

The Place of Polish Scientific Philosophy in the European Context

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Abstract. Scientific philosophy is a *sui generis* project and it is not possible to assimilate it into analytic philosophy *tout court*, nor, *a fortiori*, into the philosophy of science. Scientific philosophy was practised during the early stage of the Vienna Circle before the influence of Wittgenstein's thought became decisive. Afterwards, there was a quick transition to philosophy intended as subsidiary to science, as a mere clarification of meaning, coming, in the end, to its liquidation with Carnap's logical syntax. Different was the path of the Lvov-Warsaw School, which remained committed to Brentano's original programme and never abandoned the idea of the possibility of scientific philosophy. Decisive, here, was the absence of Wittgenstein's influence and the utter irrelevance of that of Mach. It is in Poland that at the present days it has its strongest roots and there we find considerable trends of thought inspired by it.

Usually, when we try to evaluate the significance of the Lvov-Warsaw School in the context of European philosophy, it seems natural to compare it, in the first place, with the Vienna Circle. Several reasons speak in favour of this: the actual relationships between members of the two schools, thematic similarities, the same context of time. Even though differences are recognized, an element of likeness is found in their common membership in the analytic movement (Woleński 1983, p. 313), whose temporal boundaries are nonetheless elusive, since they have been differently understood both within its own history and within the most recent and credited philosophical historiography.

If in the past it was customary to put under the label “analytic philosophy” the trend of thought originating from the second Wittgenstein and the consideration of ordinary language, as it was practiced mostly in Oxford and Cambridge (Passmore 1957; Antiseri 1966), in recent times the concept of analytic philosophy expanded to the extent of covering almost anything that has been done since Russell (or even Peirce) up to the American phase (Stroll 2000, pp. 5–8). In this way, Moore, Wittgenstein, the *Oxford-Cambridge Philosophy*, Neopositivism, the stage of its dispersion and dissemination in a manifold of authors up to the last two decades of the century, all fall under this concept (Dummett 1978, pp. 441–444; 1990, pp. 11–20; 1991, pp. 111–112; D'Agostini 2002, p. 25).

At the heart of this temporal expansion is the difficulty in finding shared and unambiguous criteria apt to identify accurately what is intended with the denomination of “analytic philosophy”: whether it is

meant to point out a method of inquiry, or a set of shared doctrines; whether it refers to the central importance given to some problems rather than others, or if it is just meant to identify a certain intellectual genealogy which has given rise to definite schools: all these criteria appear questionable and, in some way, inadequate (Føllesdal 1997, pp. 3–7; Hacker 1998, p. 4); the idea of “philosophical analysis” itself and the way to intend the “clarity” it should achieve in order to solve, dissolve or shed a light on traditional philosophical problems, is far from being “clear” and has been interpreted in different ways (Hylton 1998, pp. 37–39). Thus, we are left with a bundling of defining features which, although changing from time to time, does not obliterate the common affiliation in the movement of analytic philosophy: the consequence, however, is that of an increasing convergence with continental philosophy (Peijnenburg 2000, p. 373). As anyone can see, following this route there is the risk either of arriving at a kind of “foggy” syncretism—with the result of putting together different authors whose common membership in the movement is highly disputable—or of appealing to *soft* and not really “analytically” definable concepts, such as that of “style” (Searle 1996, pp. 2–3; D’Agostini 1997, pp. 71–73; Marconi 1994, p. 9; Ross 1998).

If in this approach the Vienna Circle and Logical Neopositivism are just intended as a peculiar expression of analytic philosophy (von Wright 1993; Woleński 1985; Hempoliński 1987, pp. 10–12), other authors have tried to disengage Neopositivism from the exclusively linguistic and analytic clasp, by shifting the focus of attention to the concept of “exact” or *scientific philosophy*: so that between the latter and analytic philosophy there would still be some connections, utterly insufficient, however, to join them together under the same label. So understood, *scientific* (or “exact”) *philosophy* would have, according to Barry Smith, dual origins: one Anglo-Saxon (with Moore and Russell) and the other Austrian (with Brentano), would reach its climax with the Viennese group and then spread all over the world after the Second World War (Smith 1994, 1996). In analogous fashion, Gerald Holton (1993, p. 47), in outlining the “four main periods” of modern scientific philosophy, begins with the Austro-Hungarian intellectual history, then moves to several European cities (such as Prague, Berlin, Lvov and Warsaw), comes to the United States and, finally, takes into consideration its different articulations until the present day. Even such an author as Ronald Giere, who is reluctant to expand too much the concept of scientific philosophy, nonetheless subsumes under it the entire experience of the Vienna Circle (as a typically European phenomenon), marking a difference with its transformation into “philosophy of sci-

ence”, which occurred (for reasons that here I am not going to spell out) after its members moved to America.

Scientific Philosophy, nevertheless, is not to be equated with Neopositivism or the Vienna Circle *tout court*; neither is it to be confused with “linguistic philosophy” or “analytic philosophy” and still less with the philosophy of science. This is my main point (Coniglione 2002a, 2005) and I believe it can be elucidated in a paradigmatic way by comparing the Lvov-Warsaw School and the Vienna Circle, in order to single out the specificity of scientific philosophy and differentiate it from the other trends of thought to which it has often been assimilated. At the same time, hopefully, this will help to understand better the specific role that the Polish School has had in the context of European philosophy.

