Future and Scientific Conception of the World without Philosophy?

Mirella Fortino
Liceo Scientifico Statale “E. Fermi”—Cosenza

Often conceived as metaphysical approach, in the XX Century, philosophy is object of a crusade antimetaphysical in the movement of Logical Positivism. I will try to demonstrate that a philosophical perspective is conceivable even in the scientific conception of the world elaborated by the neopositivists. I discuss this point of view with attention to the turn represented by pragmatic philosophy of Neurath, which represents a crucial passage for the future of philosophy. In this vision, the science is not conceivable without philosophy, namely without an open and pluralist scientific philosophy. The philosophy—so—is not insufficient too for the perspective of scientific conception of the world.

Keywords: epistemology, future, knowledge, logical positivism, metaphysics, philosophy, physicalism, science

1. The Scientific Conception of the World and Philosophy as Metaphysics

For Aristotle, metaphysics is “first philosophy.” The objects of metaphysics are the essence and the form of the things. But in the same ancient world, “what is philosophy in a Socratic sense?” Philosophy is a critical investigation, the doubt’s exercise and analysis of discourse. The modern rationality has refuted the essences’s investigation. But can we affirm a separation between the scientific rationality and philosophy?

In the XX Century, philosophy is the object of an antimetaphysical crusade in the movement of Logical Positivism, a new movement of European philosophy. The manifesto of Logical Positivism, entitled Wissenschaftliche Weltanschauung: der Wiener Kreis (1929), “reject metaphysical philosophy” (Neurath 1973, 307). This manifesto represents—according to the neopositivists—a program for the future. If we affirm that in the Viennese context philosophers have denied the rights of philosophy, well I see that this idea is restrictive because it is explained—unjustly—by the identification of philosophic knowledge with metaphysics. The economist and sociologist Otto Neurath criticized philosophy because he criticizes metaphysics with severity. I will try to defend the impossibility of conceiving a scientific conception of the world without philosophy and this just when is decreed, by the logical positivists, the antiphilosophical crusade.

2. Wiener Kreis against Philosophy? From Intolerant Positivism to Liberal Turn

Is the Vienna Circle against philosophy really? In the manifesto, Neurath wrote:

Many assert that metaphysical and theologising thought is again on the increase today, not only in life but also in science. Is this a general phenomenon or merely a chance restricted to certain circles? The assertion itself is easily confirmed if one
looks at the topics of university courses and at the titles of philosophic publications. But likewise the opposite spirit of enlightenment and anti-metaphysical factual research is growing stronger today, in that it is becoming conscious of its existence and task. In some circles the mode of thought grounded in experience and averse to speculation is stronger than ever, being strengthened precisely by the new opposition that has arisen. In the research work of all branches of empirical science this spirit of a scientific conception of the world is alive. (Neurath 1973, 301)

And the philosopher Moritz Schlick affirms the idea of philosophy as clarification of assertions. In the manifesto, dedicated to Moritz Schlick, thus is affirmed that,

Looking back we now see clearly what is the essence of the new scientific world-conception in contrast with traditional philosophy. No special “philosophic assertions” are established, assertions are merely clarified; and at that assertions of empirical science… Some representatives of the scientific world-conception no longer want to use the term “philosophy” for their work at all, so as to emphasise the contrast with the philosophy of (metaphysical) systems even more strongly. Whichever term may be used to describe such investigations, this much is certain: There is no such thing as philosophy as a basic or universal science alongside or above the various fields of the one empirical science; there is no way to genuine knowledge other than the way of experience; there is no realm of ideas that stands over or beyond experience. (VI, 316)

Philosophy remains important for the intransigent Neurath. I consider of course that for Neurath the Vienna Circle “is in opposition to philosophical investigation and to its different metaphysical ramifications… The logical analysis connects the different areas of investigations” (Neurath 1977, 100). The philosophical work—according to Neurath—“construct towers, from which philosophers are bombarded” (VI, 101). But let me now see that in the manifesto we read: “nevertheless the work of ‘philosophic’ or ‘foundational’ investigations remains important in accord with the scientific world-conception. For the logical clarification of scientific concepts, statements and methods liberates one from inhibiting prejudices.” (Neurath 1973, 316)

Then philosophy in this sense is recognized by the positivists engaged in the definition of the scientific conception of the world.

