On the (lack of) usefulness of professional philosophy of science[1]

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Abstract: This article investigates the lack of usefulness of professional philosophy of science, i.e. to which extent it fails to reach its objective (definitional) goals. In the first section, I recall what philosophy, and philosophy of science in particular, are supposed to deliver: what are their goals. In a second section, rather than providing an overview of how these goals are met or not, I mainly focus on some problematic cases where they are not met, in other words cases where philosophy of science is not useful. More precisely, I show how the skills necessary to philosophy can hinder consensus, and how an unrealistic picture of science can lead to descriptive and normative irrelevance, both of these situations leading to uselessness. I then argue for the need, for philosophy, to reflect upon its own values, an issue which is illustrated by the two previous ones, as well as by the issue of the choice of research avenues. This again has an impact on usefulness, but potentially a positive one. The conclusion summarises my claims and suggests a further avenue of improvement for philosophy of science : the assessment of the consequences of its practice.

1. Introduction

There are of course many things to criticise regarding professional philosophy, like for any profession. This is especially easy to do, since – and this an admirable thing – philosophy is most certainly the academic discipline, and more generally the professional field, which most criticises itself. This is first due to the fact that, by virtue of being a science (since philosophy can indeed be considered a science – although not only that (see 2.1) – in the large, German sense including the humanities (Hansson 2008a, 2008b)[3]), philosophy constantly revises its presuppositions, methods and outputs, and therefore constantly self-improves. But this is especially so because the speciality of philosophy is famously self-reflection (much more than any other discipline) and self-critique (and even constant self-redefinition).

In this article, I will limit myself to the issue of *usefulness* – and especially the lack thereof – of philosophy of science, and will not talk about other endemic, and much-discussed problems of academic philosophy, common to all academic disciplines, like the marketisation and privatisation of research, the insane competition and glorification of

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[3] Therefore, I am mainly talking here about analytic philosophy (of science). Indeed, (at least some parts or traditions of) continental philosophy can hardly be considered a science in the general sense (although some of its branches can, like its hermeneutic tradition which can be assimilated to history of philosophy), since it does not generally aim at providing the best available knowledge about something, it does not strive for rigour or clarity (as do all other sciences), and it does not necessarily respect the other scientific disciplines (for a convincing definition of science, see Hansson 2017). Rather, it is often based on jargon and more akin to literature (something which can be very valuable, but does not deserve the label "science").

performance, the 'publish or perish' and self-advertising cultures, with all the disastrous consequences it can have on individual researchers (see e.g. Stamenkovic 2020a). These problems perhaps threaten philosophy's *raison d'être* more than any other discipline, given philosophy's fundamental goals and intrinsically critical nature (see 2.1). I will limit myself to (analytic)[4] philosophy of science, and not address the much bigger (analytic) theoretical philosophy (which I suspect contains fields highly susceptible to uselessness), not to speak of philosophy *tout court*.

To answer the question 'what is philosophy of science (used) for?', one of course needs to know: 1) what is philosophy of science; 2) what are its *goals*. The extent to which these goals are fulfilled then illustrates the usefulness of philosophy of science. It is not my intention to engage into heavy definitional work about the notion of usefulness, which may certainly be conceived in a quite complex and multi-dimensional way. For example, the work of an artist may certainly be called useful even if it not useful in any practical sense (as e.g. the work of a nurse or a refuse collector obviously is), because it enables people to have artistic experiences. Let me here just distinguish between the *objective*[5] goals of philosophy of science which are part of its definition (see 2.2), and the *subjective* goals one may pursue by practicing philosophy of science (which may be called personal reasons for doing philosophy), which may also be useful in this subjective sense (because one enjoys doing philosophy for its own sake, finds joy, meaningfulness in its practice). A philosopher of science may write articles which no one reads and which therefore are not objectively useful in the sense that they do not help achieve the objective goals of philosophy of science, yet they can be subjectively useful because she takes pleasure or finds meaning in it. The lack of usefulness of an activity, job and especially profession[6] (which, in contrast with a normal job, is supposed to deliver a public good) is of course problematic both on the objective[7] and subjective levels, because ones does not accomplish what is supposed to be done, and one does not find self-accomplishment in it. In the following, I will limit myself to the objective sense of usefulness. My conception of usefulness is of course not limited to practical usefulness, since the goals of philosophy of science are not only practical (see again 2.2).

