Paolo Parrini*

Philosophy today: cries of alarm and prospects of progress

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Abstract: Today's critical state of philosophy is examined by considering two of its aspects: the way in which philosophy presently is ever more typically practised (increasing professionalism and specialisation) and the new challenges it has to face to keep up with the changed scientific, and more generally cultural and social context. The essay outlines some prospects of progress in the light of those which still now can be considered the proper tasks of philosophical inquiry. Such tasks are singled out through an historical survey of the original characters of philosophy and an appraisal of its theoretical motivations. The importance of the history of philosophy and the necessity of achieving a virtuous relation among the various philosophical disciplines are stressed to contrast the dangers of excess specialisation and professionalism.

Keywords: Metaphilosophy, science and epistemology, philosophical progress, history of philosophy, specialisation and professionalism

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In recent years, a sense of confusion about the nature and place of philosophy has been growing and spreading in today's technological and globalised society. For this reason, reflecting on the state of health of this discipline, its function and even prospects for its survival can be helpful and may perhaps be urgent. Such a critical state is a complex phenomenon with numerous aspects; here I shall only consider two which seem to me particularly significant. Despite their difference in principle, these aspects pose strictly connected problems. One aspect depends upon reasons I would call internal to the way in which philosophy presently is ever more typically practised; the second depends upon external developments linked to the changed scientific, and more generally cultural and social context in which philosophical activity develops.

The internal reasons must be related to the increasing 'professionalism' and specialisation of philosophy, especially to the character assumed by a large

***Corresponding author: Paolo Parrini,** DILEF (Dipartimento di Lettere e Filosofia), Università degli Studi di Firenze, Firenze, Toscana, Italy, E-mail: parrini@unifi.it

range of philosophical literature, largely resulting from the progressive success of so-called analytical philosophy.[1] Although Wilfrid Sellars (1962: 1), a major exponent of this philosophical trend, reminded us that the "aim of philosophy, abstractly formulated, is to understand how things in the broadest possible sense of the term hang together in the broadest possible sense of the term", within the analytical mainstream the link between specific problems and general philosophical perspectives – such as, for example, the perspective underlying Logical Empiricism – has gradually lost its strength. Logical Empiricism, in fact, tried to give new 'analytical' nourishment to basic features of the *esprit positif* without giving up the traditional idea of the 'integration' as ultimate 'goal' of philosophy (Frank 1941: 36 f.).

This progressive specialisation of philosophical research has been fostered by the almost exponential increase both of the number of researchers and the correlative amount of scholarly initiatives and publications of various kinds. According to some scholars, for example Susan Haack, this led to an unstoppable fragmentation of research "into cliques, niches, cartels, and fiefdoms", dominated "by intellectual fads and fashions", which, in its turn, provoked rapid erosion of the "very virtues" ("patience, intellectual honesty, realism, courage, humility, independent judgment, etc.") that good intellectual work, and perhaps especially good philosophical work, requires".[2] Thus, paradoxically, a fact that in itself should be welcomed as a sign of good health eventually results in a parcelling out of trends and contributions which seems to clash with the aspiration of philosophy to the greatest possible generality. This aggravates disappointments about the outcomes expected by non-philosophers of philosophy, increasing doubts about the usefulness of a discipline nearly reduced to an isolated game which appears to have become an end in itself.

This critical situation, fostered by internal reasons, is worsened by factors I called external. These depend upon the specialisation and parcelling out of philosophy accompanied, and partly favoured, by a comparable increasing specialisation and sub-dividing of the scientific and cultural world generally – which in one regard is fruitful and thus unrestrainable. This fact significantly undermines the task of philosophers who, by the very nature of their job, have a vital need to keep in touch with other disciplines. Thus, today, philosophy finds itself in the very inconvenient situation of having become a sort of specialisation

1 Here I leave aside the many problems that make it difficult to characterize analytical philosophy with respect to other more traditional approaches, often roughly listed under the no less problematic label of 'continental philosophy'.

2 Haack (2017), 40. See also Fodor (2004), Frodeman (2013), and for some aspects Kitcher (2011).

which must face other specialisations in a specialised way. For example, it is more and more difficult to research ethics or aesthetics without competence in fields which in their turn have also branched out, such as the various human sciences, literature, art criticism, including the most qualified and reliable publications on the transformations of the globalised society in which we live (think only of a new specialisation such as the philosophy of information).

A peculiar and still stronger uneasiness affects two disciplines which in a sense are 'sisters': general philosophy of knowledge and philosophy of science. They involve, in fact, particularly complex specialised extra-philosophical notions. Both require good competence in the use of languages, such as logical, mathematical and scientific languages, which are very far from that everyday-living language which was the medium of philosophy in its original development and which remains the way in which it can be communicated to non-philosophers. For this reason, in the following pages, I will consider these two pursuits as privileged vantage points from which we can consider our problem.