The father of this movement, the philosopher Moritz Schlick, defines the orthodox point of view of logical positivism. The orthodox doctrine is founded on the protocol assertions and on the verificationist criterion of significance.

If according to Schlick the empirical assertions, the verifiability principle of significance, the observation are the basis of truth, and the metaphysics is denied, the philosophy therefore is not denied. I see that this concept of truth is considered by concept of philosophy like analysis. Philosophy—maintains Schlick—is “the activity thanks to the sense of statements is clarified. From philosophy assertions are explained and from science are verified” (Schlick 1974, 31). This is not a renunciation to philosophy because this analysis instead is a socratic need. The important progress of science “are… founded on clarification of the sense of fundamental principles. This acquisition can be attained only by those who are inclined to philosophical activity; but this means that the great scientist is too ever a philosopher” (IV, 32-33).

And now let me introduce, about the first point, another interesting consideration, concerning the fate of Kantian a priori, whose absolute character is declared as a metaphysical character. I’ve to precise that my investigation cannot ignore Schlick and Reichenbach recognition,1 in the Twenty years, of a relativized and not absolute a priori of our mind in the process of knowledge, in terms of symbols, conventions, or elements that permit the construction of the space’s and time concept in physics, for example. This a priori is—therefore—without Kantian necessity or apodictical feature (Schlick 1938; Reichenbach 1920; Fortino 2012, 57-86; Parrini 1987; Parrini 2002, 31-57). Indeed we see in the history of science that our knowledge is
not eternal. *A priori* can be recognized like cultural element that changes and isn’t eternal, and can coincide with philosophical ideas or determinate views of the world. The history of scientific thought is sharing from a paradigm to another paradigm, from an encyclopaedia to another encyclopaedia (Neurath 1935; Fortino 2011; 2012). But in Schlick’s work I find a profound feeling for the philosophical spirit, for the “inexorable light” of philosophy when in your essay *L’École de Vienne et la philosophie traditionnelle* (Congrès Descartes, 1937) in socratic reflection he sees a critical and analytical spirit of investigation. Indeed for Schlick, the father of philosophy, or the authentic philosopher, “is not a scientist and not a logician, is not Comte or Frege, is not Poincaré or Russell,” but Socrate simply. “Socrates is the first that teaches disciples the art to pose in a right form the problems” (Schlick 1978, 760).

Let me now consider the intolerant Neurath. Has Neurath’s antimetaphysical point of view eliminated philosophy really? In the Vienna Circle, after phase of protocol assertions, the introduction of language like “physical fact,” recognizing the foundational role by the attempt to surpass the empirical round, can do without philosophy? I think that no refutation of philosophy is legitimated, but is legitimated a pragmatic philosophy.

In *Physicalism*, Neurath recalls to scientists and philosophers of the French historical epistemology, to Henri Poincaré, Pierre Duhem, that have recognized the role of subject in the construction of scientific theories (Fortino 1997; 2005). Simplicity, beauty and elegance of theoretical hypothesis, intuition’s faculty and “esprit de finesse” are philosophical criterions of choice in the establishment of theories, as is evident in Poincaré and Duhem scientific philosophy. These criterions are expression of philosophical feature and haven’t—therefore—a metaphysical character car they are relative and not “absolute.” We see here affirmed the rights of philosophy. The orthodox positivism, founded on the myth of objectivity, is replaced so by a pragmatic and sociological view because simplicity, beauty and elegance are philosophical and pragmatic criterions of truth at the same time.

Neurath and Quine reduce the empirical basis of the scientific knowledge. In *Two Dogmas of Empiricism*, Quine affirms that experience in the empirical knowledge is reduced to periphery. And the verifiability principle like empirical criterion of significance is untenable. We are facing to a Neurathian anthropology. In this model of rationality, is defined a pragmatic turn that establishes a relation between science and philosophy defining the role of the human mind, the holistic thesis versus the need of a rigorous truth. Devoted to criticizing the philosophical approach, Neurath gets to affirm—implicity—a philosophical (antidogmatic) view of science.

