# CHAPTER 1

# *The Analytic Legacy*

## 1. INTRODUCTION

This essay is based on the conviction that some well-known ideas contained in W. V. O. Quine's works played—and are still playing—an important role in the anti-realist stance currently flourishing in the philosophy of science. I am referring to Quine's entire work, although the doctrines of (a) the inscrutability of reference of terms and (b) the indeterminacy of translation of sentences seem to me particularly important in this respect. I know, of course, that other authors have said many valuable things in this regard, but none of them has been as influential as Quine. This happened because (i) his thought maintained for several decades a sort of supremacy in the field of analytic tradition following the crisis of logical empiricism, and (ii) his fascinating challenge to the analytic/synthetic distinction convinced many people that he succeeded in definitely overcoming the strictures of logical empiricism itself. I think, instead, that Quine is still very close to neopositivism, even though this conviction of mine runs into conflict with arguments advanced by other scholars such as, for instance, George D. Romanos.[1]

The fact of the matter is that we cannot even hope to understand the influence of Quine's theses on current scientific anti-realism if we do not get clear on the way he conceives the relations between *language* on the one side and the *world* (reality) on the other. This means that we must explore the philosophical roots of Quine's thought first; only when this exploration is satisfactorily accomplished will we be able to examine the consequences of Quine's ideas on many contemporary philosophers of science (such as Putnam, to take just one example). Furthermore, I would like to clarify another important issue: the fact that Quine's influence on current linguistic anti-realism may be argued for *despite* his official empiricist and proscientific stance.

I know perfectly well that such a strategy is not fashionable nowadays, since it implies getting immediately involved in ontological and metaphysical questions. And the antimetaphyisical prejudices so stubbornly defended by logical empiricism are still at work, despite the novelties brought in by Popper and his followers (and—this must be honestly recognized—by Quine himself). But a tour through the unpopular territories of ontology and metaphysics is absolutely necessary because it would otherwise be impossible to understand what I mean to do in this work. It should be clear from the beginning, however, that this is not a monograph *on* Quine, although his theses are discussed at length, particularly in the second chapter. My purpose is wider and twofold. I would like to show, in the first place, that analytic philosophy of language has had an impact on contemporary philosophy of science which is both enormous and negative. And, second, my intent is to point out that philosophy of science, in the last few decades, has grown as a largely autonomous and purely speculative discipline, one which does not take into account—with a few exceptions—what practicing scientists are actually doing. This explains why physicists like Steven Weinberg and Stephen Hawking are extensively quoted in the book. They both point out, in fact, that philosophy of science as it is currently practiced is of little or no interest to scientists, and I believe that they have extremely good reasons for making such a claim.

In this sense, I agree totally with Ian Hacking when he explicitly underlines that the theories of meaning may be, and have actually been, dangerous for philosophy of science. He claims, in fact, that

> Anti-metaphysical prejudices and a verification theory of meaning are linked largely by historical accident. Certainly Comte was a great anti-metaphysician with no interest in the study of "meanings". Equally in our day van Fraassen is as opposed to metaphysics. He is of my opinion that, whatever be the interest in the philosophy of language, it has very little value for understanding science. . . . Among the distinctive traits of logical positivism is an emphasis on logic, meaning, and the analysis of language. These interests are foreign to the original positivists. Indeed for the philosophy of science I prefer the old positivism just because it is not obsessed by a theory of meaning. . . . Unlike the logical positivists Popper thought that the theory of meaning is a disaster for the philosophy of science.[2]

Starting from these premises, and taking into account what I said earlier, I think it is possible to verify that most contemporary analytic philosophers have come to endorse a sort of "linguistic idealism" which is just the opposite of the empiricist faith they openly proclaim. In my opinion, this widespread trend in contemporary analytic philosophy has clear Kantian roots, and, in fact, the rejection of some of Kant's basic tenets plays a big role in this work. I also discuss at length Nicholas Rescher's pragmatic and conceptual idealism (trying to show that his idealist epistemology is balanced by a clean realist position at the ontological level) and Richard Rorty's interpretation of the second Wittgenstein.

The conclusion of the book is that philosophy of science, in order to rebuild the bridges with operative science that have been almost completely destroyed by the prevalence of the linguistic turn, must turn to naturalism and take into account the vision of scientific activity that practicing scientists hold. It follows then that philosophers of science, if they want to regain the respect of the scientific community, should reject both the overevaluation of linguistic analysis and formal logic maintained by logical positivism, and the purely historical and sociological approach adopted by many representatives of the post-empiricist turn.