The plan of the article is the following. In order to enquire about the usefulness of philosophy of science, I first need to quickly recall what philosophy (§2.1), and philosophy

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[4] In spite of the critique about the distinction between analytic and continental, I still find this distinction helpful and quite accurate with respect to actual practice within philosophy of science. What we may call 'continental' philosophy of science is much more concerned with the historical development of science (following the French conception of *épistémologie*), whereas analytic philosophy of science is more ahistorical and focused on conceptual contemporary issues. This characterisation also holds for the philosophy of the particular sciences.

[5] Because they are attached to the object 'philosophy of science', and not to the subject practicing it.

[6] Professions (such as medical doctors, lawyers, engineers) are usually characterised by specific diplomas, internal ethical standards, and by the fact that its practitioners perform an activity useful to the public (providing public health, ensuring that one's rights are respected, etc.). Philosophy is a profession in this sense, although it is of course not only that, and can be practiced outside any professional framework.

[7] Except if the objective goals are themselves disputable (see the phenomenon of 'bullshit jobs' where the goals are themselves useless or absurd). Fortunately, this is not the case of philosophy, whose goals are clearly worth pursuing.

of science in particular (§2.2), are supposed to deliver: what are their goals. In a second section, rather than providing an overview of how these goals are met or not, I mainly focus on some problematic cases where they are not met, in other words cases where philosophy of science is *not* useful (which does not mean, of course, that philosophy of science is useless in general). More precisely, I show how the skills necessary to philosophy can hinder consensus (§3.1), and how an unrealistic picture of science can lead to descriptive and normative irrelevance (§3.2), both of these situations leading to uselessness. I then argue for the need, for philosophy, to reflect upon its own values (§3.3), an issue which is illustrated by the two previous ones, as well as by the issue of the choice of research avenues. This again has an impact on usefulness, but potentially a positive one. The conclusion (§4) summarises my claims and suggests a further avenue of improvement for philosophy of science : the assessment of the consequences of its practice.

2. What is philosophy of science for?

2.1. Philosophy in a nutshell

The most fundamental goals of science are truth and objectivity (which, in addition to truth, includes a concern about balancedness and fairness in the way an object is studied, Hoyningen-Huene 2023), in addition to explanation, pre- or retro-diction of the facts (for empirical science). Briefly put, (empirical) science gives an account of the facts. Science in general can be defined as the activity which provides us with the most reliable knowledge about its subject matter, and philosophy can be considered a science in the large German sense of this word, which includes not only the natural sciences but all the academic disciplines (Hansson 2008a, 2008b; 2017). However, philosophy, whose goals are to throw light on the age-old 'grand riddles of existence' (Sven Ove Hansson 1994), such as knowledge, virtue, duty or beauty (concepts which delimit its main branches), also has concerns which go beyond those of science, and has a distinctively normative dimension, which goes beyond knowledge. This is why, according to Kitcher (who follows Dewey[8]), philosophy's goal can be divided into two dimensions, a knowledge axis and a value axis. 'Philosophy, so understood, is a synthetic discipline, one reflects on and responds to the state of inquiry, to the state of a variety of human social practices, and to the felt needs of individual people to make sense of the world and their place in it. Philosophers are people whose broad engagement with the condition of their age enables them to facilitate individual reflection and social conversation.' (Kitcher 2011, 254) In other words, philosophy integrates various forms of knowledge in order to help us look for what is valuable.

