32).

language, they may both be right and incompatible at the same time, because they recur to these *stimulus meanings*. In his words:

> (…) manuals for translating one language into another can be set up in divergent ways, all compatible with the totality of speech dispositions, yet incompatible with one another. In countless places they will diverge in giving, as their respective translations of a sentence of the one language, sentences of the other language which stand to each other in no plausible sort of equivalence however loose. (…) (*WO*, p. 27)

Bringing it back to our story: Let us say our linguist have a concurrent linguist also doing a manual of translation from the same alien language to English. Both work separately and there is no exchange of information between them. When both manuals are ready, other linguists will compare them to decide which one is more accurate and deserves to be published. They see that our linguist translates "kuelio" as "rabbit" and the concurrent translates as "instantiation of rabbitness". Both are different and seem incompatible with one another, but both of them capture all the instances of use the word "kuelio" by the natives. And the same thing happens with other words like the entity named "Kuelidadi", which is translated by our linguist as "the property of being a rabbit" and by the concurrent linguist as simply "rabbitness", and so on. For Quine, this shows that there are no right or wrong manuals of translation, but better or worst given the aim of the translation. One manual could be better in economy of words, while the other preserves more similarity among sounds of words, therefore the first would be better to codify in Morse and latter to translate alien poetry.[63]

One could also argue that we could generate situations to avoid these misunderstandings. For example, one could show the natives a picture of a rabbit and ask "kuelio?" if the answer for that is positive, that would be a good evidence that "kuelio" does not mean *rabbitness in its mundane form.* We could also cut a rabbit in three parts and point to the parts and ask "kuelio?" and if the answer is still positive, that means that *unattached parts of rabbit,* is not the correct translation. That is a point made by Evans in (1975), it will be explored more deeply in a further section. But, roughly speaking, I think that Quine would claim that probably the answers would not be straight-forward affirmatives in some cases, there may even be some uniformity in the pattern of negative

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[63] This can be seen as an evidence to believe that Quine thinks that to choose a language is to choose a theory. What I believe is that he proposes, differently from Harman (1968).

answers. Some natives may cast doubt upon what counts as a mundane entity or even if a dead rabbit would count as a rabbit. These clarifications would need more use of language and in that extra use of language, Quine would say, the whole of translations can be changed in a certain way so as to accommodate one or the other translation.

The argument for the indeterminacy of translation in *WO* is often called the *pressing from below* argument and is summarized by Pagin (2014) as follows (with just a few modifications):

P1) A manual of translation is correct iff it is compatible with the linguistic behavior in all the relevant observable circumstances. (Linguistic behaviorism)

P2) Between any two natural languages there are at least two manuals of translation that are both compatible with the speech dispositions of all concerned but still mutually incompatible. (Strong underdetermination)

C) Between any two natural languages there are two manuals of translation that are both correct but still may be mutually incompatible. (Indeterminacy of translation)

We can attest that P2) is very clear in our tale. P1) can be seen in the tale too. Yet, there is a clearer and more complete argument for the theory of linguistic behaviorism[64] that is also schematized by Pagin in the same text (again with few modifications):

P1) Children learn the language of their speech community. (Language learning)

P2) All that is known is known on the basis of observation. (Radical Empiricism)

P3) Only linguistic behavior in observable circumstances is relevant to language learning. (Quine's forced assumption)

C1) Children learn the language of their speech community on the basis of observing linguistic behavior in observable circumstances. (From P1), P2) and P3))

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[64] For more details on Linguistic behaviorism see Quine (1970) and (1987); Pagin (2014) pp. 243-7 and 252-3; Kemp (2006) pp. 29-47 and 73-85; Juhl & Loomis (2009) pp. 69ff.; Miller (2010); Hookway (1998).

P4) A translation manual is correct iff it is compatible with what is observed in the basis for language learning.

C2) A translation manual is correct iff it is compatible with linguistic behavior on observable circumstances. (Linguistic behaviorism, from C1) and P4))

There is another argument for indeterminacy of translation which, according to Quine, is the real argument behind this whole tale and behind the pressing from below argument. It is called the *pressing from above argument*. This argument will be the subject of the next section.

### 3.2. The pressing from above argument

Quine writes in "On reasons for indeterminacy of translation":

> My gavagai [the alien language tale] example has figured too centrally in discussions of the indeterminacy of translation. Readers see the example as the ground of the doctrine, and hope by resolving the example to cast doubt on the doctrine. The real ground of the doctrine is very different, broader and deeper (2008, p. 209)

From this excerpt it seems to me that he will propose the real argument behind the indeterminacy of translation, an argument completely independent of the alien language tale. However, as I hope to show, he is not successful in this attempt.

Quine's strategy in this article is to show that indeterminacy not only occurs and can be noticed through cases of radical translation like in the tale's example, but also through translation of scientific theory. He aims to show that there is a similarity between the way translation works for theoretical physics and ordinary language, not just because linguistic as a behavioral science is under the same umbrella of physics, both being underdetermined by experience, but rather because indeterminacy of translation is something that occurs in every instance of usage of language. However, he is not that clear about the form the argument is supposed to take; the most intuitive form to construct the argument turns out to be a form that is not independent at all from the argument from bellow (or the alien language tale).

Before analyzing the argument, I must introduce the notion of *analytical hypothesis*. This notion was introduced by Quine to account for how translation works and how different translations can be tested. He hopes to show that those hypothesis work differently from how scientific hypothesis works in sciences like physics. An analytical hypothesis is basically the hypothesis one creates for assuming the role of significance (meaning) of a sentence (or of a term) so far unknown based in the known data. This data can be the knowledge of other sentences, of a whole theory, or the stimulus available at the moment. The difference between an analytical hypothesis and a genuine scientific hypothesis is not clear, as we can see in Chomsky's criticism[65]. Both are inductions based on prior experiences about future facts. One could say that a scientific hypothesis is a hypothesis about experience and an analytical hypothesis is a hypothesis about meanings. Quine would not accept that, whereas he is arguing for the inexistence of facts about meanings. Rather, he would say that analytical hypotheses are hypotheses about speakers' behavior.

I think that the closest formalization of what he writes in the article is given by Robert Kirk (*apud* Miller [2010]) and it goes as follows:

P1) The starting point of a radical translation consists in equating observational sentences of our language to observational sentences of the foreign language, through an inductive equation of stimulus meanings. (The pinpoints we choose to build a manual of translation from)

P2) Once that is done, we are allowed to construct the theoretical sentences of the foreign language. Hence we must create analytical hypotheses. (Next step for any translation, according to Quine)

P3) The ultimate justification for analytical hypotheses is that the observational sentences implied match and nothing else. (Condition for P2) be occur)

P4) To a certain extent, as the truth of the physical theory is underdetermined by the observable, the translation of a foreign physical theory is underdetermined by the translation of its observational sentences.

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[65] See section 2.5.1.