## 2. THE REAL MEANING OF THE LINGUISTIC TURN

The linguistic turn that has so largely dominated analytic philosophy in the twentieth century can be seen as a bold attempt at preserving both the utility and the significance of philosophy conceived of as an autonomous enterprise. Following the "death of metaphysics" as envisioned by the logical positivists, philosophers had a vital need to preserve a field (and a methodology) of inquiry that they could feel was their own, since the Vienna Circle's program left them—or, at least, this is the standard interpretation of the logical positivists' theses—with almost nothing to do. Obviously, what we just said is true only if logical positivism is taken seriously, which happened only to a certain extent within contemporary philosophy considered as a whole. As a matter of fact, most metaphysicians did not even bother to read what the members of the Vienna Circle—along with their German and Polish allies—claimed. Certainly neither Martin Heidegger changed his philosophical outlook after Rudolf Carnap published his famed

paper on the "elimination of metaphysics through the logical analysis of language,"[3] nor did Jean-Paul Sartre give up the construction of his ontology due to the alleged lack of meaning of such an enterprise according to the neopositivists.

In my opinion, however, it is a fact that logical positivism addressed a *real* problem, no matter how many of its solutions—if any at all—we are ready to endorse. And this problem is that philosophy has been clearly displaced in most sectors of knowledge by modern sciences, be they natural, historical, or social. This situation is certainly well known, but it is worth noting that the reflection on its real consequences has been thus far largely inadequate. What I want to recall, in short, is that in the model of philosophical inquiry envisioned by the logical empiricists, analysis of scientific language becomes something similar to a metaphysical endeavor which is meant to establish the *bounds of sense*, and this stance may be easily traced back to Wittgenstein's *Tractatus Logico-Philosophicus*. On the other hand, the analytic tradition transferred this conception to the analysis of ordinary language, and this move, eventually, was able to restore the confidence of (at least some) philosophers in their own work. After all, they were doing something important and worthwhile (i.e., something no one else was doing, since linguists are certainly concerned with language, but from quite a different point of view).

At this point we may well ask ourselves: What is wrong with this kind of approach? At first sight it looks perfectly legitimate and, moreover, it produced wonderful results, as anybody can verify just by reading the masterpieces of contemporary analytic philosophy. To answer the question *What is wrong?* we must first of all take into account language itself and check what it is meant to be within the analytic tradition. This will give our question a clear answer. We have to verify, furthermore, what kind of knowledge philosophy needs to be equipped with if it wants to preserve its autonomy. The logical positivists clearly claimed in their program that there is no synthetic a priori knowledge such as the one envisioned by Immanuel Kant. There is, however, an analytic and a priori knowledge which is supplied by mathematics and logic alone. Within this field, the techniques of contemporary formal logic—as envisioned by Gottlob Frege, Bertrand Russell, Alfred N. Whitehead, and many others—are exalted because they allow

us to build artificial languages which—at least theoretically—eliminate the ambiguities of everyday speech.

Richard Rorty claimed recently that the linguistic turn was an attempt to find a substitute for Kant's transcendental standpoint.[4] He is right in this respect, but I also think that it would be better to speak of a "natural continuation" of the Kantian viewpoint (in any event, we will examine Rorty's position in detail later on).[5] The question to be asked now is the following: What are the philosophers supposed to do, if the aforementioned vision endorsed by logical posivism is correct? It is clear, in fact, that we cannot invent an activity just to allow philosophers to have a job and survive: this is, after all, a matter of intellectual honesty. In other words, *if* logical positivists and analytic thinkers are right (i.e., *if* philosophy has been completely displaced by science so that it no longer is a kind of knowledge independent of the scientific one), *then* we are bound to conclude that there is no need for philosophy any more. Philosophy departments may be shut down and perhaps replaced by other structures, in which the analysts of language (no longer called "philosophers") would work with scientists, both natural and social. But the previous question is still open: *What* are these analysts supposed to do, after all? Professional scientists do not seem favorable to this project and, as a matter of fact, some of them oppose it openly.

First of all, we must note that scientists themselves are perfectly aware that philosophical issues continue to arise within science, and to such an extent that it is somehow justified to speak of a "rebirth of metaphysics *within* science." Obviously we are not talking, in this context, of classical metaphysics such as the Aristotelian or Thomistic ones, because in our days the figure of the metaphysician who deems it possible to discover the "first principles of Being" just sitting at his desk is definitively outmoded (despite its persistent popularity in many philosophical circles of continental Europe). We mean, instead, a metaphysics (and an ontology) *contiguous to* science to the extent that, when philosophers are not willing to cope with metaphysical issues, professional scientists invite them to change their attitude because they somehow feel that philosophers are the only persons entitled to carry out this job.[6]

This situation is not totally new. If we consider the classical positivism of the past century, it is easy to verify that *mechanism* was a sort of new metaphysics—stemming from natural science—

which was enormously successful not only with practicing scientists but also with many scientifically oriented philosophers. Mechanics, in fact, offered to the positivists the opportunity to build up a unified synthesis of scientific knowledge taken as a whole, thus pursuing the project of explaining any natural fact by means of the mechanistic model. But this, of course, *was* metaphysics, since the positivists thought that they were able to reach the first principles of a reality conceived of in purely material and observable terms. Since reality is formed only by matter—the positivists claimed—science is able to get a complete knowledge of it. So we had a metaphysics which was both *unconscious* and *monistic*, and this fact is likely to teach us something precious about the practical impossibility of eliminating metaphysics once and for all. It is also worth noting that Marxism itself is rather akin to positivism: to the vision according to which the only reality is the natural one, Marxism adds that the character of social reality is uniquely economic.