1. What is “scientific philosophy”?

It is History that has to give us an answer to such a question and there is, indeed, a long story to be told, which could go back to the birth of modern science and the competition which has been going on since then between philosophical thought and scientific knowledge.

Scientific philosophy is the idea that imbues the Cartesian project and acquires distinct awareness with Hume’s intention of building a science of human nature inspired by the model of the Newtonian science of the physical world. It is such an idea that lies behind the demand for an exact, rigorous language, similar to that of Mathematics as much as possible. We can see this demand becoming urgent in Leibniz, Condillac and all the thinkers who looked at mathematics or natural science as a source of inspiration to bring forward a new, eventually mature philosophy, not tangled anymore in the never-ending traditional disputes.

This project seems to concretize—becoming a true philosophical “flag” under which philosophers and scientist have gathered—above all with the triumph of 19th century science and, in the half of the century, with the renaissance of the new logic on a mathematical basis, thanks to the work of Boole.

As it is distinctly claimed by a “minor” thinker (but often “minors” paradigmatically embody the spirit of an age), philosophy will not be able to modernize itself properly, getting free of its scholasticism, unless it “sits modestly at the feet of science, imbues itself thoroughly with the spirit of the scientific method” and then applies the latter “to the reconstitution of the moral sciences and the total reorganisation of human knowledge” (Abbot 1882, p. 485). Here what

is meant by scientific philosophy is plain: it is “the philosophy that founds itself theoretically upon the practical basis of the scientific method” (p. 484); and it is clear—in this light the relationships which have to be established between philosophy and science: “they are the natural complements and allies of each other”, for the “science needs the intellectual orderliness and systematic unity which philosophy alone can create; philosophy needs the verified basis and thoroughly objective spirit of science” (p. 494). The aim is that of achieving a “greatly needed identification of Science and Philosophy” (Abbot 1882, p. 495; cf. also Ducasse 1941).

The great season of European positivism, with its manifold expressions and metamorphoses, represented the most systematic cultural movement which was self-aware of the need for a “positive”, that is “exact” or “scientific” philosophy. Logicians, philosophers, physicists, experimental psychologists, biologists, economists gathered under this flag, each of them giving their own specific meaning to the transition that philosophy should undergo in order to shift from pure, sterile speculation to a fruitful, productive science.

This project has been summed up in a paradigmatically clear way by Władysław Tatarkiewicz (1988, p. 263), who spelled out three different meanings:

- (a) “In the first place, science is the *foundation* of philosophy, what it has to do is just draw general conclusions from the results of science”; that is, philosophy is meant as a philosophic reflection about science and its task is to extend the results of sciences beyond their special fields; in the end, it is a kind of “natural” or naturalistically oriented philosophy.
- (b) “In the second place, science is the *object* of philosophy, the latter being nothing more than theory of science, inquiry on the assumptions, aims, methods of science”; i.e., philosophy is meant as *meta-science*, it lacks an autonomous object of inquiry and so tends to become “philosophy of. . .” (of science, of physics, of biology, and so on).
- (c) “In the third place, science has to be the *model* for philosophy, which has to state and solve its problems with the same methods and criteria, the same standards of precision, of the particular sciences”; this is *scientific* philosophy in the strict sense of the word, having its own object different from that of science, and capable of achieving knowledge which is distinct from the scientific one but is obtained by imitating the method and the procedures, taken in a loose sense, of science.

Of these three different meanings, it is the latter (science as a *model* for philosophy) that characterizes in the best way the project which is expressed by the words of Abbot and finds an echo even in the remotest loci of European positivism. That is what is claimed trenchantly, with Latin classicality, by Franz Brentano (1929, p. 136): “Vera philosophiae methodus nulla alia nisi scientiae naturalis est”: and, as a matter of fact, its teaching in Vienna, begun in 1874, is now unanimously recognized as the birth of the programme of scientific philosophy, a programme which took root in Vienna and subsequently bore its fruits in the peak season of the Vienna Circle. Brentano’s disciples, who were assigned prominent appointments at other universities—Meinong in Graz, Husserl in Göttingen, Ehrenfels in Prague, Höfler in Vienna, Twardowski in Lvov, Stumpf in Würzburg—shared Brentano’s main point to different degrees, some of them throughout their life, some only for a limited phase of their thought; that is, in the words of Barry Smith, the idea that “the tasks of philosopher and of the empirical scientist cannot and should not be pursued in separation; philosophy is to be pursued not in abstraction from other disciplines, but as part and parcel of our attempt to come to grips scientifically with the world and thus as forming a continuum with science”. At the heart of the matter was the engrained belief that “the method of the natural sciences is common to all the sciences” (Smith 1994, pp. 30–31), with the latter to be taken as a whole, in explicit opposition with Dilthey’s claim of the difference between the *Geisteswissenschaften* and the *Naturwissenschaften*.