C) Therefore, the translation of physical theories is indeterminate at least to the level that these theories are underdetermined by all the possible observations. (From P3) and P4))

An additional information that Quine stresses is that:

> The indeterminacy of translation is not just an instance of the empirically underdetermined character of physics. The point is not just that linguistics, being a part of behavioral science and hence ultimately of physics, shares the empirically underdetermined character of physics. On the contrary, the indeterminacy of translation is additional. Where physical theories A and B are both compatible with all possible data, we might adopt A for ourselves and still remain free to translate the foreigner either as believing A or as believing B. (*ibid.* p. 210)

He must stress that point, because he is a realist about physics, which means that he believes that there are objective facts that physics talks about. And since linguistics is a behavioral science, which is subject to physics, this would mean that ultimately there are facts about meaning, though as we saw he is not willing to admit that. Therefore, the indeterminacy of translation must be parallel to physics at the undedetermination to the facts[66], differently from something like Chemistry that is completely subordinated to physics. His point is that, if we have already chosen a physical theory, we would still be able to choose a different translation manual[67].

This claim seems *ad hoc*, because Linguistics is a behavioral science which is subject to Biology, which is subject to Chemistry, which is subject to Physics. So why should this science be privileged and the others not? Other point worthy bringing up is the possibility of incoherence between the choice of physical theory and the choice of translation manual. Whether there is inconsistency, which one should we give up? And after we give up one of them, the new choice would be clearly subject to the first.

The argument called pressing from above was supposed to be independent from and prior to – in relevance – the pressing from bellow argument. Nevertheless, the premise P3) seems to be acceptable only if we already accepted indetermination of translation. Actually,

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[66] The fact that Quine can be a realist about physics and at the same time believe that meaning is indeterminate and reference cannot be scrutinized is puzzling. This discussion, however, is not the aim of this dissertation. For more about that Cf. Hookway (1988) pp. 61ff. and 203ff.; Hylton (2002) pp. 18ff. and 317ff.

[67] Hookway (1988) p. 137.

the statement seems more like a summary in one single claim of the argument from below. But this turns the argument into a *petitio principii*, i.e. we would have to accept indeterminacy of translation to accept indeterminacy of translation. Or we would have to give up P3), making the argument invalid, because P4) and the conclusion follows from P3). There seems to be no more charitable reading possible, since the article is very short and there is no extended explanation of the claims that he wants to make. Thus the argument seems to misfire, leaving Quine only with what he had constructed with the pressing from below argument.

The thesis of Indeterminacy of translation naturally brings us to the ideas of Inscrutability of reference, inscrutability of terms and – in a non Quinean framework – indeterminacy of meaning. What becomes quite clear is that one can only settle the meaning of an expression, its reference and an acceptable translation for it, after he settle a whole language, in which the meaning, the reference and the translation of this expression will be established.

### 3.3. Stimulus meaning, stimulus synonymy and so on

Assuming that this account of language in terms of *stimulus meaning* is correct and the notion is sound, one could easily raise an objection to Quine's criticisms of analyticity in TD. One could say: If there is a property that expressions have and in virtue of which they signify things or, in other words, mean something, it is also possible that two expressions share this feature. Quine certainly agrees with this, and says explicitly that this sharing happens: "(…) *meaning, supposedly, is what a sentence shares with its translation; and translation at the present stage turns solely on correlations of non-verbal stimulations*"[68]. For this reason, he introduces the notion of *stimulus synonymy*, which is the feature of expressions that share stimulus meaning. Both expressions present the same dispositions to be assented or denied in all possible situations. Analogously, he speaks of *stimulus analyticity* which is the property that sentences have when they are always correct, sentences that are true only in virtue of their stimulus meanings, only in virtue of the

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[68] *WO,* p. 31.

dispositions speakers have to assent to these sentences (because in this case there is no situation that they may be denied), which in this case are whenever faced with any stimuli.

If that is the case and that is how language is, one would say: Quine can, after all, understand what analyticity is, namely, the property of sentences that makes them always true in virtue of their meanings. The only thing is that he thinks language works in a different manner and calls this meanings *stimulus meanings* and the analyticity of the sentences he calls *stimulus analyticity*. The stimulus vocabulary seems to be analogous to the intensional vocabulary then.

Unfortunately for Quine's critics, the situation of analytic sentences is not that simple. Although stimulus analyticity is comprehensible and share relevant features with the original notion of analyticity, it doesn't share all the features and effects of it, as we can see in the following example: the stimulus meaning of the sentence "5+7=12" is composed of one hundred percent of assents against zero percent of denials. The stimulus meaning of "all bachelors are unmarried" shares the same numbers, no matter the stimuli received by the subject. Though the stimulus meaning of "there were white rabbits" is also one hundred percent of assent with zero percent of denial, independently of any possible stimuli we make the subject face, for no matter what happens in the future, the fact that I once saw a white rabbit will never change[69]. But clearly "there were white rabbits" is not a sentence that we would like to admit as an analytic one.

What happened here is that adopting the notion of stimulus meaning as the one that accounts for significance, we also changed in the same proportion the notions that depend on it (e.g. synonymy to stimulus synonymy). In changing the meaning of what we used to understand as meaning (and start to call it significance) we also changed the meaning of synonymy, analyticity, and all the other related notions of the intensional vocabulary, making them lose the features that were relevant for our purposes, their epistemological interesting features. Quine, therefore, proposes that sentences are to be divided not as analytic or synthetic, but as *standing sentences*, the ones like "5+7=12" and "there were white rabbits", or as *occasion* sentences, like "the wall is blue", "it smells bad in here", and

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[69] However, I should refresh the reader's memory by stressing that, according to holism, it is possible to make "there were white rabbits" false and even "5+7=12". According to Quine, no statement is free of revision.

"he is alive", those that the assent or dissent will depend on what stimuli are perceived by the subject.

If Quine's account of how language is acquired and how it works is correct, and if the consequences on the classification of kinds of sentences (e.g. synonymous sentences, now are stimulus synonymous sentences, and so on) follows, we can say that he would accept that – at some degree – the notion of analyticity is intelligible, though it is not as its champions believed it was. Thus, I think that we are allowed to say that Quine holds back the claims of unintelligibility of analyticity and the notions of the intensional vocabulary, to invest in another strategy. He relies on the explanatory success of his linguistic behaviorism as a better theory of language than the others available, to show that analyticity is a dispensable notion for a good theory of knowledge.

At last, one could argue that there is no place in the text of *WO* where Quine admits the intelligibility of analyticity. But I would rather say that he just doesn't admit it openly, but he introduces all the conceptual machinery to understand analyticity in the introduction of the stimulus-concepts. Quine's change of strategy from disqualifying the intelligibility of analyticity and the other related notions to argue to convince his readers to abandon the intensional vocabulary is another point favoring my view. If the reader still does not agree with this reading, he can at least agree that Quine was flirting with the idea that his criticisms of TD were too harsh as we can confirm in latter writings like *RR* and *PT*, where he openly admits the intelligibility of the notion and never again tries to push TD's criticisms upon his readers.