We all know that logical positivism is just an updated version of classical positivism. The positivists of our century no longer view philosophy as the elaboration of metaphysical world-visions but, rather, as a technical and linguistic activity meant to clarify the meaning of concepts: a pivotal role is played, in it, by formal logic. In this sense, neopositivism is very close to an even wider philosophical movement called analytic philosophy and, as a matter of fact, authors like Rudolf Carnap and Alfred J. Ayer are both logical positivists and analytic thinkers. The two philosophical trends just mentioned have many common characteristics, because both make of linguistic analysis the *only* task pertaining to philosophy. In one case (neopositivism) scientific language is mostly taken into account, while in the other (analytic philosophy) everyday language is the main object of inquiry. In this work we do not mean to explore the strict relationships between these two trends of thought and their common founding fathers such as Gottlob Frege and Ludwig Wittgenstein (to mention just two names out of many). Let us only note that logical positivism is a very important subset of a large set of tendencies which, taken together, form twentieth-century analytic philosophy. Here, we are mainly interested in clarifying the metaphysical tenets of contemporary linguistic analysis (and of logical positivism in the first place), a theme that we shall examine in the next section.

## 3. WHAT IS PHILOSOPHY FOR LOGICAL POSITIVISM?

According to the neopositivists, the sole true knowledge is empirical and based on immediate observative data; furthermore, they reject the Kantian synthetic a priori, even though, as we shall see later on, Kant's influence on their philosophical outlook is quite strong. As I hinted previously, they attribute a pivotal role to formal logic because, in their opinion, it allows us to formalize in a rigorous manner the intuitive inferential processes of ordinary language. In our day logical positivism is less popular than it used to be until a few decades ago, although it maintains a considerable influence (especially in Great Britain and North America). The so-called post-empiricist turn questioned practically every single point of its general outlook on philosophy and the world (an outlook that is often defined as the *received view*, just to stress the fact that, despite its many shortcomings, it is the starting point of a trend of thought whose importance within contemporary philosophy cannot be denied). Today a successful philosopher of science like Paul K. Feyerabend holds views that are practically opposed to those endorsed by logical positivism. This means, however, that if we want to understand Feyerabend's current popularity, we are bound to read the neopositivists' works very carefully. In my view, it is not correct to claim—as many contemporary authors do—that the neopositivists are *completely* wrong. This is clearly an overstatement, because the members of the Vienna Circle—along with their allies of the Berlin Circle and of the Lvov-Warsaw School—can at least be credited with one great merit: they compelled philosophers to take science seriously into account in a period when it was largely believed that philosophy and science are totally independent fields of inquiry (a position that, unfortunately, many philosophers still endorse nowadays).

If we try to identify the position of logical positivism in the map of contemporary philosophy, we will soon find out that it can be characterized by a few basic and radical theses:

1. Neopositivism is not a philosophical system but, rather, a general *attitude* towards philosophy which denies any validity to the way philosophical work has been carried out in the past centuries.

2. The logical positivists think that philosophy is not a *speculative* discipline; it is, rather, a logico-linguistic activity aimed at clarifying scientific propositions.

3. There are only analytic (a priori) and synthetic (a posteriori) propositions. The first class is formed by logical and mathematical sentences, and the second by the sentences that can be found in the empirical sciences (where physics has a predominant role). As we said before, there is no Kantian "synthetic a priori."

It follows that the whole of human knowledge can be reduced to the two classes of sentences just mentioned, and this means that the only possible knowledge is given by science. Metaphysics is thus meaningless, because its sentences do not comply with the rules set forth by logical analysis of language. What, then, is the philosopher's job? The members of the Vienna Circle answer that his task is to clarify the concepts used within empirical and formal sciences, while analytic philosophers stress instead the importance of ordinary language's analysis. But the outcome is in both cases clear: philosophy *is* linguistic analysis. It may be observed that neopositivism certainly has some ancestors in the history of philosophy: the sophists of ancient Greece, such as Protagoras; the nominalists of the Middle Ages, such as Ockham; the classical British empiricists (and especially Hume); and the positivists of the nineteenth century, such as Comte. Their radicalism, however, is rather new. The logical positivists want to rebuild philosophy *ab initio*, just making a tabula rasa of what has been said and done in many centuries of philosophical speculation. And their attitude is based on two undeniable facts: (a) the enormous results, both speculative (knowledge of empirical reality) and practical (technological applications) accomplished by modern science from Galileo on; and (b) the spectacular achievements of formal logic which, starting from Frege and Russell, set forth the project of accomplishing the Leibnizian dream of the *calculemus*, that is, the complete formalization and mechanization of human reasoning.