“Scientific philosophy” meant, then, rigorous, exact, clear philosophy, i.e. philosophy which does not use any ambiguous terms, is founded on experience (Aristotle’s “*nisi est in intellectu. . .*”), is “minimalistic” and unsympathetic towards broad syntheses; it is to be preceded by an accurate description of the object of inquiry, it makes use of the logical analysis of concepts and repudiates metaphysics (Mulligan 1986; Smith 1989). The belief in the need to practice philosophy with scientific criteria is, therefore, the main motivation underlying—this is my claim—the other features characterizing this approach, which can be considered derivative; some of them, e.g. anti-Kantianism, are peculiar of the Brentanian group, others, such as the empiricist attitude and the attention to language and to the mistakes caused by it, are shared also by the other figures sympathizing with the background project (Haller 1981, pp. 91–102).

This broad program summarizes some of the “constants of Austrian philosophy” (Sebestik 1986, p. 21) which would subsequently influence to various degrees those different schools and trends of thought which would make reference to this common root. It will receive, moreover, different shades of meaning according to the further influences

associated with it, which will provide scientific philosophy with its more disparate features, also in relation to the particular national traditions in which it will find a home. So, just to talk about Austria, one thing will be the “*Philosophie als strenge Wissenschaft*” advocated by Husserl, who develops Brentano’s idea of the intentionality of consciousness in the direction of phenomenology, whereas utterly different will be the understanding of Brentano’s project in the Vienna Circle between the two World Wars. Still different will be Twardowski’s interpretation of Brentano’s teaching when in 1895 the former moves to Lvov, giving rise to The Lvov-Warsaw School.

But it is with Bertrand Russell, at the beginning of the last century, that scientific philosophy finds its first and strongest supporter (Coniglione 2002a). With him, scientific philosophy is given an explicit programme and it finds—and this is very important to fully understand its history and significance—its ultimate weapon in mathematical logic. Russell shows himself to be willing to get rid of traditional philosophy (Russell 1918, p. 221) and he is aware that scientific status can be achieved only by stripping away from philosophical inquiry its consolatory role, harshly criticizing, therefore, the use of metaphysics as poetry or music (Russell 1897, pp. 106–111): these are premonitory signs of an approach which subsequently would become quite successful.

“The scientific philosophy [...] aims only at understanding the world”, Russell (1914a, p. 64) claims, because the existence of “philosophical truths” different from the “scientific” ones is beyond question. This is a “minimalistic” philosophy, but it still retains its own task, its autonomous function, and it is not confined to playing just an ancillary role with regard to science: there still is “a large number of the recognized problems of philosophy” (Russell 1914a, p. 73), but to address them we have to find *the new method* which can do for philosophy what Galileo’s method did for physics (Russell 1913, pp. 372–373). This cannot be other than the the logico-analytic method which the new mathematical logic has made possible. Of this new method Frege is to be considered the first exponent and Russell himself gave a brilliant and paradigmatic illustration of it with his 1905 “On denoting”, subsequently trying to apply it to the knowledge of the external world (Russell 1914b).

Of the three meanings of scientific philosophy put forward by Tatarkiewicz, it is apparent, to my mind, that Russell endorses especially the third one, namely the idea that science is *the model* of philosophy, even though evidence supporting also the second interpretation can be found in his work. The so called “method of analysis”, or “logical paraphrase”, considered the distinctive feature of analytic philosophy, is nothing else than a tool, the most efficient instrument to

attain the aim that Russell is striving for. He wants to be, first of all, a *scientific philosopher* and uses analysis to carry out his philosophical programme. To think differently and to consider him the founder of analytic philosophy means taking the part for the whole, the means he employs for the aim and the meaning of his philosophizing; the reason for this is that Russell never adhered fully to the so called “linguistic turn”, which is the most distinctive feature of analytic philosophy, since for him logic cannot be reduced to sheer linguistic analysis, rather it deals with the structure of reality, of which it picks out the deepest qualities (Monk 1997, pp. 517–518). This is an alteration of the real meaning of Russell’s work caused by a topsy-turvy historical perspective, typical of contemporary analytic philosophy, scarcely accustomed to historiographical reconstruction; in this way, present interests are projected into the past, making of Russell an analytic philosopher because “the method of analysis” is what has survived of his teaching and has been taken on by further philosophical thought, whereas his original project of scientific philosophy faded away and vanished almost altogether (at least in the Anglo-Saxon culture until the 80’s).

To understand the reason of this fading away, however, we have to look at Vienna and Lvov.