### 3.4. More about holism

As we just saw in the previous sections, stimulus meaning is based on the grouping of all assents and dissents from the speaker's part when confronted with a sentence and various different stimuli. So, stimulus meaning is not based in an obscure notion like Fregean sense or any of the logical positivist criteria for significance (e.g. be reducible to a sense data language or be analytic). Stimulus meanings are given by facts, the sum of assent and dissent that the speaker have already done, and the induction of future assents and dissents, based on the ones that already are facts, i.e. the stimulus meaning of "rabbit"

is given by the sum of assents and dissents the speakers of English do when asked "is this a rabbit?" and faced with a rabbit or when not faced with one. Therefore, we can say that to attribute truth or falsehood, assent or dissent, to the sentence (I) "'rabbit' signifies rabbit", one must stick to these facts (i.e. the previous assents and dissents for "rabbit"), making sentences about language participants of Quine's holistic framework. If one goes to a wee village where people use "rabbit" not to talk about the fluffy animal, but to talk about winter hats (or anything but the animal), then she has two options (i) give up (I), in favor of other definition, that "'rabbit' means winter hat", because the facts about it drive her to this conclusion; or (ii) give up other statements of her totality of beliefs, like "They are speaking English", to save (I).

The possibility of choosing between (i) or (ii) is the main consequence of holism – and, as we saw on section 1.6., the preferred way to explain the doctrine by the commentators. Therefore, the stimulus meanings of sentences are related in such a way that they support one another and are supported by one another. Like confirmation – to attribute truth or falsehood to a determined sentence, one has to attribute truth or falsehood to other sentences that, together with the former, build a whole theory – one also needs to attribute a sum of assents and dissents to related sentences, that will together form a language[70]. It seems to me that one cannot have confirmation without meaning, and one cannot have meaning without confirmation. If the Quinean framework of language and knowledge is correct, although one can think of meaning and confirmation as different things, one cannot have them existing separately. Therefore, Quine's holism must be seen both as a semantic holism and as an epistemic holism[71].

As I said in section 1.6., Quine has argued against reductionism. Many believe[72] that this is the same as arguing against verificacionism – i.e. the idea that the meaning of a statement is given by its truth conditions. However, as I just argued, he was himself a verificationist. The truth conditions for a sentence is given by the stimuli received by the

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[70] Cf. section 2.4. and Quine's reply to Chomsky at (1968).

[71] This reading is supported by Putnam, not just as an interpretation of Quine, but also as his view of how things are. He explicitly proposes a view almost exactly like the quinean one, in (1975) pp. 40-1. The only difference is that he admitts the possibility of some sentences to be imune to revision. Though, for him, they are exeptional cases.

[72] Cf. Miller (2010) pp. 140f.; also Fodor & Lepore (1992) p. 39.

speaker, and the assent and dissent of the speaker, when faced with this truth conditions, are what gives us the sum of assents and dissents (that happen and that we hope to happen). This sum of dispositions is what gives the stimulus meanings of sentences. Thus, it's easy to see that Quine's idea of meaning – or significance – of a sentence is based on the truth conditions of this sentence. Logical positivists believed that the criteria for a sentence to be meaningful were two, namely, (1) to be an analytic truth or (2) to be an empirically observable sentence. These are also clearly confirmation criteria. These were reductionist verificationist criteria. What Quine is proposing are holist verificationist criteria. He claims that the grouping of all assents and dissents the speaker does (and shall do) when confronted with a determined sentence and many different experiences, summed with the same groupings of assents and dissents of other sentences will result in its stimulus meaning and its truth value. Thus, in some sense, Quine is also a verificacionist, a holist verificacionist[73].

The interdependence of the signification of sentences with their confirmation and vice-versa is what makes Quine's holism such a fragile view, in my opinion. If the critics of his view on how language works – like Evans and Chomsky – are correct, his whole epistemology must be abandoned; for there would be something, namely, significance, in this closed conceptual framework that is not fitting properly. Notions that should support and be supported by each other to form the framework are in fact supported by something that is out of the framework, something of a higher level. Additionally, if Quine's criticism of analyticity fails to expose that unintelligibility or the incoherence of the notion, this would show us that other theories of language and knowledge (e.g. Carnap's theories) are legit rivals that can explain linguistic and epistemic phenomena as well as his theory. The choice between his theory or a rival one should be decided for more complex criteria, that demand more investigation to settle.

A last thing worth mentioning about holism is that in TD it seemed that holism was an alternative to the fact that analyticity was unintelligible and it must be abandoned. however in *WO* and in 'Two Dogmas in retrospect', Quine seems to be turning his motivations upside down. It seems that he is trying to argue in favor of analyticity's unintelligibility to favor his holism.

[73] As a corroborative evidence that reductionism is a particular type of verificacionism, see Fodor & Lepore (1992) note 1 at p. 215.

# CHAPTER IV

## Objections to the ideas of *Word and Object*

This new and unorthodox theory of signification proposed by Quine may be a more secure account of language, but it also gets rid of notions that seemed to be very intuitive to us like, e.g. meaning and reference (in a certain way). So most philosophers are not sympathetic with it. In this section I shall expose some of the most relevant arguments against Quine's theory of stimulus-meaning and the effect it has on the criticisms of analyticity. The most famous is probably Chomsky's (1968), where he criticizes some assumptions that Quine's theory seems to rely on. After that, we shall look at Evans' (1975), where he exposes a few undesirable consequences of adopting Quine's theory.

### 4.1. Chomsky

Chomsky's objections on his article (1968) were fruit of his misinterpretation of Quine's ideas in *WO*, according to Quine's comments on the article[74]. The article became very famous. His main worry is that, according to him, Quine's account of how language works was laid on some empirical assumptions that were not really tested. Therefore, there is no good evidence that they are better explanations than other theories. Chomsky concedes that these assumptions may be correct, however they should be tested and Quine presents no empirical evidence for them.

Chomsky starts his article criticizing the fact that Quine's view of how language works is based on the idea of innate quality similarity spaces, which, roughly, are the capacities of perceiving and grouping common features that one experience shares with another. E.g. when faced with ripe tomatoes, blood and red paint, the child can see that there is a relation among these things. Although she does not know the name of it, nor had before the idea of it his mind (in the classical empiricist sense of idea), she had the

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[74] (1968) p. 302.

apparatus to perceive the color and associate the color of blood, with the color of ripe tomatoes. The same goes for shapes, textures, tastes and other things related to other senses. Chomsky criticizes Quine for being an empiricist and making use of innate concepts while presenting no empirical reason to favor this view instead of another. Quine replies that he is not making use of innate concepts (or ideas) like the ones criticized by Locke or Hobbes, but rather he is talking about an innate disposition, which is much more close related to Chomsky's universal grammar, than to Cartesian innate ideas. Additionally, Quine mentions old experiments conducted by behavioral psychologists[75].

Chomsky's main criticism is that Quine is unclear about some pairs of central concepts of *WO*. E.g. between language and theory and between totality of speech dispositions and stimulus meaning. But he also insists that Quine makes some distinctions that are not legitimate, namely, the one between analytical hypotheses and genuine hypotheses. Quine indeed lacks a good explanation of the difference between language and theory. For him, to choose between languages is to choose between theories of the world, systems of believe[76]. He claims that he is not doing any technical use of the term "theory" at *WO* or any related writings[77]. He does acknowledge that "theory" may be used in a more technical sense, but what he means with "theory" is the sum of beliefs of a man. However, in the scholarly literature it is easy to find references to notions such as "language of science", "cognitive language", "regimented language", "common language"[78]; this seems like a good evidence that Quine is not very clear about whether there is a difference between language and theory at all, nor about what a language is. The language of science and cognitive language seems to be closely related with one's theory of the world (what Quine also calls the web of beliefs), but common language seems to be related with poetic language or non-literal meanings. One could argue that they are all different segments of the human language, rather than different languages. But if that is the case, a language cannot be identified with theory (of the world), for in daily language one can normally talk things like "For god's sake" and do not be committed with the existence of such an entity

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[75] Cf. (1968) p 306.
[76] Cf. (1968) p. 309.
[77] Cf. (1968) p. 309
[78] Cf. Hylton (2015).

as god. Quine seems obscure not just about the difference between the two notions, but also his definitions of those notions are themselves obscure.