A further important factor is the impressive developments of exact and empirical sciences in the centuries since Galileo and Newton, which led to an ever greater narrowing of the domains regarded as prerogatives of philosophy. This is not only because philosophy, as has repeatedly been said, has become ever more like a once-vast empire which progressively lost its provinces, but also because these provinces, *i.e.* the scientific disciplines gradually emancipated from it, have been able to develop theories capable to compete in breadth with traditional philosophical conceptions. These theories absorb questions once reserved for philosophy, attain outcomes which cast doubts on well-rooted philosophical doctrines such as the a priori/a posteriori distinction, and even autonomously turn their own basic principles into problems. Thus, philosophical inquiry has also been deprived of its exclusive right to so-called foundational researches, which, on the other hand, are facing a crisis due to rising mistrust in the existence of absolute foundations of knowledge or ethics. In the first decades of the twentieth century, Adolf Harnack said that it is not true that "our generation has no philosophers ... it is merely that today's philosophers sit in another department, their names are Planck and Einstein" (Sommerfeld 1949: 97), to which names it seems quite right to add Schrödinger's, Heisenberg's, Born's, Bohr's, Pauli's, Dirac's, among others. In this way, the broadening of the horizons of science has accompanied the narrowing of the range of action of philosophy, worsening the situation. What is valid for physics is, in this regard, also valid (though less dramatically) for biology and all the human sciences. Such sciences too (psychology, anthropology, sociology etc.) enter into direct competition with philosophy on several issues pertaining, for example, to ethics or the sphere of moral life.

Additionally, in the second half of the twentieth century, relations between philosophers and scientists worsened. The first decades saw the rise of great scientific theories, such as relativity theory and quantum mechanics, in both of which not only the scientific work carried out after the 'Galilean-Newtonian revolution' has converged, but also a large part of the epistemological reflection developed above all in the nineteenth century. Such achievements were mostly due to physicists who – like those mentioned above, beginning with Einstein – were respectful of philosophy and in particular epistemology. Moreover, at that time, epistemology was dominated by some conceptions, such as Popper's or Logical Empiricists', which – in spite of their differences – posed themselves on an extremely general plane and contrasted to other equally general speculative trends just because they drew inspiration from scientific knowledge. Heisenberg, for example, in works characterised by a clear philosophical dimension, brought his interpretation of quantum formalism closer to some Plato's and Aristotle's ideas. Besides, both he and other exponents of the Copenhagen School, while discussing with Einstein, also called into question the methodological conceptions which had favoured the birth of the theory of relativity. These same conceptions had been expounded by Einstein himself in some essays that influenced philosophy as well as science and sprung, in their turn, both from his in-depth knowledge of Mach's, Poincaré's and Duhem's epistemological works and his meaningful relations (well documented by his "Autobiographical Notes" and his letters) with important philosophers of the time.

Einstein's activity and the Copenhagen School exemplify that interdependence between science and philosophy which brought Einstein (1949: 683 f.) to say – though with an important *caveat* I shall discuss later – that an epistemology "without contact with science becomes an empty scheme", and a science "without epistemology is – insofar as it is thinkable at all – primitive and muddled". Subsequently, however, matters changed considerably and some influential exponents of the scientific domain have taken critical positions towards philosophy and especially philosophy of science. Besides the famous quip, of uncertain attribution, according to which philosophy of science is about as useful to scientists as ornithology is to birds, many renowned physicists such as Richard Feynman, Stephen Hawking, Freeman Dyson and Steven Weinberg maintained that since some time onwards philosophers have no longer been able to contribute to progress in science (Weinberg 1992: 166–169) and that their works are "historically insignificant" (Dyson 2015: 243–245; in particular, 244). Since, in their opinion, philosophy no longer even carries out its original task of answering the great questions on the nature of the world, its origin and the existence of a creator of the universe, it should be considered "dead" (Hawking

and Mlodinow 2010: 13). Philosophical research has not kept up with modern developments in science, particularly physics, so that instead scientists "have become the bearers of the torch of discovery in our quest of knowledge" (Hawking and Mlodinow 2010: 13).

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Such critical judgements had various after-effects among philosophers. For example, Tim Crane returned them to the sender by observing – quite correctly – that the books of these physicists so strict with philosophy are often themselves "full of philosophy" (Crane 2017: 177), and not a very good philosophy because it "has not kept up with developments in philosophy" (Crane 2017: 179). Others took more articulated positions. Clark Glymour (2011: 4), for example, although he did not refer to particular criticism, showed a strong dissatisfaction with a large part of formal epistemology, which he said would often consist only of "ritualised" and "ill-motivated technicalia" of no use to science or philosophy. At the same time, though, he also said that he believed in a philosophy capable of producing scientifically interesting ideas and sometimes real acquisitions, worthy of becoming part of the patrimony of science. Just for this reason, he maintains the usefulness of philosophy as an academic discipline.