2. The fate of scientific philosophy in Vienna and Lvov-Warsaw

Vienna did not mean only Brentano. Brentano’s successor in the university chair of inductive sciences was Ernst Mach, one of the main figures who inspired the Vienna Circle. With Mach the concept of scientific philosophy takes a different turn, deriving for the most part from the fact that he did not share Russell’s enthusiasm for mathematical logic; Mach’s concept of scientific philosophy is similar to the traditional positivist approaches, such as those advocated by Spencer, that had penetrated many national cultures (the Italian one above all). Mach denounces the danger of the reciprocal estrangement between science and philosophy, *leitmotiv* of all “scientific philosophers” (Mach 1895, p. 207), but he is confident that philosophers now see that their discipline must aspire to a critical integration, interpenetration and association of all sciences in a supreme unity (Mach 1895, p. 208). This can happen since philosophy, unlike science, is about the whole of facts and so cannot refrain from borrowing from the special sciences the knowledge on which it is based (Mach 1905, p. 5). Philosophy is both the basis of science—as it corrects the background ideas ingenuously and tacitly assumed by the theoretically naive scientist—and the fulfilment and

culmination of scientific theorization, allowing science to attain the completion that it cannot achieve on its own. Especially the last task has a clear positivist origin: it is distinctly spelled out by Spencer in his *First Principles*, when he claims that philosophy, through the application of the same method of science (consisting in progressive inductive generalizations), achieves even more abstract and general knowledge, grasping what is common to a given field of inquiry (Spencer 1910, §37).

It seems clear that here we are dealing with the first meaning of Tatarkiewicz's definition of scientific philosophy (science as the *foundation* of philosophy) and, subordinately, also with the second one (science as the *object* of philosophy). Now Russell is not unsympathetic with this second meaning (he often suggests that this is the task of philosophy, even though this aspect stays in the background in his thought), but he explicitly rejects the first meaning (Russell 1914b, p. 218). Philosophy is not scientific in this sense, but rather because it studies the *methods* of science and tries to apply them, with the required adjustments, to its own "peculiar province". As a matter of fact, "It is not results, but *methods* that can be transferred with profit from the sphere of special sciences to the sphere of philosophy" (Russell 1914a, p. 57). And logical methods (which Mach neglected) constitute the picklock to open the doors of scientificity, the philosopher's stone for a renaissance of philosophy, the keystone for a true "turning point in philosophy".

A "turning point" which is fully appreciated in the Vienna Circle, as well as by Twardowski's young disciples, those sophisticated and creative logicians who gather first in Lvov and then in Warsaw and who borrow from their master the idea of scientific philosophy put forward by Brentano; moreover, in Polish philosophy this idea gains supporters even in the Catholic Theology with the Cracow group, whose main characters were J.M. Bocheński, J. Salamucha and J.F. Drewnowski (Drewnowski 1934; Bocheński 1989; Puciato 1993). Contemporary formal logic—especially according to the logicians gathered in Warsaw around the great logician Jan Łukasiewicz—was considered, first of all, as the tool able to eradicate the semantic misunderstandings and terminological confusions by which philosophy had always been tainted. The search for clarity and exactness in style and in the definition of problems was, then, the precondition for scientific philosophy, since, as Twardowski claimed,

whoever thinks clearly would also write clearly, and we would have to conclude that an author who writes unclearly does not know how to think clearly (1919, p. 258).

Lukasiewicz (1946, p. 112), in his turn, after denouncing the miserable state of the philosophical systems of his time, did not hesitate to assert strongly that “Philosophy must be reconstructed from its very foundations; it should take its inspiration from scientific method and be based on the new logic”. It is a constant *leitmotiv*, that of the need of “reforming philosophy on the basis of mathematical logic” (Zawirski 1935, pp. 130, 138, 140), of “the applicability of pure logic to philosophical problems” (Ajdukiewicz 1934a, pp. 211–214) and to their correct formulation:

I intend to demonstrate here the great importance of contemporary logic for a satisfactory formulation of the central issues handed down to us by philosophical tradition (Ajdukiewicz 1937, p. 140).

In fact, as Ajdukiewicz claims, “among the classical problems of philosophy there are some whose solution was made intractable by the imprecise conceptual apparatus used for their formulation”; but “the conceptual apparatus of contemporary logic makes the solutions of those problems simple” (1937, p. 277). And it is Czeżowski who finds in the “method of analytic description”, a feature common both to science and philosophy, that feature which allows a united treatment of natural and social sciences (Coniglione 1997).

It is not difficult to find passages comparable to this one in the Vienna Circle. It would be sufficient to mention Schlick’s lapidary statement (1970, p. 200): “philosophy is ill, logic is its only cure”. There is, then, an unlimited confidence in the thaumaturgical power of logic, whose importance for the whole of philosophy—as Carnap writes—has been noticed by few yet; but

as soon as philosophers are willing to follow a scientific course (in the strict sense), they will not be able to avoid using this penetrating and efficient method for the clarification of concepts and the purification of problems (Carnap 1928, p. xvi).