The logical positivists of our century are, then, despite their official lay spirit, the prophets of the "new scientific world-perspective." Their stance is a full-fledged *scientism,* and, needless to say, Feyerabend's position (i. e., an antiscientific outlook growing within philosophy of science itself) can perhaps be better understood if we take it to be a reaction to the "received view" of logical positivism.

If we now examine the neopositivists' alleged destruction of metaphysics, it is possible to note that their attack actually missed the target due to its essential vagueness. *Whom*, or *what*, did they mean to attack? It is quite evident, in fact, that the word *metaphysics* has an incredibly high number of semantic and historical connotations. Plato and Aristotle are both metaphysicians, but is this sufficient to associate them? Hegel and Bergson, too, are metaphysicians, but who dares to claim that this fact makes them similar? We must recall that neopositivism is, first of all, a reaction to the predominance of idealism in the Austrian and German academic circles during the last decades of the past century: the real targets of the members of the Vienna and Berlin Circles (and of their Polish allies) are in fact Hegel and their contemporary Martin Heidegger. Taking again into account the above-mentioned essay by Rudolf Carnap, "The Elimination of Metaphysics Through Logical Analysis of Language,"[7] it is easy to verify that, in order to show the purported meaningless of metaphysics, Carnap just analyses from a logical viewpoint some statements made by Hegel and Heidegger:

> Just like the examined examples "principle" and "God," most of the other specifically metaphysical terms are devoid of meaning, e.g., "the Idea," "the Absolute," "the Unconditioned," "the Infinite," "the being of being," "non-being," "thing in itself," "absolute spirit," "objective spirit," "essence," "being-in-itself," "being-in-and-for-itself," "emanation," "manifestation," "articulation," "the Ego," "the non-Ego," etc. These expressions are in the same boat with "teavy," our previously fabricated example. The metaphysician tells us that empirical truth-conditions cannot be specified; if he adds that nevertheless he "means" something, we know that this is merely an allusion to associated images and feelings which, however, do not bestow a meaning on the word. The alleged statements of metaphysics which contain such words have no sense, assert nothing, are mere pseudo-statements.[8]

But it is not difficult to understand that to criticize two particular philosophers does not imply attacking metaphysics as such: if it may be justified to claim that Heidegger often plays with the "magic of words," certainly this charge cannot be addressed to such rigorous philosophers as Aristotle or Leibniz. The situation becomes even clearer if one takes into account the classical essay *Language, Truth and Logic*, written in the 1930s by Sir Alfred J.

Ayer. In this work, in fact, some remarks may be found that are very important for our purposes:

> The belief that it is the business of the philosopher to search for first principles is bound up with the familiar conception of philosophy as the study of reality as a whole. And this conception is one which is difficult to criticize, because it is so vague. If it is taken to imply, as it sometimes is, that the philosopher somehow projects himself outside the world, and takes a bird's-eye view of it, then it is plainly a metaphysical conception. And it is also metaphysical to assert, as some do, that "reality as a whole" is somehow generically different from the reality which is investigated piecemeal by the special sciences. But if the assertion that philosophy studies reality as a whole is understood to imply merely that the philosopher is equally concerned with the content of every science, then we may accept it, not indeed as an adequate definition of philosophy, but as a truth about it. For we shall find, when we come to discuss the relationship of philosophy to science, that it is not, in principle, related to any one science more closely than to any other. In saying that philosophy is concerned with each of the sciences. . . we mean also to rule out the supposition that philosophy can be ranged alongside the existing sciences, as a special department of speculative knowledge. Those who make this supposition cherish the belief that there are some things in the world which are possible objects of speculative knowledge and yet lie beyond the scope of empirical science. But this belief is a delusion. There is no field of experience which cannot, in principle, be brought under some form of scientific law, and no type of speculative knowledge about the world which it is, in principle, beyond the power of science to give. . . . With this we complete the overthrow of speculative philosophy. We are now in a position to see that the function of philosophy is wholly critical.[9]

On the one hand Ayer's statements are very clear, but on the other they make us understand why the elimination of metaphysics could not be carried out (and this also justifies the length of our quotation). Let us take into account, for instance, the concept of "reality as a whole." Ayer remarks that, in claiming to study reality as a whole, the metaphysician pretends to project himself outside the world taking a bird's-eye view of it. Assuming that any serious metaphysician really means to do this (which is, at least, questionable), there is a sentence that clearly reveals Ayer's hidden thoughts. In fact, he goes on to claim that "there is no field of

experience which cannot, in principle, be brought under some form of scientific law, and no type of speculative knowledge about the world which it is, in principle, beyond the power of science to give." It is possible to note, then, that in pronouncing these statements Ayer is not talking about a reality which is investigated "piecemeal" by the special sciences. He speaks, instead, of (1) a reality *as such* which has an exclusively empirical character, and (2) a purported unified method which natural science uses in order to investigate reality.