Glymour thinks there is scope for the kind of philosophical work that he has in mind (and that he calls "material") both in the scientific-epistemological field and the studies "about public policy". Such work – well exemplified by the contributions of Hilary Putnam, Patrick Suppes, John Earman, Elliott Sober and some others – can lead to constructing new conceptual frameworks and to pave ways to domains of research not yet explored by "the science of the day".[3] He adds that it can be "done" only by philosophers: first of all, because "philosophy teaches an eye for hidden presuppositions, equivocations, [and] bad arguments generally"; secondly,

> because philosophy departments can be homes to brilliant people who are, at least initially, outsiders to the science of the day, people who will take up questions that may have been made invisible to scientists because of disciplinary blinkers, people who look at issues, in small ways or large (Glymour 2011: 5–7).

3 Glymour himself gave significant contributions to this kind of work which is an important part of Neo-Positivist's legacy, a legacy that was not developed only in the United States of America (see Wolters 2015).

It seems to me that Glymour moves in the right direction, in particular when he stresses that philosophy can favour critical analyses of received theories, pave new ways for research and also – as Carnap had already pointed out, though in the restricted terms of the 'linguistic turn' – project conceptual frameworks of reference.[4] Although philosophy has no monopoly on the construction of great architectures of thought, and even less a monopoly on critical thinking or thinking in general (as Heidegger and the Heideggerians would say on the basis of the odd idea that science does not think), for historical reasons, it has led to such an accumulation of experiences that can be precious on all the fronts mentioned above. On this point, a difference in principle emerges between the tasks specific to philosophical work and those specific to the sciences. However, I do not think this difference can be translated into formal criteria of distinction, or that it should preclude pretended 'invasions of the pitch' (which are instead highly favourable!) now from philosophers, now from scientists.

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To highlight such a difference – the real kernel of the problem – consider how in ancient times three great philosophers tried to account for the whys and the wherefores of their discipline. Not that we must return to the questions and answers of the ancients as if nothing had changed since! Nevertheless, four meta-philosophical conceptions which accompanied the birth of philosophy can provide a compass for better understanding the reasons for the present sense of crisis and indicating some possible remedies. Such conceptions highlight important characteristics of philosophical inquiry; all can be found in the ways in which philosophy has been intended and practised over the centuries.

The first characteristic was pointed out by Aristotle who underlined the discursive-rational dimension that must distinguish philosophy. According to him, in the first place, this dimension consists in the most strictly scientific aspect of rationality, *i.e.* the logical-demonstrative one. In fact, he said that we must learn from those who use the language of proof (*Metaphysics* III, 4, 1000^{a} 20–21). At the same time, though, he said that it is impossible to demonstrate everything starting from "true and first" principles by means of deductive logic (according to him, coinciding with syllogistic). In many cases, it is necessary to

4 Carnap speaks of language planning, but because of the crisis of the linguistic turn I think one should also speak of theoretical frameworks.

make use of looser argumentative means, whose premises are only based on the most qualified and well-established opinions (*Topics*, 100[a-b]).

The second characteristic was pointed out by Plato (*Republic*, 537[c]) when he concisely affirmed that anyone capable of a unifying vision is dialectical [*i.e.* a philosopher], and anyone who cannot, is not. The feature of generality is linked to the very reasons that brought to the birth of philosophy as a theoretical-rational speculation. Since ancient times, philosophy has been endowed with a strong, so to say, 'Enlightenment' aspiration. It produced unifying visions of a broad and general character similar to mythological or religious conceptions, but, as a consequence of its gradual detaching from mythology and religion, it was different from them both because its constructions should be scrutinised and justified by the exercise of *logos*.

Although this characteristic is evident to whomever is familiar with philosophical activity, many scientists (also among the most distinguished) have not realised its relevance for clarifying the relations between philosophy and particular sciences. A remarkable exception is once again Einstein who, on just this basis, pointed out a basic difference between the tasks of philosophers and the tasks of scientists. In the same pages where he affirms the importance of a mutual contact between science and epistemology, he adds that this contact must not be made to limit the freedom of scientists. The scientist, under the pressure of his specific goals, can – or rather, must – opportunistically rely upon the epistemological "creed" (Platonism, realism, conventionalism, Kantism, etc.), which is most convenient for his research. On the other hand, the work of the epistemologist does not have its *raison d'être* in the production of results useful to the scientist. Its primary purpose is the research of "a clear system" of a general nature capable of interpreting "the thought-content of science" through its concepts and principles (Einstein 1949: 683 f.).

It may be that Einstein's 'methodological opportunism', which in a sense prefigures Feyerabend's anarchism (shorn of his excesses), served the twofold purpose both of resisting the pressures of those philosophers of science who would have wanted to enrol him under one of their flags, and rebutting the charge of quasi-inconsistency brought against him by advocates of the Copenhagen School. Actually, they had observed that Einstein's rejection of the standard interpretation of quantum formalism violated the same methodological criteria he himself had followed in his development of the theory of relativity. What matters here, though, is that, whatever Einstein's reasons or motives may have been, he indicated a crucial point for challenging some anti-philosophical complaints from scientists.