Quine also does not differentiate between the totality of speech dispositions and stimulus meaning, because he thinks there is no need to. Perhaps a helpful suggestion would be that the stimulus meaning of a sentence is the totality of *relevant* speech dispositions. Quine points out, in his reply to Chomsky, that he is aware that the totality of speech dispositions is not limited to assent or dissent, but the other dispositions are irrelevant to the matter of stimulus meaning – although, later, as we can notice in *RR*[79], Quine admits a third possibility, namely, absent, which will be used in case the speaker does not know or does not have sure of what she should assent or dissent to – , the relevant dispositions to attribute the stimulus meaning of "this is red" are the ones one presents when faced with the question "is this red?". Other kinds of reactions should be discarded as irrelevant to the matter language learning (or formation). Chomsky points out that mood, brain lesions, eye injuries, personality, etc.[80] can be relevant factors that would change the dispositions of the speaker. Mood, personality and factors akin to these, I think, do not configure really relevant factors to motivate a biased or distrustful answer to the question "is this red?". However, brain lesions, eye injuries and factors that can cause anomalies at the stimuli receptors, may configure relevant factors to an anomalous response to the question "is this red?". (At this point, I think we should stress that the alien language tale is just possible if we already know the words for assent and dissent of the natives. However, one of the conditions of Quine's described situation is that the linguist has no knowledge at all of the alien language or culture. So he does have to discover the words for assent and dissent too. Having that in mind, we may say that personality, mood and other subjective factors, may interfere. The sign or word taken by assent for the linguist, could be really sign of annoyance from the natives with the linguist question. Actually, every word uttered by the natives may be just different sounds of fear or hate, which in our culture are limited by guttural sounds, but in theirs could have infinite different varieties.)

The third critical point brought up by Chomsky is Quine's failure to distinguish a hypothesis of language as a hypothesis of science. This point involves the others, because

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[79] Cf. (1973) pp. 49.
[80] (1968) p. 65.

this lack of differentiation is laid upon all Quinean empirical assumptions, according to Chomsky. He interprets Quine as saying:

> (…) what distinguishes the case of physics from the case of language is that we are, for some reason, not permitted to have a 'tentative theory' in the case of language (…). There can be no fixed set of analytical hypotheses concerning language in general. We need a new set for each language (to be more precise, for each speaker of each language) there being nothing universal about the form of language. (…) the study of language is different from let us say, physics. The physicist works within the framework of a tentative theory. The linguist cannot, (…) just as the child can have no 'tentative theory' that guides him in learning from experience. (*ibid.* p. 62-3)

The major problem here, according to Chomsky, is that Quine sees a sharp distinction between two types of induction. The first is an induction over language learning (analytical hypotheses) and the other is an induction over sciences, like physics, biology, etc. (genuine hypotheses). Science is based (undetermined) on evidence, therefore can have something to mark a north for a theory. Language is not based on evidence, since different manuals of translation can be incompatible, but both appropriate to describe evidence (indetermination of translation). Chomsky believes that Quine's theory of language relies only in the innate built-in quality spaces, which Chomsky criticizes. However, this is a misinterpretation of Quine, as we can see in his reply: "*In respect of being under-determined by all possible data, translational synonymy and theoretical physics are indeed alike*"[81]. He says that both hypotheses creations are underdetermined by data, and can be indeterminate when translated. The difference between a linguistic theory and a physical theory is of degree. Since there is no ultimate first philosophy, physics would be the most solid and prior theory and linguistic would be subject to it.

Chomsky sees the whole Quinean view as "*a relatively clear formulation of a classical empiricist doctrine*" that has "*at every step, certain empirical assumptions which may or may not be true, but for which Quine does not seem to regard evidence as necessary*"[82]. These empirical assumptions are: (i) that potential concepts of ordinary language must be characterized by its physical dimensions, in opposition to a teleological characterization *à la* Aristotle, for example; (ii) that learning sentences is the same as

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[81] *Ibidem* p. 302.

[82] *Ibidem* p. 63

acquiring a collection of dispositions to respond to certain stimuli and linguistic competence is the same as performance; and finally (iii) that physics can be worked in a test framework, but language – or theory of knowledge – cannot, for to create a framework we would be already making use of a linguistic framework. (i) and (ii) are in fact interesting points, though (iii), in my opinion is fruit of another misunderstanding by Chomsky.

In (i), Chomsky gives us an example that goes like this: When faced with a knife, a child learning a language defines it as an object with such and such qualities (like being of a certain color, a certain size, with a certain shape) or she defines it giving its final cause, an object used to do such and such activities; or even other factors? For Quine it is obvious that the first choice is the correct, but Chomsky, rightfully, asks for empirical evidence for it. I have already dealt with (ii) and (iii) in this section, so there is no more need to develop these points.

Chomsky also criticizes, correctly in my view, the examples used by Quine. He claims that they are, many times, too narrow or tendentious and, therefore, misleading. One must agree with Chomsky that they are misleading. The example of the sentence "bachelor is an unmarried man" represents only a narrow class of sentences available in English, as Putnam points out[83]; the green dot in TD its completely unfair, because makes use of a vague notion of dot, in which we can't really talk about having properties or not[84]; and the alien language tale at *WO* is just a mental experiment, and hence we have no good evidence to say that in a situation like that the linguists nor the natives would proceed that way. In fact, we have history of the languages of the world showing that language can be (and is) learned and developed in other ways.

## 4.2. Evans

Another critique to Quine's views on how language works in *WO*, is Evans' "Identity and predication" (1975). The article starts with these words: "*a translation is one thing, a*

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[83] See section 1.9.2.

[84] Cf. Grice & Strawson (1953) and Carnap's unpublished article in response to Quine in Creath (1990) pp. 427-32.

*theory of meaning another.*"[85] This is something most readers of *WO* pay no attention to. A theory of meaning is supposed to provide the basis for a translation manual. However, a manual of translation is not supposed to provide basis for a theory of meaning. Therefore, an indeterminacy of meaning is supposed to explain an indeterminacy of translation, not the other way around. Quine's strategy in *WO* follows the other way around. Through an argument for the indeterminacy of translation he is willing to infer indeterminacy of reference, of extension, and of other fundamental notions of meaning. Evans' objective is not to deny indeterminacy, but to show that from indeterminacy of translation we cannot derive indeterminacy of every other notion that constitutes the idea of meaning (and use this generalized indeterminacy to justify the abandonment of the notion of meaning itself).