But, at this point, two facts are neatly exhibited: (3) by reducing the whole of reality to empirical reality, Ayer is doing metaphysics. A metaphysical system need not be idealistic: there is an empiricist metaphysics, as is shown by the developments of the last century's mechanism; and (4) even Ayer's reality turns out to be "reality as a whole." Science, as conceived of by Ayer, is in fact nothing but a tool for knowing reality as such. We do not have the "elimination" of metaphysics here, but just the proposal of an empiricist brand of metaphysics. And this fact confirms, once more, that we must distinguish what the logical positivists *say* from what they actually *do*.

## 4. THE METAPHYSICAL TENETS OF LOGICAL POSITIVISM

Are we allowed to say, however, that the neopositivist program aimed at the elimination of metaphysics has failed? The answer to such a question is not as easy as it might seem at first. From a certain point of view the answer is, "Yes, the program failed and the members of the Vienna Circle did not succeed in getting rid of metaphysics." This is due, as we noted previously, both to the vagueness of their attack and to the fact that a large number of philosophers maintained their interest in this old sector of philosophy no matter what the logical positivists had to say about it. On the other hand, however, someone might answer, "No, the program did not fail completely, because the neopositivists gave us precious insights into the *epistemological* status of metaphysics, so that no serious scholar can ignore, nowadays, their theses on this subject." Who is right? In my view both answers are correct to some extent, and at the same time they are both partial. Let me explain why.

First of all, it is obvious that metaphysics has *not* been eliminated: this is shown by the fact that it is still thriving, even within the analytic tradition itself (as we shall see later on). In addition, as we have just pointed out, it must be clearly distinguished between what the logical positivists claimed and what they really did. It may be argued that, like the classical positivists in the past century, contemporary neopositivists built *their own* metaphysics, which is, as a matter of fact, beautiful and fascinating. If we forget this situation—as, unfortunately, many analytic authors today do—we are not likely to understand the crisis of logical positivism and the subsequent rise of post-empiricism, whose success is also due to the reaction to the particular brand of metaphysics endorsed by logical positivism. Secondly, the fact that the traditional way of doing metaphysics—although it is still practiced in several philosophical circles—seems so outdated nowadays is largely a consequence of the methodological and epistemological criticisms set forth by neopositivists themselves and subsequently endorsed by the whole analytic tradition. Probably it is not correct to speak—as many authors do today—of the "end of metaphysics," but no doubt the new approaches to this discipline, including those currently popular within the analytic school, are much indebted to the neopositivists' insights.

Just to explain what the metaphysical tenets of logical positivism are, we may start with a well-known critique addressed to the so-called principle of verification, which is the keystone of neopositivist methodology. According to this principle a sentence—except for the analytical sentences of logic and mathematics—is meaningful from the cognitive point of view if, and only if, its truth or falsity may be established by having recourse to empirical observations. This is the basis of the neopositivist elimination of metaphysics, since according to the representatives of the Vienna Circle metaphysical propositions, along with ethical and religious ones, turn out to be devoid of meaning if they are analyzed according to the standards set forth by the aforesaid principle. What is, however, the status of the principle of verification itself? Is it an empirical sentence? Or, to put it differently, *how* is it possible to verify its truth or falsity using empirical observations? Obviously this cannot be done, and therefore we are bound to conclude that the principle cannot be submitted to empirical verification. But curiously—and this is the main point to be noted—the logical positivists meant to eliminate metaphysics using a prin-

ciple whose nature, according to their own criteria, turns out to be metaphysical in character.

As we previously said, however, this fact is well known, and I promised instead to display some metaphysical tenets which, although endorsed by the neopositivists, are not usually taken into account. If we examine the famous distinction between *pseudo-problems* (which are, more or less, all those problems addressed to by traditional philosophy) and the *genuine* ones, it is easy to realize that, according to neopositivism, the difference between philosophy and science is the same difference holding between *language* on the one side, and *the world* described by language on the other. My thesis is that we can identify here a clear Kantian descent. Kant's work, while showing that metaphysics conceived of in scientific terms is impossible, linked science to the perceptual and conceptual characteristics of human experience. Acting that way, the philosopher of Königsberg hoped to avoid both the skeptical doubts put forward by David Hume and the metaphysical excesses often endorsed by the rationalists. It may be noted, however, that by limiting scientific discourse to a domain explicitly identified with *appearance*, Kant's writings prompted a growing interest in the *transcendent* domain which, if we take his words seriously, must exist somewhere beyond appearance itself.