Logic, then, at the service of philosophy, instrumental to the latter, in full continuity with Russell’s suggestion; a philosophy which can be reformed without missing its own field of inquiry and without being subordinate to science: a kind of *scientific philosophy* as Schlick understood it *before* he met Wittgenstein and moved to Vienna and which continued to exert a certain influence even after, at least until the publication in 1929 of the Vienna Circle manifesto, the *Wissenschaftliche Weltauffassung*. As a matter of fact, the analysis of the works before 1922 shows that Schlick had a high regard for philosophy, which—far from dissolving under the hammer of logical syntax—plays quite an important role, being able to attain knowledge and world views debarred from science, being indispensable for the clarification and corroboration

of the foundations of science itself and, finally, being necessary to complete scientific knowledge (Coniglione 2002b, pp. 141–245). These are three different aims which synthesize Mach’s and Russell’s ideas and which encompass, to a greater or lesser degree, depending on the evolution of Schlick’s ideas at this stage of his thought, the three aspects outlined by Tatarkiewicz: philosophy is scientific in the first place because, in treating its problems, it aspires to the clarity and perfection typical of science, but is not to be reduced to bare meta-science, i.e. the study of the method and the procedures of science. A kind of philosophy, then, which does not renounce debating its own classical problems, but, in doing that, it takes inspiration from the method and the content of science. In the second place, philosophy is scientific since it considers as its own the task of harmonizing the whole of knowledge, by removing mistakes and contradictions: this is the task of exploring the basic concepts of science (such as space, time, causality, matter and so on) which connect particular sciences, bringing them into contact with practical life and pursuing the end of securing the foundations on which the special sciences rely (Schlick 1911, p. 108). Finally, philosophy is scientific in that it has a unifying function towards the top, a task which Schlick does not hesitate to define as “metaphysical”: a kind of metaphysics starting at the point when sciences end, based on their results, but aiming to shape and coordinate the results of particular sciences, to look beyond them, in order to add what is needed to attain a global and harmonious view of the world. It is a task always performed in close connection with the sciences, but it is not limited to taking into consideration the philosophy implicit in them or to coordinating their fundamental principles, rather it goes further, since it completes the knowledge provided by the particular sciences in order to obtain a unified framework (Schlick 1911, pp. 110–113).

The same perspective is shared, in substance, by Carnap and takes form in his great work of this period, the *Aufbau*, the first draft of which circulated and was discussed by the members of the Circle already in 1925 (Stadler 2001, pp. 200–202). In the programmatic declarations of the first preface of 1926, all the features that Russell considered typical of scientific philosophy are exemplified. This is no surprise, since the influence exerted by Russell’s *Our Knowledge of the External World* in orientating Carnap towards scientific philosophy is well known: in Russell’s book was “formulated clearly and explicitly a view of the aim and method of philosophy which I had implicitly held for some time” (Carnap 1963, p. 13). Carnap was in particular “moved and inspired [...] by Russell’s eloquent defense of the role of logic in philosophy”, since he believed that “logic was, no doubt, the most promising road for those who wanted philosophy to follow the secure

path of science” (Coffa 1991, p. 208). The detachment from traditional philosophy, rejecting its speculative and poetic way of proceeding; the “new method of doing philosophy”, closely connected to the specialized sciences (especially mathematics and physics); the task of putting into effect in philosophy a style rigorous and aware of its own responsibilities, such as the one of the scientific researcher; the cooperative, progressive and specialized work done by each one in order to erect “stone by stone” “a safe building [...] at which each following generation can continue to work”; finally, the demand that in philosophy, as in physics, theses were established on “purely empirical-rational justification”, since “the *justification* [...] has to take place before the forum of the understanding; here we must not refer to our intuition or emotional needs” (Carnap 1928, p. xvii): these are the features of Carnap’s conception of philosophy, modeled for the most part, even though with some difference in emphasis, on Russell’s programme.

Sympathetic with this programme are also the members of the early period of the Vienna Circle, particularly Philipp Frank, Hans Hahn and Richard von Mises. The aim was that of building a “new philosophy” consistent with the new scientific discoveries, that is, to quote from the Gospel parable—pouring the new wine of science into the new barrels of a philosophy not traditional anymore (Frank 1941, p. 40). The aim had to be a “philosophy of integration” (that afterwards would give rise to the movement for the unity of science); not satisfied with proposing for philosophy just “primarily critical and analytical aims”, those scholars never considered the analysis of science as an end in itself. Rather, their fundamental goal “was to render philosophy scientific and give it an anti-metaphysical (anti-idealistic) orientation, combined with empirical enlightenment ideas” (Stadler 2001, p. 145).

It was the acquaintance with Ludwig Wittgenstein and the influence exerted by his thought that brought about a decisive turn to the approach of the Circle. Wittgenstein was far from sharing Russell’s programme of scientific philosophy (Monk 1997, pp. 339–343), both for his own lack of interest in science (Monk 1990, pp. 399, 410, 433–436, and *passim*), and for substantial reasons rooted in the *Tractatus*’s claims and in his way of conceiving the task of philosophy in relation to that of the natural sciences (McGuinness 1990, pp. 467–468). His influence on this point was decisive for the scholars of the Circle: Schlick, literally fascinated by his thinking and his personality, gradually changed his conception of philosophy, with a *crescendo* of enthusiasm for Wittgenstein. Thanks to his work a new age arises and the philosophy has come to a “turning point”, but a very different one from the former: as it is clearly stated in the 1930 essay, “Die Wende der Philosophie”, philosophy is not considered as a science anymore,

but rather as an activity of clarification of ideas; it is not a system of knowledge, but a system of *acts* aimed at clarifying the *sense* of the sentences, whereas their truth is the competence of science. Philosophy is no longer, then, a *sui generis* science, with its own set of problems, and philosophers do not hold a particular sort of knowledge, distinct from that of the specialistic sciences. Logical analysis is not the method that allows philosophy to become scientific, but the method philosophy uses to dissolve confusions deriving from words and language, so that its problems can be solved in the scientific field.