Evans stresses that the main difference between a semanticist and a translator is that "*the semanticist aims to uncover the structure in the language that mirrors the* [competent] *speakers of the language have actually acquired*"[86], discerning different syntactic functions to expressions and state the different semantical properties these expressions have to form a more general meaning (for a sentence or for a whole theory). From another perspective, he aims to discover how the competent speaker is able to build completely new sentences never read or heard before, based on the ones already read or heard. Meanwhile a – Quinean radical – translator is simply worried about provide a sentence (or an expression) in his language that presents a content equivalence with a sentence (or an expression) in the studied language. As Evans notices, the translator is not worried about the same things as the semanticist, because for him it is enough to know that it is possible to translate infinite sentences from Spanish using this simple rule:

Translation of ("Es necessario que" S) = "It is necessary that" (Translation of S)[87]

The translator is content to know that "es necessario que" and "it is necessary that" are successfully interchangeable between idioms. Nonetheless he is not worried to know what "es" or "que" mean, while this are extremely important questions for the semanticist. Evans

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[85] p. 343.

[86] *Ibid*. In the original, the 'competent' in brackets here is 'competence' but it seems to be a misspelling of the author, thus I changed here.

[87] *Ibid*. p 344.

reminds us that Tarski "*was obliged to show that it was not an accident that the very same words 'and' and 'not' occur both as sentence formers and as predicate formers*" and that "*by providing a uniform account of their roles, he thereby explained the validity of countless inferences connecting sentences containing the expressions in their different positions*"[88]. As Tarski's example makes clear, one that is willing to give an account of how language works must account for all tools of language and their possible usages.

From the example of 'not' and 'and' of Tarski and innumerous others (like words that can work sometimes as verbs and others as nouns) we notice that our language presents a high degree of complexity and Quine's simple theory of how it works does not account for those phenomena. Evans will argue that the phenomenon of predication shows that language must work differently from the way that Quine proposes. We do use expressions like 'White Rabbit', 'Warm Fog', 'Red Water', etc. and it is very plausible that we did not learn them like this, but we first learned their components, and then we were able to structure them in a certain way that makes they mean what they mean. And we cannot account for their meanings only by saying that we notice a spatial overlap of whiteness in a rabbit or redness in the water, because when whiteness is absent in a rabbit we still understand that there is a rabbit and that if whiteness appears in another thing (in another place, in another time) it will still be correctly described with "a white…". Therefore, "*to treat an expression as a predicate is to associate with it a certain condition, upon whose satisfaction by objects depends the truth or falsity of the sentences in which the expression occurs*"[89]. The simple identification of an instantiation of an object is not enough to say that we are able to identify the word used to mean it as the predicate that denotes it. According to Evans, we must be able to recognize other instances of it when facing them, we must be able to recognize future instances, imaginary instances, etc., and also, to recognize which objects fail to satisfy this condition. This constraint is probably due to the problem of collateral data, which Quine is aware of and tries to avoid too.

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[88] *Ibid*. p. 344.

[89] *Ibid.* p. 348-9. I shall stress that the notion of predicate here does not apply simply to 'white' in the example of 'white rabbit' as one could be tempted to read it as "(the/a) rabbit is white", reading it as a sentence with the form 'S is P', hence considering 'rabbit' a subject in opposition of 'white' in the predicate position. I think Neither Quine nor Evans have this reading in mind. They have sentences with the form '[this/a] *x* is [a] rabbit' and '[this/a] *x* is white'. However, I think if Evans adopted an Aristotelian vocabulary his critique would be more clear, because he proposes a difference between predicates of the kind of 'rabbit' and the kind of 'white'.

Evans provides an example to help our understanding of how these predications occur. He asks us to think of expressions $G_1$, $G_2$, $G_3$…$G_n$ that when queried upon a certain material object are assented (e.g. "A rabbit?", "A man?", "A hut?", also the possible variations "Unattached rabbit parts?", etc.). These expressions, when uttered, then, are stimulus-synonymous with our English expressions "A rabbit!", "A man!", and so on. Evans also asks us to think of expressions like $F_1$, $F_2$, $F_3$…$F_n$, which are stimulus-synonymous with our expressions "White!", "Bloodstained!", "Warm!" and so on. These expressions present no need of a specific kind of material object to be assented for when queried; they are general predicates. These expressions can appear unaccompanied, or with a sentential negation particle, or in a compound with G-class expressions (which cannot be coupled with other G-class expressions), in expressions like "[an/the] F G" (e.g. "A white rabbit!"), or even in more complex compounds like "[an/the] $F_1$ $F_2$ G" ("A bloodstained white rabbit!"). Additionally, he asks us to notice that we can add a negation device in different positions, i.e. "not-(F G)" and "(not-F G)", which would result in not just a syntactical difference but also different behavioral reactions. For one can say "I have a non-white-rabbit", and I can understand that he something that can be anything in the world but a rabbit; or one can say "I have a non-white rabbit", and I can understand that he has a rabbit that is of any color but white.

These accounts are enough to show that things that are in the G-class position cannot be features, i.e. cannot be F-class expressions. Therefore, there is a particular way in which sentences are constructed that the resultant compound may have an F term that contributes to this compound "*in a way consistent with its capacity to enter into couplings with other G terms*"[90]. The G terms contributes to the compound when we suppose "*it to be associated not merely with a recurrent feature (its criterion of application) but with a particular set of identity conditions – a particular divided reference*"[91]. Evans argues that it is not simple overlap of white in a rabbit, or an instantiation of white in a rabbit-shape that gives us the identity conditions (and, thus, truth/assenting conditions), but something else. Also there is no way to explain sentences like "[an/the] $F_1$ $F_2$ G" just assenting to "$F_1$ G" and "$F_2$ G", because we can have a white rabbit and a bloodstained rabbit in our modulus of stimulation

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[90] *Ibid.* p. 351.
[91] *Ibid.* pp. 351-2.

and the information we wish to convey is different, namely, that the same rabbit that is white is also bloodstained. That is why semantics must be concerned with identity, predication, sentential structure and the apparatus of individuation.

With this framework of language, Evans explains how Quine's other alternatives are not acceptable. He criticizes many different alternatives. However, here I will expose only the ones I take to be more relevant, namely, translating 'kuelio'[92] as 'rabbithood', as 'rabbit fusion' and as 'rabbit parts'. He also presents a very interesting argument against indeterminacy of translation based on how language accounts for the persistence over time of a single rabbit that changes its features.

If 'kuelio' were to be translated as the universal 'rabbithood', Evans claims, we would have to generate appropriated truth conditions to "Un kuelio branku!" ("A white rabbit!") or "Un kuelio (aqui) ye branku!" ("A rabbit (here) is white!"). The expression 'branku' is a predicate that must be satisfied by an object iff that object has a white instance (as we saw above). So the translation would have to be something like "Rabbithood has a white instance (here)". However, according to Evans, this translation would not serve, because when the predicate 'branku' is negated, generating "Un kuelio nie-branku!" ("A rabbit non-white!"), we cannot translate it maintaining the same truth conditions. We would have the sentence "Rabbithood has no white instance (here)", which would have the same truth conditions of "Nie un kuelio branku!" ("Not a white rabbit!"). In the first case, the satisfaction conditions in the scenario are of a rabbit that is not white, while in the second, they are of anything, but a white rabbit (from a brown rabbit to a golden sparkling Leprechaun-shaped spaceship). The identity conditions are utterly different if we translate 'kuelio' as 'rabbithood', which makes the truth conditions also utterly different, according to Evans.