So the neopositivists meant to solve this problem by rejecting the Kantian "synthetic a priori," and by reducing all knowledge to (i) purely empirical and (ii) purely linguistic factors, with nothing else left behind. The founder of the Vienna Circle, Moritz Schlick, claimed that between philosophy and science there is no conflict, but just a differentiation of their respective fields of inquiry: philosophy looks for *meaning*, and science is interested in *truth*. It follows that philosophers must only concern themselves with clarifying the meaning of scientific sentences, thus re-constructing the language of science in a clear and rigorous manner. Scientists, in turn, use language in order to ascertain the truth (or falsity) of those sentences concerning the world, and build theories which must be either verifiable or falsifiable.

What happens, then, if physicists want to discover the meanings of the assertions that are made within their discipline? According to neopostivism, if they do that, they become ipso facto philosophers. But on the other hand philosophers, in determining both the nature and the extension of meaningful discourse, set up the the boundaries of scientific inquiry, and this means, more or less, that

philosophers themselves establish the *conceptual limits* of scientific inquiry. At this point nobody can deny that this is an extremely important job: the philosopher, in fact, becomes a kind of *super-scientist*. He *bestows meaning*, and any operative scientist is practically compelled to ask for his—the philosopher's—opinion.

Let now ask ourselves, What does logico-linguistic analysis become *if* it is conceived of in these terms? The answer is that it becomes something which is enormously more important than the mere scrutiny of terms and sentences. It turns out to be a sort of *first philosophy*, a superdiscipline which is meant to establish the conditions that make all knowledge possible. If we, for some reason, do not want to call it "metaphysics," a different name may still be found for it. But it is quite clear that the substance of the argumentation does not change. And, in fact, in Wittgenstein's *Tractatus* we find the following claims:

> Philosophy settles controversies about the limits of natural science. It must set limits to what can be thought; and, in doing so, to what cannot be thought. It must set limits to what cannot be thought by working outwards through what can be thought. It will signify what cannot be said, by presenting clearly what can be said.[10]

If this is the situation, it becomes evidently misleading to speak of a "far" Kantian descent. Kant's presence in the neopositivist theoretical building is, instead, well-perceivable, and any difference must be attributed, in the final analysis, to the changes occurring in the historical context. So we find a first analogy between the Kantian reaction to rationalism and the neopositivist and analytic reaction to idealism. We also find a second analogy between Kant's desire to save scientific knowledge from Hume's skeptical doubts and the analytic attempt to assure safe logical foundations to that same knowledge. More generally, we may recall that for Kant the perception of reality was possible only if it were somehow *mediated* by conceptualization: our knowledge of the world always needs the application of categories, which in turn give shape to human experience. By adopting such an approach, it is no longer possible to speak of an *absolute* knowledge of reality, but only of a type of knowledge which is necessarily *relative to* our conceptual apparatus.

Exactly the same preoccupation is common to neopositivist and analytic philosophers, with only one important difference.

For Kant the conceptual apparatus filtering experience is located in human intellect, while the analytic philosophers of our century locate it in *language*. In both cases we have preconditions of knowledge: categories for Kant and language for the analytic tradition. So we are entitled to claim that contemporary analytic philosophy replaces the Kantian question *What are the conditions that make human knowledge possible?* with the following—and rather similar—query: *What are the conditions that make meaningful discourse possible?* Since the philosopher's task is just to answer this second question, the philosophical activity of bestowing meaning becomes—as Moritz Schlick used to claim—the beginning and the end of all knowledge. And it may even be noted that the problems foreseen by Kant about the possibility of mapping our conceptualizations onto reality-in-itself find a precise correspondence in the problems—underlined by neopositivist and analytic thinkers—concerning the possibility of mapping the characteristics of linguistic systems onto the reality they purport to name and describe.

But, at this point, the objections to the Kantian outlook are, *mutatis mutandis*, the same objections that can be addressed to linguistic philosophy. We can in fact claim that Kant, by posing limits to knowledge, assumed de facto the existence of something that lies beyond those limits. Similarly—as Wittgenstein, for instance, pointed out—to set up limits to meaningful discourse implies, ipso facto, assuming the existence of something that transcends those limits. We can thus conclude that, while according to Kant our knowledge of the world is relative to human conceptualization and categorization, for the analytic tradition this same knowledge, on a par with the meaningfulness of any discourse regarding the world, is relative to *language*. By choosing this path, conceptualization is transferred from human nature to language, and such a move is very important because it guarantees—theoretically, at least—the logical independence of the new linguistic philosophy not only from the old metaphysics, but also from natural science. This strategy favors, in particular, the detachment of philosophical inquiry from all kinds of psychological introspection, as Ludwig Wittgenstein underlines once again in his *Tractatus Logico-Philosophicus*:

> Psychology is no more closely related to philosophy than any other natural science. . . . Does not my study of sign-language

> correspond to the study of thought-processes, which philosophers used to consider so essential to the philosophy of logic? Only in most cases they got entangled in unessential psychological investigations.[11]

The antimetaphysical stance of linguistic philosophy is thus based on the assumption that our knowledge of the world is always relative to language and to our conceptual schemes, and the "Kantian flavor" of this position is neatly perceivable in a famous metaphor introduced by Otto Neurath, one of the founding fathers of the Vienna Circle. According to Neurath, in fact, we are all embarked since our birth on a sort of *conceptual ship*; if one wants to modify this ship, one cannot set ashore, but is rather compelled to rebuild it bit by bit in the open sea. This means that human beings cannot modify their conceptual schemes in order to make them more suitable to an—alleged—external reality, since this same reality (the world) turns out to be perceivable *only* through conceptual schemes. It is here that we find the roots of what I call "linguistic idealism," a theme about which we shall have more to say later on. It is not possible, therefore, to justify language by appealing to what reality is; adopting such a strategy, we are likely to return immediately to some old brand of metaphysics that, as we already pointed out, is for analytic philosophy a bunch of sentences devoid of meaning. And Neurath's metaphor is, as we shall see later,[12] very important for understanding the theses (or, at least, their early formulation) of a philosopher like Quine, who says in this regard:

> It is meaningless, I suggest, to inquire into the absolute correctness of a conceptual scheme as a mirror of reality. Our standard for appraising basic changes of conceptual scheme must be, not a realistic standard of correspondence to reality, but a pragmatic standard (on this theme see Duhem). Concepts are language, and the purpose of concepts and of language is efficacy in communication and in prediction. Such is the ultimate duty of language, science, and philosophy, and it is in relation to that duty that a conceptual scheme has finally to be appraised.[13]

It is correct to claim, at this point, that the purported analytic elimination of metaphysics is more theoretical than real. The absoluteness of traditional metaphysical questions like *What is the structure of reality?* or *Of what does it really consist?* has a punctual correspondence in the absoluteness of such linguistic

questions as *What is the structure of our language?* or *What entities can we talk about?* The analytic tradition turned, in sum, the metaphysical absoluteness into a linguistic one, and this explains why Rudolf Carnap—just to take a famous example—meant to translate the traditional metaphysical and ontological assertions into sentences concerning the syntactic and semantic structure of language. And so, any sentence about *what there is* corresponds to a sentence about what *we say* there is. In Carnapian terms, the sentences of the metaphysical/ontological object-language must be translated into sentences belonging to the metalanguage of a philosophy conceived of as mere linguistic analysis.[14]

It is obvious, however, that this stance is nothing but the linguistic translation of metaphysical positions quite common in the history of Western philosophical thought. On the one hand, the possibility of pronouncing meaningful statements on an alleged extralinguistic reality is denied, but, on the other, we are supposed to pronounce definitive truths on the way in which we describe that same reality. According to this view, men would be unable to take directly into account the categories of existence, but would at the same time be able to examine in absolute terms their linguistic representations of reality. It is not difficult to understand that by acting that way the analytic philosophers, far from "eliminating" metaphysics, give rise to their own brand of metaphysics, with only one very important caveat: the world conceived of as reality, the Aristotelian being-*qua*-being, is replaced by Language (which must be written now with a capital *L*), thus going back to some form of rationalism. The alleged elimination of metaphysics through logical analysis of language is, therefore, a mere illusion, and it is much better to turn our attention instead to the symmetry existing between the analytic outlook and the positions endorsed by many traditional metaphysicians. No matter what the analytic thinkers claim, we have once again a distinction—in most cases *unconscious*—between science and metaphysics. As we observed previously, the analyst of language gives rise to a kind of first philosophy which is meant to bestow meaning on human knowledge conceived of as a whole. And thus a growing gap appears between *pratical-operative* scientific activity on the one hand, and linguistic analysis on the other. Abstract and purely speculative problems are privileged by many analytic philosophers, including traditional metaphysical and ontological problems which are now taken into account using the tools of formal logic and of the logi-

cal analysis of language. It is not at all surprising, thus, that the analytic thinkers have in most cases become the *linguistic counterparts* of those metaphysicians they originally meant to fight and destroy.

Within the analytic tradition, old distinctions are re-proposed which have always been objects of inquiry in traditional metaphysics: for instance the distinction between platonists and nominalists. The clarification of the traditional philosophical problems obtained thanks to the linguistic turn, in other words, does not succeed in hiding the much more important fact that many old quarrels show up again within the analytic field. Let us only mention the dispute about the opportunity of using a nominalist or a platonist language in the philosophy of logic and mathematics. This is not a merely linguistic controversy but, rather, the re-proposal of problems thriving already in ancient and medieval philosophy. The step toward recognizing that metaphysics, after all, cannot be eliminated is rather short.