The fate of all “philosophical problems” is this: Some of them will disappear by being shown to be mistakes and misunderstandings of our language and the others will be found to be ordinary scientific questions in disguise (Schlick 1931, p. 221).

It is the abandonment of the idea that there are genuine philosophical problems that marks the new period of Schlick’s thought: philosophy is not a science, therefore it is absurd to think it is possible to “scientifize” it. “Scientific philosophy”, which had been the flag of Brentano, Russell, Wundt and many other philosophers-scientists around the turn of the twentieth century, and had been held by the early Schlick himself and by Carnap in the *Aufbau*, is now considered impossible. With the later Schlick “scientific philosophy” is sentenced to death.

The capital execution is Carnap’s work, with all the honours of his peculiarly sophisticated logical-mathematical culture. The turning point leading him away from the *Aufbau* can be located in the 1930 essay “Die alte und die neue Logik”, where the influence of Wittgenstein’s *Tractatus* is apparent in the claim that philosophy possesses no cognitive domain of its own, its task being just the clarification of the propositions of empirical science via logical analysis (Cirera 1994, p. 149). And the burial of the corpse is completed with the *Logical Syntax of Language*, in which philosophy has lost any autonomy and has been assigned the role of carrying out a merely logical analysis of science. Previously, Carnap claims, it was thought that there were objective and logical problems (being part of logic, theory of knowledge, natural philosophy, history etc.) belonging to the so called “scientific philosophy” (not metaphysical in character) which would investigate the same objects of other sciences from a different, i.e. purely philosophical, point of view; now, instead,

as opposed to this, we shall here maintain that all these remaining philosophical questions are logical questions. [. . .] Apart from questions of the individual sciences, only the questions of the logical analysis of science, of its sentences, terms, concepts, theories, etc., are left as genuine scientific questions. We shall call this complex of questions the *logic of science*.

In such way, “*the logic of science takes the place of the inextricable tangle of problems which is known as philosophy*” (Carnap 1936, p. 279). To designate what remains of philosophy, Carnap would rather speak now not of scientific philosophy but of theory of knowledge or epistemology, a more neutral label, even though he still wants to distinguish it from the traditional epistemology, tainted with pseudo-problems. Also A.J. Ayer (1936, p. 170), who was the best known and successful promulgator of neopositivism, claims with resolution that “philosophy must develop into the logic of science”. Once buried by scientific philosophy, epistemology, understood as *philosophy of science*, comes now into existence.

This is not, however, the path followed by the philosophers of the Lvov-Warsaw School. And for a precise historical reason: there was no Wittgensteinian influence on them and that of Mach was quite small. On the other hand, Brentano’s influence was decisive and also, especially concerning the concept of truth, that of Aristotelianism and Scholastic philosophy, originating from Twardowski’s mediation. When Ajdukiewicz (1934b, p. 408), in comparison with the Vienna Circle, enumerates the thinkers who exerted the main influence on the School, he does not mention either Wittgenstein or Mach at all. Instead, after Brentano, considered the main inspiring figure, are listed Russell, Frege and Schröder for logic; then Hume, Leibniz, Mill, Spencer, Poincaré, Duhem, Hilbert and Einstein (Woleński 1997, pp. 175–186).

This made it possible for the School to remain always faithful to the proper characterization of scientific philosophy, in the third meaning given by Tatarkiewicz, without ever coming to its liquidation or devaluation in the name either of a purely syntactic approach or of a redefinition merely instrumental with respect to philosophy. This is proved in the first place by the stance taken towards metaphysics, soon put on trial by the Vienna Circle and declared to be nonsensical by means of the verifiability principle. The Polish School, by contrast, did not take a monolithic and unitary position towards it—the School did not condemn metaphysics in general, but was rather inclined to evaluate individual theories, whose criticism, sometimes harsh, was not meant to contribute to the overall liquidation of metaphysics on the basis of significance or demarcation criteria or through a final solution of a syntactic kind. The School was confident, rather, in the possibility of a “scientification” of metaphysics by means of translating its concepts into a conceptually clear language inspired by logic, removing in this way its semantic and linguistic ambiguities and contributing to resolving of its own specific problems (Przełęcki 1989, pp. 447–449).

Ajdukiewicz, for example, in the debate at the Cracow Philosophical Congress in 1936, refuses to be considered as a liquidator of philoso-

phy and rather views his task as that of carrying philosophy from its prescientific stage to the scientific one, thanks to the instruments of contemporary logic (Borkowski 1966, p. 34). And in the post-war period, during a 1946 presentation of the claims of Neopositivism, albeit he defended it from the charge of liquidation of philosophy (do not forget that from among the members of the School Adjukiewicz was certainly the closest to the positions of the Vienna Circle), Adjukiewicz wonders whether the Neopositivist lancet had not lanced too deeply, cutting off even some sound parts of philosophy. In any case, though he accepts the way neopositivists intend scientific work, namely as empirical inquiry and construction of deductive systems with their axioms and the consequences descending from them, he thinks that there still is a large field of work for the philosopher (Ajdukiewicz 1946, p. 28). Some important examples of that would be given by Łukasiewicz's essays on determinism, by the use of semantics in order to eliminate the equivocalness of language, by Ajdukiewicz himself in analysing the problem of transcendental idealism through the method of semantic paraphrase, and, finally, by Twardowski in defending the heuristically effective role of philosophical conceptions.