He also points out the fact that we the same truth conditions for "Kuelio branku sujodissangui!" ("Bloodstained white rabbit!"), when using 'rabbithood' in the translation. In that case, we would have to translate '…has a white instance (here)' for 'branku' and '…has a bloodstained instance (here)' for 'sujodissangui' and doing this it cannot be clear if we are predicating these qualities from the same rabbit or different ones. Evans does not consider this possibility, but I think it is worthy to consider: one could argue that the

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[92] Bearing in mind the alien language tale examples.

correct translation is "Rabbithood has a white and bloodstained instantiation here!" and 'branku sujodissangui' should be viewed as a single predicate. However, one should keep in mind that we are not trying to explain translation here, but to explain the semantic roles of terms and we have no good evidence for counting 'branku sujodissangui' as a single term and not as two terms united. Moreover, we have evidence for doing the contrary, because we know that 'branku' and 'sujodissangui' can be used separately.

Similar problems arise if we try to translate 'kuelio' as 'rabbit fusion' or 'rabbit parts'. In that case, Evans asks, what should be the satisfaction conditions for 'branku'? Consider saying that they are '… iff x has a white part', but that would be too weak, for we could have brown rabbits with white feet, and that would satisfy "A white rabbit fusion!" and "(a joint of) White rabbit parts!", according to Evans. An alternative he considers is '… iff x has a white rabbit-sized part', however we could have a half white rabbit that from our point of view seems completely white, or even a group of brown rabbits with complementary white parts copulating and forming a white rabbit-sized part and those cases also satisfy the conditions. The only alternative that would fit correctly the conditions thought by Evans is '… iff x has a part that is a white rabbit'. This condition, however, would ruin the capability of 'branku' to be coupled with terms different of 'rabbit', what is unacceptable.

Now the most interesting point that Evans makes, in my opinion, is the one concerning identification of the same rabbit over time, when translating 'kuelio' as 'rabbit stages'. Consider sentences like:

"Issi kuelio phoy $F_1$ ek vay yer $F_2$" and "Un kuelio ye $F_1$ ek vay yer $F_2$"

("This rabbit was $F_1$ and will be $F_2$") and ("A rabbit is $F_1$ and will be $F_2$")

Sentences like these provide evidence for us to believe that the term 'kuelio' is a term that makes reference over the persistence of an individual trough time. Otherwise these sentences would make no sense. The use of tensed verbs would make no sense at all, for we would be talking about different things in different times, thus the simple use of present tense would be enough to express such information.

The truth conditions of the compounds in these sentences can be expressed with the following general clauses[93] (bear in mind that $t$ = time; $t_u$ = time of utterance):

> $x$ satisfies 'ye (is) F' iff At ($x$, $t_u$) satisfy F.
>
> $x$ satisfies 'phoy (was) F' iff ($\exists t'$) [(Before $t_u$, $t'$) and ($\exists y$) (Co-membered ($x$, $y$) and At ($y$, $t'$) and $y$ satisfy F].
>
> $x$ satisfies 'vay yer (will be) F' iff ($\exists t''$) [(After $t_u$, $t''$) and ($\exists y$) (Co-membered ($x$, $y$) and At ($y$, $t''$) and $y$ satisfy F][94].

In those cases, we have predicates attributed to the correct stages. I.e. 'ye F' is predicated of $x$ at the present stage, 'phoy F' is predicated of $x$ at present and future stages, and 'vay yer' is predicated of past and present stages. E.g. only stages after a warm stage in the persistent existence of an individual satisfy 'was warm'.

However, Evans shows that this scheme also does not work. For

> an object satisfies the tensed predicate 'was warm' iff it is a stage later in the life of some object than some stage which satisfies the simple predicate. But this does not get the truth conditions right. 'A rabbit was running' may be true even though there is no stage of rabbit later than some running stage (*ibid.* p. 361)

The rabbit may have stepped in a land mine and ceased to exist. In that case, there is no future stage of rabbit to predicate 'was running'! The same problem happens for when we talk about people who are not born yet, e.g. "My son will be a human". Therefore, translating 'kuelio' as 'rabbit stages' may work as a translation in some contexts, but 'rabbit stages' is clearly not the correct account for what 'kuelio' signifies.

One could argue that, in *Pursuit of Truth* (*PT*), Quine addresses those criticisms when he writes about reification and reference, though not mentioning Evans. Quine believes that these predication problems are accounted for when we start the process of building our *ontological commitments*. Quine's ontology is quite complex and unorthodox (and is not the subject of this dissertation), but we can summarize it with the lemma "*To be is to be a*

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[93] I have changed a few details and added the formula for future, but they keep the same spirit of Evans' ones in p.360.

[94] These "co-membered" clauses are necessary to identify both stages with the same individual and to exclude the satisfaction condition of one stage to the other.

*value of a variable*"[95]. I.e. a rabbit is just a rabbit if we consider it a rabbit, otherwise it could be just an amount of carbon-based molecules, or a rabbit-within-the-world, or even a robot. But we commit ourselves with the term "this rabbit" to talk about that fluffy thing that happens to be white, and only that. In Quine's view, this ontological commitment permits us to predicate whiteness, or fluffiness and all the other predicable things of it. It also permits us to identify the past rabbit and the future rabbit as the same object[96], perhaps, avoiding Evans' critique of the spread through time reference. However, Quine's ontological commitment is something that is beyond language and Evans believes that the simple mastery of language should be enough to perceive these phenomena caused by predication. Indeed, that should be enough, because in learning German one does not learn the ontological commitments of Germans not even German theory of the world (if one thinks that the ontological commitments are imported within a theory of the world). This corroborates Chomsky's point on the unclear definition – or differentiation – that Quine's doctrine lacks concerning what is a language and what is a theory.

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[95] *PT* pp. 26; 31; and innumerous other places in Quine's Works.
[96] *Ibid.* pp. 29-31.

# CHAPTER V

## Analyticity intelligible

In this chapter, I will analyze Quine's latest view on analyticity, namely, acceptance of the intelligibility of the notion. after this, I shall briefly consider the impacts this acceptance had in the further developments of the debates.

## 5.1 Quine openly admits analyticity's intelligibility

We have seen, in the last sections, how Quine presents in his own works enough conceptual tools for the understanding of analyticity; also we saw in his critics' writings enough reasons to decline his views on language learning and usage. Thus, it is not far-fetched to say one could reasonably argues for analyticity acceptance. The arguments in favor of this goes from his own words and the acceptance of logical truth to the sound critiques of his theory of language. Hence, I believe that there is a substantial amount of evidence to believe that analyticity is intelligible. Quine, in his latter works, seems to agree with that. Yet he does not clearly express the reasons that made him change his mind. He openly admits the intelligibility of the so criticized notion of analyticity and other intensional notions like synonymy in diverse texts. However, although he admits that they are intelligible and may offer some usefulness to the daily language, he still stresses the point that these notions do not possess the explanatory power and do not assure the metaphysical security to the propositions they convey as its defendants wished. Therefore, according to him, these notions are best put aside for anyone that wishes to build a solid and coherent theory of knowledge.