The third characteristic concerns relations between philosophy and its history. We can find it in Xenophanes and again in Aristotle. Xenophanes (F18)

described the progress of human knowledge as a slow and tiring pathway towards the better; Aristotle 'supplemented' such a statement when he, referring to the necessity of employing not only demonstrative syllogism, but also dialectical, ended by maintaining that philosophical inquiry also must consider the most reliable opinions expressed in its past (*Topics*, 100^{a-b}).

Finally, the fourth characteristic regards the real *raison d'être* of philosophy. Because it desires to know, philosophy is 'set in motion' by a critical and speculative motivation of a theoretical kind, different from non-rational attitudes or attitudes not exclusively based on Sellars' logical space of reasons (mystical intuitions, mythological beliefs, religious creeds). As is well-known, for both Plato (*Theaetetus*, 155^{d}) and Aristotle such a motivation consists in 'wonder'. In the *Metaphysics* (I, 2, 982^{b} 10–25, 983^{a} 10–20) Aristotle says that from the very beginning science was not pursued because of its usefulness, but for itself. Philosophy was born, in fact, from wonder about things surrounding human beings, *i.e.* from the discovery of their condition of ignorance and the desire to replace it with the opposite condition.

The first characteristic concerning rationality is not relevant to my present purposes. Indeed, much of today's philosophy has followed Aristotle's way by embracing the reasons of an open-textured rationality, not exhausted by the demonstrative procedures of logic and mathematics. Just through the adventures and misadventures of analytical philosophy and Neopositivist and Post-Neopositivist philosophy of science, we have become more and more aware that a philosophy *ordine geometrico demonstrata* is impossible. By now, the rationality required by the great majority of philosophers does not coincide with what some scholars have concisely called 'logicality'. As in the sciences, philosophy needs argumentative and explicative procedures which cannot lead to 'coercitive' answers, as Robert Nozick said. Thus, I will limit my attention to the fourth characteristic concerning the origin of philosophy, the second concerning its search for a global vision, and the third concerning its relations with its own history.

4

The thesis of the origin of philosophy from wonder can be connected with what perhaps still is its main motivation. Many centuries after Plato and Aristotle, such a motivation was well caught by Johann Friedrich Herbart (who, directly or indirectly, influenced the birth of analytical philosophy more than is usually supposed). In order to realise this, it suffices to extend the reasons for wondering beyond those natural phenomena and mathematical questions to which

Aristotle referred in the passage mentioned above. Today, to such questions, we can give scientific answers that silence our uneasiness through empirical inquiries or logical-mathematical demonstrations (or both). Wonder, however, can also derive from other problems which in time became subjects of philosophical inquiry and, in the last century and half, also of scientific research. These problems concern the most general aspects of our conceptual and cultural systems of reference; *i.e.* that non-thematised web of concepts and beliefs in which we are immersed. Such a web also reveals surprising traits that generate 'wonder' and prompt that desire to know which undergirds philosophy. Our usual referential apparatuses too are pervaded by many conceptual tensions of several kinds (tangles, quirks, clots) which require clarification and resolution, if possible; they too can present not only ambiguity or vagueness, but also real aporias and contradictions because the concepts involved are not sufficiently well-defined and so, also in important cases, spawn difficulties in their use and application. Any and all of these can shake our certainties and those convictions which often are the coordinates of ordinary life and form its routines, both from a cognitive point of view and (broadly speaking) a practical one (Parrini 1995/1998: 191 f.).

Indeed, all traditional problems of philosophy (its 'eternal problems') are rooted in problematic aspects of our conceptual system of reference: not only the classical topics of metaphysics and ontology, but also the themes discussed by philosophy of knowledge, ethics, aesthetics and, in time, still more specialised disciplines such as philosophy of science, philosophy of religion, philosophy of law and so on. In the light of such a 'constitutive' character of philosophical inquiry, it is possible to consider the current crisis in philosophy from a point of view that offers some advantages. The first advantage is that it allows us to identify the initial task of philosophy: *i. e.* the focusing of objective conceptual anomalies of broad scope. Such anomalies are already present at a common sense level and cannot be (plausibly) denied even by scientists. The second advantage is that it identifies another task of philosophical activity: to settle such perplexing discrepancies or dissonances by carefully developing an improved general perspective; consider the various *-isms*, often mutually opposed, which populate the history of philosophy! The third advantage is that this approach, by bringing the theme of anomalies to the fore, allows us to leave decidedly *open* the very question of what philosophy should do to 'save itself'. In other words, such an approach is neutral and in a sense preliminary in regard to various possible fundamental options such as, for example, between those who support metaphysics and those who oppose it, those who believe that philosophy must produce substantive knowledge and those who think it should limit itself to conceptual and linguistic analyses, those who think that its goal is

to understand the links holding together our complex of concepts and beliefs and those who think it should result in a systematic reworking of our conceptual and cognitive apparatus, those who support an exclusively descriptive metaphysics or epistemology and those who support a revisionary metaphysics or epistemology aiming to construct an improved systematisation of basic notions such as being or truth.