Carnap's answer was that the analytic discussions about platonism and nominalism do not regard the problem of the existence of universals, but rather the choice of which language is more useful for dealing with themes related to the foundations of mathematics. It is evident, however, that this answer is far from being satisfactory. Platonists and nominalists fight each other not for linguistic reasons, but because they do not agree on what kinds of entities have to be admitted into *ontology*. The real nature of the dispute is ontological and metaphysical, and not linguistic. So the antimetaphysical stance turns out to be more an "ideological prejudice" (just to borrow a term belonging to political philosophy) than a thesis which can be reasonably argued for.

It may then be noted that the absolutism of the analytic conception of language, which is based on the thesis that our talk about the world is meaningful only in so far as it is referred to some system of linguistic representation, practically assumes that language itself is *not* a part of the world. In other terms, we must ask a question that neopostivist and analytic philosophers tend—strangely—to ignore: *How* was language born and *where* does it come *from*? This is the reason why Quine (or, at least, the Quine of the 1950s) rejects the analytic/synthetic distinction, insisting instead on language conceived of as a *tool* created by mankind for practical purposes.[15] The early Quine, thus, overcomes the strictures of a purely analytic conception of language by resorting to

the pragmatist—and typically American—tradition represented by thinkers like James, Peirce, and Dewey.

Let us conclude this section by noting that, despite what many authors nowadays keep saying, (i) metaphysics has not been eliminated and (ii) logical analysis of language may instead be extremely useful for examining the traditional metaphysical problems in a more precise manner. This explains why, within the analytic school itself, a great deal of attention is currently paid to such old problems as the platonism/nominalism distinction, the status of modal propositions, and the meaning of negative existential sentences.[16] In any event, our criticisms are not meant to overlook the fact that neopositivism and analytic philosophy have great merits too, because they compelled philosophers to take eventually into account the scientific dimension of human inquiry. Their work, furthermore, is an important step toward the construction of a philosophical language which is both rigorous and intersubjective.

## 5. THE POST-EMPIRICIST TURN

It is well-known that, in the last few decades, the neopositivist supremacy within philosophy of science has been replaced by that of the so-called post-empiricist thought. My intention is not to outline an historical account of this important change of outlook, because this has been done already by other authors.[17] What I want to do, instead, is to give some short and sketchy remarks on the post-empiricist phenomenon, always taking into account the themes of the relationships between language on the one side and reality on the other, and the parallel problem of the alleged elimination of metaphysics. Let us begin with Karl R. Popper, whose falsificationism, although from some aspects still close to neopositivism, nevertheless gave rise to a true epistemological revolution.

Unlike the neopositivists, Popper believes that a clear separation (i) between analytic and synthetic sentences and (ii) between theory and observation is an impossible task; according to his view, a general sentence is not produced by many particular observations, and scientific theories are nothing but *conjectures* freely created by the human mind in order to explain empirical phenomena. Theory and observation are thus intimately linked to each other, and no pure—and detached from some theoretical con-

text—observation is ever possible. A very important point may be noted here. A position very similar to Popper's was endorsed by the American pragmatists, in the last century with Charles S. Peirce and—especially—William James, and in the present one with John Dewey. To my knowledge this fact is not very well known nowadays, maybe because the analytic thinkers usually do not pay much attention to the history of philosophy. Only recently, for instance, did Hilary Putnam rightly underline in a volume published in Italy these beautiful remarks by James concerning the relationships between theory and observation:

> The knowing subject is no mirror reflecting passively an order that already exists. The knowing subject is an actor, who both codetermines truth and registers the truth he manages to create.[18]

Putnam, however, does not mention the striking similarities between Popper's and James's theses, although we cannot infer from this fact that the founder of falsificationism was somehow influenced by the American pragmatist tradition. Anyhow, it is clear that if we recognize that the theoretical dimension precedes observation, and if we claim furthermore that scientific theories have a creative character, then we may explain the "jumps" that often take place in the history of science (i.e., the genial intuitions that allow scientists to interpret usual phenomena in a new way) better than by having recourse to the classical neopositivist model.[19] Einstein himself, in fact, used to say that there is no logical and safe path able to take us automatically to the discovery of the universal laws of physics, since only a mixture of intuition and experience may bring scientists in the right direction.

In criticizing neopositivism, Popper says something new and important about the relation between language and the world. In the 1959 foreword to his most famed epistemological work, in fact, he claims:

> Language analysts believe that there are no genuine philosophical problems, or that the problems of philosophy, if any, are problems of linguistic usage, or of the meaning of words. I, however, believe that there is at least one philosophical problem in which all thinking men are interested. It is the problem of cosmology, the problem of understanding the world—including ourselves, and our knowledge, as part of the world. All science is cosmology, I believe, and for me the interest of philosophy, no