In *Roots of Reference* (*RR*), Quine flirts with the intelligibility of analyticity when he writes:

> Some such linking of meaning and truth is of course characteristic of language learning generally, also apart from the logical particles. We

> learn to understand and use and create declarative sentences only by learning conditions for the truth of such sentences. (…) The learning of 'A dog is an animal' as I represented it consisted in learning to assent to it, and this hinged on the truth of the sentence. It hinged anyway on our having learned to assent to 'dog' only in circumstances in which we learned to assent to 'animal'. If we learned to use and understand 'A dog I an animal' in the way I described, then we learned at the same time to assent to it, or account it true.
> It would seem reasonable, invoking the controversial notion of analyticity, to say that by this account the sentence 'A dog is an animal' is analytic; for we learn even to understand it is to learn that it is true (…) (*RR*. pp. 78-9)

Here we can see Quine admitting that in a certain way it is possible to learn the truth of a certain statement through the learning of what the component terms – words – signify. In this excerpt we can see the first hint available that analyticity shall not be understood as intimately linked with necessity or apriority, but rather as a notion related with the means of justification for the truth of a sentence[97]. There is, nonetheless, a point to be made against Quine here. I, myself, learned the meaning (or a meaning, or even the significance) of 'dog' in a very early age and was able to understand and use this term. My learning of 'animal' came latter, probably in school where the teacher said something like 'An animal is everything that is alive and is not a plant' (bear in mind that I had no idea of what a protozoa or a fungus was, I have never seen one). Henceforth, I was able to know that 'A dog is an animal' simply by understanding what 'animal' is. Additionally, I have learned both words separately. Therefore, Quine must present an account for cases like that too, and he does in *PT*, as we shall see below.

In the same page, Quine also presents an account of how we can talk about analyticity not just for one individual, but for the whole community that shares the same language:

> (…) Language is social, and analyticity, being truth that is grounded in language, should be social as well. Here then we may at last have a line on a concept of analyticity: a sentence is analytic if *everybody* learns that it is true by learning its words. Analyticity, like observationality, hinges on social uniformity (*RR*. p. 79)

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[97] This is one of the passages that makes me inclined to believe that Quine would accept the notion of truth in virtue of meaning proposed by G. Russell in (2009).

In addition to my point above, I shall stress that I don't know how people around me came to learn 'dog' or 'animal', though I think we all share the belief that 'A dog is an animal' even without having access to each other method of language learning. But this excerpt is important because in it Quine admits that we can "*have a line on a concept of analyticity*". Actually, he does better than that. He presents us to an important feature of the notion (even without admitting its intelligibility). He says that the notion depends on social uniformity, just like observational sentences do. Thus, as observational sentences, analytic sentences depend – at a certain degree – on how language keeps its public aspect, which is a very delicate matter for Quine and one he would not be willing to forfeit. For without the public aspect of language all the concatenation of language with science – that is a social activity – would be very weakly established.

Quine finishes the chapter on analyticity writing:

> In *Word and Object* I defined stimulus-analytic sentence as one to which every speaker is disposed to assent. The analytic sentences [described above] in the present sense are a subclass of those (…) In learning our language each of us learns to count certain sentences, outright, as true; there are sentences whose truth is learned in that way by many of us, and there are sentences whose truth is learned that way by few or none of us. The former sentences are more nearly analytic than the latter. The *analytic* sentences are the ones whose truth is learned in that way by all of us (…). (*ibid.* p. 80)

We can see, then, that he clearly acknowledges that there is a notion of analyticity intelligible enough to be distinct from his notion of stimulus analyticity. The main difference I would point out is that raw analyticity is concerned with the way we came to know the truth of a sentence, while the stimulus analyticity is concerned with the truth of the sentence itself. An analytic truth may be denied (or dissented) if the speaker had a different formation and does not know the truth of it, e.g. If I had learned that 'animal' applies only to 'wild beasts', I would never had assented to 'a dog is an animal'. However, in that same scenario, I would never dissent from 'There were black dogs' or '2+2=4'. It is clear, then, that analyticity is one thing and stimulus analyticity is another. Quine, in those passages, is starting to track down the real roots of the problem he noticed in TD, whilst he does not yet grasp the subtleties of the distinction.

In *PT*, these views are more salient in Quine's theory. He does admit openly not just the intelligibility of analyticity, but also the intelligibility of synonymy. He is willing to admit sameness of meaning (or at least of content) as long as we give up the notion of *proposition*, i.e. the notion of a language-transcendent sentential meaning that transmits informational content among speakers. For to accept such notion is to throw away the need for acceptance of stimulus meaning and his physicalism (because acknowledge the notion of proposition would be to postulate an unnecessary metaphysical one)[98]. Synonymy in his view would be an equivalence of *empirical content*, which is in Quine's words "*the set of all synthetic observation categoricals that it implies, plus all synonymous ones*"[99].

Additionally, Quine claims that synonymy has nothing to do with analyticity, for the latter has to do with the way in which the words and sentences and their truth values are learned, whereas the former has to do with the equity of cognitive content – which is not necessarily linked with the way in which we learned the words and sentences. Quine writes:

> In *Roots of Reference* (pp. 70-80) I suggested externalizing the criterion [for acknowledge analyticity]: a sentence is analytic if the native speaker learns to assent to it by learning one or more of its words. This accounts for such paradigms of analyticity as 'No bachelor is married', and also for the analyticity of many elementary logical truths. The concept can be adjusted to cover also the truths derivable from analytic truths by analytic steps.
> I think this definition does some justice to the intuitive notion of tautology, the notion that comes into play when we protest that someone's assertion comes down to '0=0' and is an empty matter of words. But the definition gives no clue to the demarcation between analytic and synthetic sentences that has exercised philosophers, out beyond where anyone either remembers or cares how he learned the pertinent words. And it gives no clue, certainly to a general concept of cognitive equivalence. (*ibid.* pp. 54-5)

In this excerpt we can also see that, although Quine accepts the intelligibility of analyticity, he does not accept the dichotomy analytic/synthetic. I believe that he doesn't

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[98] *PT* p. 53.

[99] *Ibid.* p. 17. '*Observation categoricals*' is a term that he introduces in *PT* to talk about sentences of the form "Whenever this, then that", a compound of observables. He believes that this is a type of sentence that can avoid the use of propositions appealing to the experiences directly. Moreover, this observation categoricals are fundamental for explaining his holism. The statements are linked to one another by this observational categoricals, and this is why the confirmation or disconfirmation of one statement alter the confirmation or disconfirmation of others. See Quine (1991) p. 268.

accept it because he is in accordance with the polychotomy proposed by Putnam in (1975), as we can see in his reply to Putnam in (1986). But the really important content of this passage is the differentiation between being analytic and having synonymy of terms. Quine noticed that sentences like "Hesperus is Phosphorus" and "Heperus is Hesperus"; may share empirical content between its terms, being cognitively equivalent, but not being analytic. Sentences like this are not analytic, because we may discover its truth long after discover what Hesperus is and what Phosphorus is, which does not fit Quine's learning constraint for analytic sentences.