Conceiving philosophy in this way does not preclude its potential contributions to the sciences, nor its paving new ways for science, as Glymour advocates. Nevertheless, the chief and specific goal of philosophy is not that. Such a goal consists in the analysis of the difficulties inherent to our conceptual system in order to clarify them and in case to settle them, for instance by proposing alternative conceptual solutions which aim to better systematise or even to optimally systematise our most fundamental and comprehensive conceptual network(s). The idea that there are no definitive and indisputable answers, but only answers claiming to be the best presently available, now generally accepted in the empirical sciences, is also valid for philosophy. Those anomalies which prompt philosophy also change due to various, more or less radical transformations of historical contexts. Such contexts are the background and the horizon of every activity; philosophy too must take them into consideration. Though many thinkers of the past aimed to construct all-embracing, definitive conceptual systems, the products of philosophy also undergo processes of historical stabilisation or erosion which condition their growth, decline and renewal, just as happens in any intellectual or cultural production.

Analogously, if we evaluate philosophy of science on the basis of whether it can (or not) contribute usefully to the progress of science, we have started off on the wrong foot. In connection with the sciences, too, the primary and specific task of such a discipline lies elsewhere. Its tasks are to scrutinise and clarify the structural notions of scientific discourse, such as explanation, law, or inductive confirmation on up to the very general notion of objective validity. Furthermore, philosophy of science must never lose sight of the possible connection between these notions and general philosophy of knowledge, so as to understand whether and in what sense(s) it is (or is not) possible to grant a cognitive value to scientific statements. Naturally, also the converse holds: philosophy of knowledge must consider what happens within the sciences so as to avoid erroneous, trifling or implausible results which collide with what sciences appear to be able to realise or have already realised.

From these considerations, it seems to me that an answer can emerge to those problems of philosophy which depend on external reasons, and in particular on its relations with the sciences. It being understood that naturalisation programs are fully legitimate and philosophically important, it will be

impossible to claim that science can treat and solve the traditional problems of philosophy by its own means until such programs are found not to be entirely successful. Certainly, they have already produced results that change and enrich the complex of elements philosophy must consider. Their supporters are quite right in seeing elements favouring their expectations in the partial successes so far achieved. Nevertheless, so long as questions remain to which these programs are not able to give exhaustive answers, there will be room for legitimate and autonomous philosophical speculation.

For example, consider a question linked more to physics than the usual problems about consciousness and *qualia* extensively discussed in philosophy of mind. In a series of lectures titled *The Quantum Mechanical Concept of Reality*, Feynman (2015: 200) maintained

> that quantum mechanics is fundamentally correct, and that all this is simply psychological trouble. It is extremely difficult to get used to it because it's so much common sense and common knowledge that gets this idea that when you're not looking at something, it's either this way or that way.

Nevertheless, if an idea so incompatible with common sense, such as that something, when you are not looking at it, is neither this way nor that way, is an 'integral part' of the quantum concept of reality, do we not also need a *Philosophical Concept of Reality*, in other words a philosophical notion of reality which at least helps us understand how it was possible to go so far as conceiving two such different images of the world as the ordinary image and the scientific (QM) one? In recent decades, something of this kind has been attempted for relativistic physics, a theory nearly as disconcerting as quantum theory. Many philosophical reconstructions, both theoretical and historical, of the processes which led to Einstein's theory considerably attenuated the impression of an unbridgeable distance between classical physics and relativistic theory. Such reconstructions showed that both physical theories stand out against a partially shared presuppositional background which at least allows us to understand the origin of common beliefs and their seeming obviousness. Although the task of philosophy is not to answer specific scientific problems, at least in principle it remains an open prospect that, while realising its own task, philosophy can also produce some scientifically useful results.

On the other hand, sometimes scientists expose themselves to philosophical criticism because they take no notice of the objective problems affecting the notions they use, such as, for example, the connected notions of reality and truth. In the case of realism, I would like to mention an interesting remark by Alfred J. Ayer who certainly – as Williamson observed (2014: 17–19) – has not kept up with the developments of analytical philosophy, but knew philosophy very well. According to Ayer, "naïve realism" – today explicitly or implicitly

espoused by many scientists and some philosophers of science – "is not a false theory of perception: it is a refusal to play" the "sort of game" proposed by the sceptic and therefore the choice of not getting "to the root of the matter"; and "if a man will not play he cannot lose. But one is inclined to say that the naïve realist is missing something by refusing to play" (Ayer 1954: 142). For example – we may add – this 'something' Einstein, the scientist, did not lose when he played the 'sceptical' game proposed by Hume, the philosopher, about causality and induction. Moreover, by probing deeply just such matters philosophers contributed to some scientific achievements.[5] Therefore, Feynman's *boutade* (1994: 260) that "scientists are explorers, philosophers are tourists" appears to be unfair in two regards: because philosophers, even when they must take into consideration scientific results, do have their own field of exploration, and because sometimes, while exploring their field, they too have given scientists some opportunities.