The enthusiasm for logic by itself did not at all mean blindness towards the complexity of philosophical problems, but often went hand in hand with an attitude of cautious and careful approach. It is this awareness, noticeable already in 1936 in one of the greatest contemporary logicians, Alfred Tarski, that dampens the excessively triumphalistic tones of the most logicist of his colleagues, namely Łukasiewicz. Tarski, in fact, feels the danger that applying the apparatus and the methods of contemporary logic to the classical problems of philosophy can result in nothing else than sheer platitude, ignoring the fact that these problems have a centuries-old tradition. Thus, the question of whether, by logically rephrasing such problems, freeing their formulation from obscurities and inaccuracies, the essential intentions of the people who in the past posed the problems—though not being able to give them a formally correct shape—are really grasped, cannot be avoided. Nevertheless, Tarski maintains that the work of the logicizing philosopher is not vain: it forces the opponents to make the “essence” of the problems at stake more precise, so that they can meet the demands of logic and methodology, and it allows the future discussion to free itself of such problems of the character of an unbroken chain resulting in nothing else than misunderstandings (Tarski 1936, p. 425). Certainly, logic must be handled with care. We must not make of it a tool likely to hop with both feet together over the rich historical stratification which each concept acquired in the course of tradition, but it is beyond question that the aim is in any case beneficial, since logic enables us

to address and solve problems previously left vague and indeterminate. Once more, then, there is a positive value for philosophical research, which from logic can expect help and support, and not a cold dagger stabbing it in the heart; at the same time, there is the awareness of the importance of the historical tradition within which the philosophical problem must be placed, and this is in sharp contrast with the typically ahistorical approach of the members of the Vienna Circle and of the following analytic philosophy (and it is not by accident, in fact, that the Polish School started a new period in the study of the history of logic, first of all with the researches on the Stoics and Aristotle carried out by Łukasiewicz).

The Polish philosophers were fully aware of this difference in the way of considering philosophical work and did not fail to make explicit, often in polemical contraposition with their “cousins” of the Vienna Circle, known by the Polish School when it had already completely abandoned the project of scientific philosophy. It is the case of Łukasiewicz, who, in spite of his logistic radicalism, rejects the idea that philosophy should be liquidated by being absorbed into science. His opposition to the Vienna Circle is clear, like his reference to Carnap:

Metaphysical problems have been left unsolved, though, I think, they are not unsolvable. But they must be approached with a scientific method, the same well-tested method which is used by a mathematician or a physicist (Łukasiewicz 1936b, p. 227).

It would be a mistake to reject metaphysics as meaningless, since there are problems far from being metaphysical in Carnap’s sense:

For Carnap, all these questions are only problems of language or, more strictly, problems of syntax of language. [...] But I can in no way agree with such a formulation by Carnap as: “Thus all questions about the structure of space and time are syntactical questions about the structure of the language” [...]. These problems are for me factual, real, and objective, and not purely formal, linguistic problems” (Łukasiewicz 1936b, pp. 230–231).

Thus, Łukasiewicz elsewhere claims, “we must recognize the meaningfulness of the metaphysical problems (at least of some of them) and contrast the tendencies of the Vienna Circle to deprive them of meaning”, because metaphysical problems represent “most general empirical problems—and as such are resolvable” (Łukasiewicz 1936a, p. 69).

An analogous criticism is made by Maria Kokoszyńska, a disciple of Twardowski and Ajdukiewicz, back from the First International Congress of Scientific Philosophy held in Paris in 1935. The Congress was attended by a significant Polish delegation and there the end of scientific philosophy in the proper sense (though the denomination survived) and the transition to the logic of science was officially sanctioned.

After having illustrated the Neopositivists' thesis, argued by Carnap, according to which philosophy should limit itself to the logic-syntactical field, Kokoszyńska observes that this thesis has its own flaws. She claims that, at the Congress, the most important effort to give scientific philosophy “richer means at its disposal and—consequently—broaden its boundaries, has come from the Polish group”. For the Poles, thanks to the instruments of syntax and formalized language,

nothing forbids that, in the domain of philosophy, not only this language is spoken, but it is spoken using this very same language. By working with such enriched language, philosophy can define in a completely sound way a range of concepts and can formulate a range of problems which are not to be confused with logical syntax and which would be excluded by philosophy if into the latter would be allowed nothing else than syntax (Kokoszyńska 1937, p. 79).