In opposition to habitual lecture, facing to thesis that conceives language like a material fact, I rouse a new reflection. Neurath—to define the role of language—appealing to Duhem, to conventionalism of Poincaré that exalts the role of subject, to Ernst Mach, denied the concept of truth as correspondence and maintain the idea of intersubjectivity and universality—by conventional language—of the scientific knowledge. The scientist exerts the decision-making power, the power of choice, the freedom, between Euclidean and non Euclidean geometry.

This conception, founded on the physicalism, is for Neurath condition of the unitarian ideal of the science, which I emphasize the political, sociological, people’s education implications. “Science is here conceived—Dvorak wrote—as a collective activity, as the consciously planned and executed work of diverse specialists, as contribution to the betterment of human existence” (Dvorak 1991, 266) and not like a capriciously invention, but like an hope concerning the future. John Dewey has affirmed—I remember—this implication when engaged in the encyclopedia of unified sciences.
3. How Science Can Be Philosophy

The elimination of philosophy is declined too by idea of unity of science. What are the ambitions (or limits) of the Unitarian ideal of science? Collective work of the scientists: work of a generation, interdependence of scientific works, unitary language, and syntax, predictions. We can speak of different laws, biological, of chemistry, sociological but—according to Neurath—if we speak of predictions we are in the face of the unity of sciences. Can you predict a fire in a forest if we know both the climate and the laws of the human behavior, wrote Neurath in *Soziologie im Physikalismus* (1931). The laws of climate, chemistry, sociology are the parts of a system, the system of a unitary science. And this science needs a language of mathematical and logical signs; this science realizes predictions, but the unitary science is a science that “can’t therefore anticipate—wrote Neurath—your future state” (Neurath 2006, 268). On define—so—a philosophical and pragmatic approach to scientific knowledge, in agreement with the holistic conception of knowledge. Reporting the metaphor of the sailors that in the open sea are forced to repair his ship, Neurath by the pragmatic and antimetaphysical approach “exprime—Sebestik wrote—[une] entreprise à la fois unitaire, pluraliste, essentiellement historique et ouverte sur l’avenir” (Sebestik 1997, 67). This unitary, pluralist, historical and open on the future enterprise is so not incompatible with the passion for logical construction of the world, that has aroused adverse and hostile reactions. If Kuhn shows the important role of metaphysics ideas (the Neoplatonic metaphysics of the Sun, for example), considering the structure of scientific revolutions, the Neurathian enterprise shows nevertheless his dependence from the coherence-theory truth, from logical approach.

If the thesis of unitarian language is criticized, because it is postulated a restrictive logical approach, we can see like the “science can become philosophy.” For this aim, the history of science is interesting and rich of teaching. I consider now the Astronomy. The ancient Astronomy is depending from the ideas of Pithagorics, concerning the circularity of movement of celestial bodies. For to save the philosophical postulate of the perfection of the circularity—face to irregularity of planets observed—are devised the eccentrics and the epicycles, whose role is object of philosophical investigation (and I remember that for Plato is very important to save phenomena). The choice between Ptolemaic theory and theory of Copernicus is another important example. What is the thesis of Copernicus, a fiction (an hypothesis for to save phenomena) or a realist theory? I consider that the philosophical, aesthetic criterions of choice, affirmed in the Ch. V of the *Copernican Revolution*, are reasons of the greatest revolution of every time. In this way, the theory of Copernicus became a scientific and “philosophical system.” The sociological perspective of the historian of science Thomas Kuhn maintains—indeed—this link between science and philosophy.

But—this is surprising—Neurath, sociologist who affirms coherence-theory truth, logical approach, reduction of science to language, is not in opposition to thesis of Kuhn. The Neurathian idea, according to science, is a passage from an encyclopedia to another encyclopedia (Neurath 1935), is not in opposition to idea of Kuhn according to the scientific rationality is handing over from a paradigm to another paradigm, namely from a vision of the world to another vision of the world (Kuhn 1970). So science is not an absolute and independent from the view of world (rather from historical view of world) that can be—I emphasize—a philosophical and scientific view of the world, as the Copernican revolution has showed clearly.