5

If some arguments may be suggested to counter the external reasons for the crisis in philosophy, the treacherous and potentially destructive internal reasons remain. As specialisation has affected every aspect of our cultural life, such a problem transcends the specific philosophic field and spares neither the various sciences nor the so-called humanities. In the case of philosophy, though, the situation is particularly serious because, as we said above, it has a natural vocation to develop visions which are as broad as possible and yet, at the same time, able to account for the complex of our knowledge. Therefore, to remain loyal to its original goal, philosophy should be able to reconcile, or at least interrelate, global considerations with local considerations (in their turn, more and more specialised and parcelled out).

To the contrary, in today's uncontained proliferation of philosophical publications, exactly this link between particular and general questions has gradually though considerably weakened. This explains much of today's sense of crisis. Doing philosophy, in fact, is impossible if one adopts the strategy that, according to the legend, was chosen by the last of the Horatii: to separate the three remaining Curiatii in order to face them one by one and win the

5 In this context, an interesting case which I cannot address here concerns the relation between Herbart and Riemann.

challenge.[6] To tell the truth, even in the scientific field things do not work quite that way. Also in science there is no clear alternative between a detailed, piecemeal method and a systematic approach, but, as by now we know very well, science can successfully operate by making provisional and revisable assumptions that can be modified when needed on the basis of the results obtained. Although philosophy too can operate in this way, its margins of action are considerably narrower. Philosophy must always account for the inseparable interdependence among the questions it addresses, whether they are large- or small-scale questions. Thus, from the outset, any pursuit of a global systematic vision is in competition with other possible systematic visions based on different assumptions, presuppositions or principles, yet at the same time it is also conditioned by the different answers that can be given to the specific problems taken into consideration. The process of specialisation and fragmentation of research can be a terrible obstacle to conducting such an undertaking.

Let us consider more closely the case of realism already mentioned. Both philosophy of knowledge and philosophy of science deal with this topic, yet an odd dissociation has occurred due to increasing specialisation: philosophy of knowledge discusses realism in general and stresses the problem of scepticism and the contrapositions among various forms of realism, idealism, empiricism, and pragmatism which emerged in the course of history; philosophy of science, instead, stresses the problem of scientific realism, *i.e.* the existence of non-observable entities posed by our scientific theories, above all by opposing this particular realism to various forms of phenomenalism or constructive empiricism and considering such issues as the best explanation of scientific achievements (or the 'no miracle' argument), and the cumulative character of scientific change.

Since scientists are rightly little interested in scepticism, if at all, it often happens that philosophers of science, following their example, deal with scientific realism starting from the presupposition that the sceptic can be ignored and thus disposed of without any regard to the problem of realism in its generality. Nevertheless, the problem of scientific realism does not only concern the reality of non-observable entities; at least at the beginning, it also concerns the notion of reality *sic et simpliciter* (or *sans phrase*). Thus, such a problem must necessarily intersect with the problem of realism in general, and hence also with the common sense realism questioned not only by scepticism, but also by that phenomenalism, deriving from Berkeley's *esse est percipi*, whose heuristic fruitfulness was stressed

6 The last of the Horatii's strategy was instead proposed by Russell (Russell 1919: 113) when, at the beginning of analytical philosophy, he supported the "*divide and conquer*" method. See also Wick's criticism to Feigl, Carnap and Logical Empiricism (1951: 53).

by Ayer. In fact, he observed that the phenomenalist has the merit to take us "on a philosophical journey while the naïve realist, secure in the possession of his property, is content to stay at home" (Ayer 1956: 83).

As its very name tells us, philosophy of science requires reference both to science and to philosophy. Some kinds of questions cannot be approached without considering discussions within the theory of knowledge, which means, in the case of scientific realism, without taking some position on the problem of realism in general. Global point of view and local point of view must find some sort of correct adaptation and integration. Without the cooperation of philosophy of knowledge, some debates in philosophy of science risk sterility, and *vice versa*, because the ignorance of the methodological characteristics of scientific processes can compromise the possibility of neutralising the sceptical instance. Something of the kind can be also said of several attempts to defend so-called structural realism: this topic too cannot be properly addressed if the answer to the problem of scepticism is disregarded. Overlooking such a problem can produce a multitude of minute, though frustrating disputes which achieve little.

The greater specialisation and fragmentation of research becomes, the greater the possibility that such cases as those mentioned above become more frequent, promoting still more widespread bewilderment. In fact, each scholar will find the number of publications that are hardly useful to her (or to him) increasing in number. For example, think of a philosopher who, following in Quine's footsteps, considers the notion of 'possible world' spurious just like the notion of 'analyticity'. What attitude can he possibly assume towards works which propose solutions to this or that problem by presupposing, or at least using, this very notion? Analogously, which opinion can a Kantian or Hegelian scholar possibly offer authors attempting to neutralise scepticism, without any knowledge of such philosophers' works on this very topic (and indeed, if only because they belong to a philosophical trend which disregards past conceptions with indifference or conceit)?