3. Conclusions

Scientific philosophy is, then, a *sui generis* project, peculiar to a whole stage of philosophical thought more committed to the comparison with science, and traceable in various degrees in different thinkers and philosophical orientations (Marsonet 1994). If it is to be understood in its proper sense, according to the intentions of those who first conceived it, it is at least inaccurate to speak of the Vienna Circle, if not of the whole logical positivism, as scientific philosophy, unless the meaning of this concept is diluted and reduced to that of a generic theoretical engagement performed in close contact with scientific theorization.

There was a phase in the Vienna Circle in which scientific philosophy was practised: this is the early stage of the Circle before the influence of Wittgenstein's thought was decisive. Afterwards, there was a quick transition to philosophy intended as subsidiary to science, as a mere clarification of meaning, coming, in the end, to its liquidation with Carnap's logical syntax; so, the focus of attention shifted, prevailingly if not exclusively, to interests of philosophy of science. For this reason, it would be a mistake to include the Vienna Circle (and linguistic philosophy) within analytic philosophy (von Wright 1993, p. 43). As a matter of fact, the Circle lacked the most relevant feature that the programme of scientific philosophy bequeathed to analytic philosophy, namely, the will to address the traditional philosophical problems and attempting to solve them, thus maintaining a specific object and real autonomy for philosophical thought with respect to science (Stroll 2000, p. 270; Clarke 1997, p. 36).

Different was the path of the Lvov-Warsaw School, which remained committed to Brentano's original programme and never abandoned the idea of the possibility of scientific philosophy; this was intended as a field in which the autonomy of philosophical thinking, not absorbable either by syntax or by the philosophy of science, could be practised. Decisive, here, was the absence of Wittgenstein's influence and the utter irrelevance of that of Mach. So that it would not be unsound to define the work of the Polish School as "analytic philosophy", even though the latter is not always and necessarily scientific philosophy.

In fact, although analytic philosophy has recovered and embodied many features of scientific philosophy since the Second World War, first of all the claims that philosophical propositions bear their own truth and that the method to be applied in philosophy is that of analysis, it has not always kept itself in close connection with the method of science; moreover it has focused almost exclusively on the problem of language, especially ordinary language, seeking in it and through it the access to truth (this is the reason why Russell, strictly speaking, cannot be defined as a "linguist" philosopher). In addition to that, there is the more compelling argument that in analytic philosophy science loses that role of *model* that it had for Russell and for the majority of scientific philosophers, the role of a paradigmatic example from which to gain inspiration and on the results of which to rely: the *naturalist* stance of scientific philosophy, granting a privilege to the method of natural sciences and to its universal applicability, comes into conflict with the merely linguistic character proper to analytic philosophy.

The history of scientific philosophy does not come to an end with the Lvov-Warsaw School in the period between the two World Wars (the only phase of the School we have examined) nor with the end of the Vienna Circle and its diaspora. Scientific philosophy found new routes in the postwar period and maintains, in my opinion, its own specificity, so that it is not possible to assimilate it into analytic philosophy *tout court*, nor, *a fortiori*, into the philosophy of science. Once again, it is in Poland that it has its strongest roots at present and there are we find considerable trends of thought inspired by it. The Polish thinkers complain about the rupture of the close relationship between philosophy (and metaphysics) and science, which occurred both for the narrowmindedness of positivism and for the ignorance of the philosophers of science. It is not by accident, to quote just an example, that the Russellian programme of "returning to the problems of real philosophy and acting in philosophy as in science, in particular as in mathematics and logic" is put forward again. For this reason, the editorial article published in 1993 in the first issue of the review *Logic and Logical Philosophy*, edited by Jerzy Perzanowski and Andrzej Pietruszczak,

makes reference to the great British philosopher, considered, together with Brentano, “one of the great fathers of Polish analytic philosophy, whose programme became crucial even for its logic and philosophy”.

This ideal has not completely vanished in the contemporary English-speaking philosophy, since there are thinkers such as Mario Bunge (2001, p. 10), who, against the crisis of philosophy or even the announcement of its death, revives the idea of building a “good philosophy”, “capable of tackling interesting philosophical questions in the light of the best available factual knowledge, and with the help of precision tools forged by formal sciences”. Moreover, the ideal of “philosophy as science” is put forward again, by William Lycan (1988), reassigning to philosophy, as it was with Spencer, the role of constructing most abstract theories from which it is possible to select the best ones with standards which are highly plausible, even though not identical with those proper to empirical sciences.

Scientific philosophy, therefore, is not dead, even though it nowadays lives a wretched life, between the ruins of a philosophy of science which seems to have lost her previous conceit, the aggressiveness of hermeneutic, deconstructionist and postmodern philosophies and the danger of losing its own specific lineaments in the large and ecumenical womb of analytic philosophy. We do not know and cannot foresee which fate it is going to have: if it will be revitalized, as Bunge wishes, or if it is living the last remnants of a long and honoured existence. One thing, I think, cannot be doubted, namely that its history has yet to be studied (Richardson 1997, p. 444), once it has learnt to perceive clearly its own peculiarity, without confusing it either with positivism, or with philosophy of science, or, *a fortiori*, with analytic philosophy. Along this path, certainly, the tradition of Polish scientific philosophy still has much to teach us.

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