4. Interdisciplinarity: A Challenge for the Future of Philosophy and Not a Vain Prophecy

If this analysis is acceptable, I believe that today I can identify a part of the philosophical activity with
scientific philosophy while science can be considered a humanism. I see—naturally—the other fields of philosophical reflexion: moral, ontological, political… But if the science is traditionally reputed (as incontrovertible knowledge) in opposition to philosophy, we see that is undeniable the role of philosophy because this is inseparable from science in the sense that philosophy is an essential activity, intrinsic to process of the science’s elaboration. The antagonism between science and philosophy is untenable even in the intransigent logical positivists. In his book *Philosophy of Science. The Link between Science and Philosophy*, the physicist, mathematician, and philosopher Philipp Frank affirms an interesting, interdisciplinary point of view. And he affirms moreover—that “Plato discusses in his *Republic* the question of how to educate the future leaders of society by a curriculum which will make them ‘good’ leaders” (Frank 1957, 19). I here emphasize that in his *Republic* Plato has affirmed—and this is unforgettable—the importance of mathematics in the curriculum of the future leaders. Frank is an eminent exponent of logical positivism movement: Is he—therefore—in contradiction with the premises of this antimetaphysical movement? No, I think, it is because the philosophy is in the heart of the scientific activity. And—so—“all the reasons for the acceptance of the general principles of science belong to the philosophy of science” (Frank 1957, 3).

I propose to conclude by an idea of the philosopher Moritz Schlick.

> Although strange is their attitude (of upholder of unitarian science) and in spite of everything that this men can believe, can’t conclude that they have work to ruin of philosophy or that his thought isn’t, in general terms, of same kind of that is generally called *philosophical*. So it will cease to consider Pascal as a very philosopher although he has written: “to make fun of philosophy is to philosophize really” (Schlick 1978, 756).

With this brief consideration, I see that scientific philosophy therefore is not, in the future, insufficient, if we are able to integrate the historical, sociological dimension and the theoretical dimension of scientific knowledge. The unity is not a vain prophecy. Philosophy can contribute naturally to defining the purpose of the technological society, but I have considered here epistemological aspects concerning the relation between science and philosophy. My argumentation, elaborated from an historical and epistemological perspective, brings to the conclusion that philosophy is given a new sense and a new chance to realize a new alliance between the natural sciences and the human and social sciences. And if this analysis is tenable, the scientism is contained—strongly—by the humanism and the science is not conceivable, for education of future generations, without philosophy, namely without an open and pluralist scientific philosophy. The philosophy—so—is not insufficient too from the perspective of scientific conception of the world.

Notes


2. This question concerns the opposition between the geometrical astronomy and astronomy of observation, between the tradition of “naturales” and the tradition of “mathematici.” For the history of this tradition is important to see P. Duhem, 1908 and P. Duhem, 1913, Vol. I, Ch. II. P. Frank 1957, Ch. 1 (“The Chain that Links Science with Philosophy”).

3. On this point, it is necessary to see the argumentation of Thomas Kuhn. See T. Kuhn 1979, Ch. V and T. Kuhn 1970. Furthermore see the critical point of view in the work of J. W. McAllister 1996. See M. Fortino, 2014.

4. On this point, see M. Fortino 2016, 27-56. Frank has recognized that “Duhem describes Plato’s conceptions in a way that is very useful to us if we want to understand the relationship between science and philosophy.” P. Frank, 1957, 20.

5. On this point, see P. Frank 1973, Ch. XV. I emphasize that in this book Frank considers philosophy as integration of knowledge.
6. “The general statements of physical science are not simply empirical facts. The fact is that people advance and accept these general principles: This fact, however, belongs not to physics but to, say, psychology or anthropology. Thus, we see that the philosophy of physical science is not exhausted by physics itself” (P. Frank 1957, 3).

Works Cited