There is no doubt that the problem of scepticism, if illustrated by seemingly 'extravagant' examples such as the evil genius or the brain in a vat, can arouse scientists' perplexities about and against philosophy. Perhaps some of them also fear that, if taken seriously, the sceptic instance could involve problems of epistemic reliability concerning the very existence of their laboratory instruments or the weight of evidence of experimental results so laboriously and prudently obtained. Actually, Feynman reacted roughly in this way when, referring to the riddle of non-being (or 'Plato's beard'), claimed that he did not want to have anything "to do with philosophers" and was hence "going to investigate" the world "without defining it!" (Feynman 2015: 121, 226; *cf*. 112). Are we entitled to be sure, though, that we can assume this same attitude when,

instead of particular physical problems, more general questions arise concerning such notions as truth, reality, objectivity? Such notions pertain first and foremost to philosophy, yet they also have scientific relevance, at the very least because they are integral to the language used by scientists themselves. Also, in this connection, Einstein's case is illuminating.

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The 'internal' disorientation affecting philosophy is not only strengthened by excess specialisation and professionalisation (together with the necessity to heed the imperative 'publish or perish'), but also by the fact that it is at least problematic whether we can maintain the idea of absolute truth as the goal of philosophical research and point out valid criteria for establishing whether or not we are advancing towards it. The same happens to science but, unlike science, philosophy cannot even appeal to the growing empirical success of its researches and theories. On this point I can only make a couple general suggestions.

First, I would not neglect what Aristotle says about the help philosophy can gain from knowledge of its history. It is not my intention to reopen the question of the relations between philosophy and its history. I do not wish to do so at a methodological level by considering disputes between exegetical history of philosophy and philosophical history of philosophy; even less do I want to do so on the speculative plane at which it was posed by Hegel, who claimed he had freed history of philosophy from every contingent accident by incorporating it into his theoretical system. I only intend to draw attention to Aristotle's wise advice of also taking account of the opinions upheld by the most distinguished philosophers of the past. In the present situation of crisis this can be particularly useful.

Given the great speculative tradition which is behind us and makes us dwarfs on giants' shoulders, a good knowledge of past philosophy can attenuate the paralysing effect of its weight on anyone who aims at enriching it, even if with a modest or incremental contribution. Moreover, against specialisation and the 'pulverisation' of research a careful and philologically accurate study of the conceptions of the past and their reciprocal relations of convergence and divergence – not to be confused with arbitrary 'rational reconstructions' *à la Lakatos* – could identify what positions were real points of reference and show how in time they have developed, internally differentiated and gradually increased in number due to the necessity of considering and accomodating objections, criticisms, pros

and cons. It would be opportune not to forget all that, and not merely for the well-known reason that whoever ignores history is condemned to repeat it.

In a situation where it is difficult to command more than one sector of a single discipline and the level of specialisation often prevents scholars from intervening in many discussions, a history of philosophy which, with the utmost interpretative respect for historical facts and contexts, were able to highlight the theoretical-conceptual articulations of great philosophical constructions and – why not? – the *-isms* around which they gathered, or can be legitimately gathered, could allow the philosopher, analytical philosophers included, to arrange her or his own contributions into frames of reference strongly rooted in the history of our discipline. Better knowledge of the doctrines developed before us could perhaps also favour surmounting the peculiar analytical/continental divide.

Philosophy is often said, sometimes ironically, to have always kept circling round some 'eternal problems' (the True, the Good, the Beautiful, God, Soul, Justice, and so on) which would present themselves again in the same way over the centuries, even though in different historical situations, without having ever achieved shared outcomes. There's no denying this thorn in the side of philosophy. Nevertheless, one cannot deny, either that philosophy, in 'bending over backwards' about those problems, has been able not only to significantly influence other aspects of cultural life, but also to realise a sort of internal progress through which its answers have become more and more articulate, accurate and informed. The kernel of such problems has been continually enriched by both a more and more refined and extensive philosophical work pointing out more and more numerous and subtle facets of them, and the necessity to consider new questions and account also for them. It is possible to apply to philosophy the same non-teleological notion of progress employed by some historians of science and epistemologists in the case of natural sciences. For natural sciences too we cannot speak of a progressive approach to truth; also in their case we can speak of a progress only as a non-teleological passage from less complex and differentiated conceptions and theories to more complex, differentiated and accurate ones.

Perhaps Western thought can still today be considered an uninterrupted gloss to Plato. Nevertheless, in time, such glosses have multiplied and developed in the interweaving of more and more extended and differentiated conceptual relations (as I said above, in an increasing ramification some have seen a sign also of scientific progress). For example, even if in philosophy of knowledge the debate has not been able to exclude the realistic option or the anti-realistic one once and for all, it has pointed out even more subtle distinctions and sub-distinctions by examining the validity of traditional arguments in

support of both positions and has gradually brought them nearer than before. This is so true that today many branches of philosophy can be addressed in an institutionalised form.[7] Of course such works cannot be compared with the handbooks we find in the fields of exact and positive sciences, yet they afford presenting their topics in ways at least partially independent of the author's adopting a preliminary theoretical position. Therefore, philosophical research with a strong, or at least a meaningful, historical basis can help us to contend with the frustrating impression that no progress has been made simply because general and definitive solutions, universally accepted, have not been found.