This differentiation allows him to acknowledge analyticity without linking it to synonymy and, thus, not linking it to the notion of meaning. As we saw above, he thinks synonymy as a relation of empirical content, which would permit intersubstutibility *salva veritate* of synonymous terms. However, this would have some undesired consequences. In the famous example of 'animals with kidneys' and 'animals with heart', we can swap the terms in any sentence without changing their truth value, because they have the same extension, thus, having the same empirical content. Still we would not say that they are synonymous, because they clearly have different truth conditions. They accidentally have the same extension. Quine's notion of synonymy is closer to stimulus synonymy than to our desired synonymy. But, at least, he does acknowledge a certain intelligibility to it. This is important, for if we can show that his views on meanings are wrong and that there are meanings, we could make him admit the existence of expressions that share meanings, and, thus, admit analyticity through this sharing of meaning. Quine never really did that, but we could do that in principle.

A problem in his view is that what he acknowledges as synonymous expressions are the ones that share empirical content, that share extensions. What we are looking for is a sharing of cognitive content, a sharing of intensions. And although he does not allow that, he gives us at least a hint of how we should do it: "*Call an observation categorical* analytic *for a given speaker if, as in 'Robins are birds', the affirmative stimulus meaning for him of the one component is included in that of the other. Otherwise* synthetic."[100] Here we can see Quine defining analyticity in terms very much alike one of the definitions Kant tried to

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[100] *Ibid*. p 17.

use and that Quine labelled as just a metaphor with no real explicative power[101]. His suggestion here is to say that the stimulus meaning of 'bird' is contained in the stimulus meaning of 'robin', therefore, when we assent for 'robin' we would have to assent for bird too. In this case, I do not think we can see that the empirical content of 'bird' is inserted in the empirical content of 'robin', but otherwise, the extension of all the robins is inserted in the extension of all the birds. However, I think one can say that there is a cognitive content to the word 'robin' which contains the notion of being a bird in it somehow. Quine does not develop this point, because it is not interesting for his whole theory. The point is, though, extremely interesting and, as we shall see further, will be very well developed by G. Russell to give a more complex and clear account of analyticity.

Although Quine accepted the intelligibility of the notion, he still thought to the end of his career that the notion was of little interest for the philosopher that wanted to build a strong and coherent theory of knowledge, agreeing with Putnam that the clear cases of analytic sentences were mostly uninteresting ones. He still defended his holist view of meaning and knowledge and his linguistic behaviorism, as we can see in *PT*. Thus, he still defended that we should stop worrying about analyticity and look somewhere else for the bases of the scientific building.

One of the most clear reverberations of this acceptance of analyticity is that if one can make sense of it, there is no good reason to accept such a radical holism as the one proposed in TD. That is why I believe from *WO* onwards he tried to change his line of argumentation, he had to make holism strong in it's on to show it was better to adopt it than to adopt an obscure notion (though it was getting less obscure by the minute).

### 5.2. Further developments

The acceptance of analyticity's intelligibility on Quine's part have not come easily, however it came handy. By accepting that there are sentences that are true in virtue of meaning, Quine accepted that other theories may explain linguistic and epistemic phenomena better than his theory. This led to new approaches to old theories of analyticity,

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[101] Cf. section 1.1.

e.g. a neo-kantian theory[102], and the development of new original theories about analyticity, e.g. G. Russell's theory in (2008), Boghossian's in (1997), the Canberra Project and many other views[103].

It would be too great a digression if we started considering all these new views on analyticity. However, I think that it is worth to enumerate some points that are main characteristics of these views to illustrate how important the acceptance of Quine was. 1) Boghossian (and everyone that followed, of the related in this work) have proposed that the notion must be understood as an epistemic notion rather than a metaphysical one. He believes that this confusion is one of the main issues that generated all the problems of with analyticity. Quine acknowledges this when he acknowledges that analyticity is social and it comes up in ones learning of meanings, not when looking at the world. 2) The containment criteria of Kant is one of the most important features to identify analyticity in G. Russell's work, as she identifies analytic sentences by containment and exclusion principles. As we saw in the latter section with the Robins example, Quine have recognized that it really is an important part of the identification of analyticity. 3) There are more categories to fit statements in than just analytic and synthetic, as Putnam first pointed out and later this idea was enhanced by G. Russell. Quine's approving comments on Putnam's work are evidence that he thought that this idea is keen with what he is proposing. 4) Analytic sentences are not "essentially" analytic, they are perceived as analytic and can be perceived as synthetic (or as anything else). This is proposed by Putnam, Boghossian and G. Russell and certainly was clear for Quine, as we just saw when he talks about the social feature of analyticity. Other features of the new views could be listed in parallel with Quine's latter views, but I think this four are the most evident and the most relevant of them.

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[102]Cf. Russell (2008), chapter 3.

[103]Cf. Jhul and Loomis (2009), for the Canberra project, see chapter 4, section 11; for other theories see chapter 6.

# CHAPTER VI

## Conclusion

The main goal of this dissertation was to make a clear exposition of the shift of view of Quine concerning analyticity, from the believe that analyticity was an unintelligible notion that must be abandoned, to the believe that it is intelligible, but not relevant; also passing through its criticisms.

I hope that the arguments of TD, in chapter I, had become clearer for the reader. I hope that the reader can see that Quine really brought up some serious problems with the notion of analyticity and that they had to be solved for the sake of a correct theory of knowledge. However, in chapter II, with the exposition of relevant criticisms against the arguments of TD, I hope that it is also clear that theese problems are solvable with no need for the abandonment of the notion of meaning, as Quine believes it is needed. Therefore, Quine's radical solution is needless.

Quine still had to make clearer how signification worked without the notion of meaning for us to accept his holist view. Hence, he introduced his linguistic behaviorism by his *stimulus* vocabulary in *WO*, as explained in chapter III. I hope that it had become clear for the reader that by introducing the notions of *stimulus* meaning and *stimulus* synonymy, Quine conceded enough conceptual machinery to make analyticity intelligible, though he still did not accepted its intelligibility. Additionaly, as showed in chapter IV, this linguistic

behaviorism faced many problems, from the lack of evidence of some of its theses to the failure in explaining some linguistic phenomena; and for that I believe it is clear that it is not a good theory of language.

The criticisms showed in chapter IV were never well accepted by Quine, however the criticisms of chapter II were well accepted by him and, in *RR* and *PT*, he accepted the intelligibility of analyticity, though he still believed that it was a deceptive notion that make more harm than good to one that wished to comprehend the relation of language and knowledge. I tried to make this clear at chapter V.

The issue of what analyticity is and of its relevance for science are not settled yet. Much of it hinges on other debates that are constantly changing their standard views *(e.g.* debates concerning the nature of meaning and knowledge). However, Quine's criticisms, though wrong in many aspects, contributed immensely to avoid misconceptions that lead to false conclusions giving us the false sensation that we have reached the true, solid and unshakable basis of the building of science. For philosophers that came after him it is clear that there is still a lot of work to do. Thanks to his works - and the works inspired in his - we know which ways are worth pursuing truth and which will lead to dead ends in this infinite horizon of possibilities in the enterprise of understanding knowledge and language.

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