I find it difficult to foresee whether the 'great problems' which previously gave life to philosophy will continue to present themselves in a relatively distant future or whether philosophy itself will be destined – as some believe – to dry up and become one of the wrecks of a past civilisation or an outdated 'form of life'. What seems unquestionable, though, is that in our present time such 'great problems' seem to be still alive and kicking (sometimes they are even 'compelling'). They have kept questioning us, even if in modified forms, out of the spur of the historical-cultural transformations we have undergone and still undergo. Philosophy, when properly practised, can be a first compass for orienting oneself within a great range of very different questions and consciously venturing views, even if tentative and revisable, supplied with some breadth and comprehensiveness. Consider just one of the most pressing, burning problems of our time: intercultural and interreligious relations. Can we seriously believe that a satisfactory answer to crucial challenges of this kind does not *also* require fulfilling a typically philosophical task, in other words, pursuing sophisticated, general and comprehensive axiological theories, so as to favour the dialogue among different religions, cultures and races?

My second suggestion also contains a wish, even a hope. If it be true today that specialisation impedes fruitful exchange between philosophy and the other disciplines, a well-practised specialisation could contribute to lessen this very problem. Since any particular topic has its own characteristics, it seems impossible to point out a general strategy which can be valid always and everywhere. To suggest what I have in mind, consider a specific case I find to be enlightening. Such a case is linked to a discussion of philosophy of physics, or better a sort of sub-specialisation of this specialisation: philosophy of relativity theory. The scholars involved in this discussion came from several countries and worked (sometimes crosswise) in several fields of research including philosophy

7 That happened above all thanks to analytical philosophers favoured by their strong delimitation of topics, interests and reference texts.

of science, philosophy of knowledge, history of scientific or philosophic thought (or both).

The debate concerned the real characteristics of the theory of relativity. In particular, the problem at issue concerned the validity of geochronometric conventionalism, in other words the possibility of considering some basic notions of geochronometry conventional (or not). Through in-depth analysis of many topics (the absolute character of space and time, the conventionality of geometry and simultaneity), such a discussion led to a subtler and subtler examination of the physical-mathematical aspects both of relativistic physics and the historical material accumulated by various philosophical movements, such as, for example, Neo-Kantism, conventionalism, realism and Logical Empiricism. The starting positions of the discussion were much complicated by all this work, yet they also approached one another due to the necessity of considering some important outcomes, such as David Malament's (1977) well-known theorem on the conventionality of simultaneity in the special theory of relativity.

In this way, starting from typically philosophical concerns, such as the component of conventionality present (or not) in a scientific theory, it was possible to clarify the internal structure of this same theory and to discuss its most general and abstract presuppositions. Quine explained to us that the distinctions concerning the epistemological status of assertions such as a priori/a posteriori, analytic/synthetic and conventional/factual play no role in the operative choices of scientists. This does not mean, however, that such distinctions are unimportant on a philosophical level to address such topics as the cognitive value of theories, and also on a scientific level to point out those 'tacit' presuppositions which can obstruct the progress of science. Einstein himself (1949) affirmed that the theory of relativity developed on the basis not only of new empirical data, but also of critical reflection, favoured by knowledge of some philosophical works (by Hume, Kant, Poincaré, Duhem, Mach) concerning the very presuppositions underlying traditional physics.

At the very least, this case in point shows how it is possible to realise a virtuous circularity among the various specialisations, in other words a successful integration among several specialised fields of research. Undoubtedly, a physicist who wants to study in depth, improve and extend relativity theory can regard (at least to some extent) the literature about Malament's theorem as hardly useful to his purposes. Likewise a philosopher who deals in general with the traditional characterisation of knowledge as 'justified true belief' can (at least to some extent) legitimately think the same. The main point, though, is that if and when both the physicist-physicist and the philosopher-philosopher begin to speak, even if at a lay level, about the cognitive value of scientific theories or

the contraposition between realism and instrumentalism, they are aware of the existence of such results. The correctness and the significance of Malament's theorem can be evaluated by the physicist-physicist who for whatever reason decides to venture his opinion on philosophical questions, by physicists, so to speak, 'permanently' interested in epistemology, and by professional philosophers of physics. For her (his) part, the 'generalist' philosopher, our philosopher-philosopher, could profitably refer to all of them, but especially to philosophers of physics, if ever she (he) felt the need to extend her (his) interests and checks to that extent. In conclusion, the challenge we must now face consists in managing to gain all the benefits that specialisation can give – those benefits which made it a factor of progress and then an unstoppable phenomenon – not only limiting the damages it causes, but even transforming it in a new element of strength.

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