Philosophy is neither an inferior nor a superior discipline. It is not an 'auxiliary science' (*Hilfswissenschaft*) such as dendrochronology (which is the scientific method of dating tree

[8] '"The problem of restoring integration and cooperation between man's beliefs about the world in which he lives and the values and purposes that should direct his conduct is the deepest problem of modern life. It is the problem of any philosophy that is not isolated from that life.'" quoted in Kitcher (2011, 252).

rings) or numismatics (which are not practiced as a scientific discipline in its own right[9]) (Hansson 1994, 325). Neither is it a 'super-discipline' supervising other disciplines. As Hansson remarks, in many cases treated by the particular sciences, philosophy has little to say. However, philosophy has (the luxury, and at the same time the challenge, of having) an integrating role with respect to other disciplines, as its very design allows it to take them as objects of study (in the same way history or sociology can study other academic disciplines). I believe this integrating role is even essential in trying to answer the above-mentioned 'grand riddles of existence' from this (integrated) variety of perspectives[10].

Philosophical activity can be considered as a craft (*techne*) requiring skills learned through practicing (Hansson 1994), rather than as a purely theoretical, 'top-down' activity where one would learn and then apply theoretical principles, or as an artistic activity where one would be either gifted or not (but even in artistic activities such as literature or painting, I believe practice and training are essential). Among philosophical skills, one finds (Hansson 1994):

- thought-experiments (coming up with imaginary cases), often used in a negative way (to provide counter examples);
- linguistic (and hence conceptual) analysis, and use of definitions;
- idealisation, which simplifies a complex situation by abstracting some of its aspects or distorting it.

I will come back to these skills in §3.1. As mentioned previously, another fundamental feature of philosophy (which can perhaps be called a skill as well) is reflective and critical thinking, to which I will come back in §3.3.

2.2. Philosophy of science

Philosophy of science takes science (in general, or a particular one) as its object, or the relationship between science and the wider society. The above definition of philosophy as a synthetic discipline is particularly applicable to the subfield of philosophy of science, which is a second order activity taking science as its object and critically reflecting upon it. As a subfield of philosophy, philosophy of science of course inherits its main characteristics. It also aims to answer the 'big questions' of philosophy on the basis of the scientific knowledge it takes as object of study[11] (questions which professional scientists often do not have time, or interest, to tackle). In particular, it should not loose sight of these more general questions by delving into technicalities or conceptual virtuosity, if it is to deserve

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[9] Numismatics can certainly be practiced for its own sake, but not as a science, rather as a collection or hobby.
[10] In this sense, philosophy is a synthetic discipline, as both Hansson (1994, 325) and Kitcher (2011, 254) remark, although at different levels. Hansson calls philosophy synthetic with respect to philosophical standpoints (such as structural realism) which it produces itself (hence it produces its own object of study), whereas Kitcher talks of the synthetic character of philosophy assembling and articulating disciplinary standpoints from already existing disciplines (this is the assembling, but not the creative sense, of synthetic).
[11] In the case of philosophy of science, such big questions typically concern knowledge or reality.

the 'philosophy' appellation, as both Kitcher (2011, 259)[12] and Hansson (1994, 325)[13] remark.

But philosophy of science also has its own, specific goals, which basically amount to (descriptively) understand and (normatively) assess the scientific enterprise. Philosophy of science examines the presuppositions, methods, structures, goals and impacts of the sciences (again in the large sense), trying to answer questions such as: what are the relationships between the different sciences? between science and reality? to which extent are scientific claims justified? how do, or should, non-scientific values influence science? and conversely, how does science influence society? etc. In sum, philosophy of science aims to describe, evaluate and help improve: 1) science itself; 2) as well as the relationship between science and society (what is sometimes called 'socially relevant philosophy of science', and I may add, socially useful).

How exactly can these goals make philosophy of science useful? By pursuing them, philosophy of science helps understand the respective domains of validity of the various claims made by the different sciences, and the underlying (theoretical, methodological, etc.) assumptions that have to be fulfilled for these claims to be valid. This is of utmost importance because our modern societies are so much science-based, and because there is a strong specialisation not only in research but also in society at large (with a strong division of labor), so that people tend to be focused on their speciality field and have difficulties stepping back. In this respect, philosophy of science can have both an intra- and an extra-scientific usefulness:

- By providing a theoretical understanding of what science is and how science works, philosophy of science enables (both scientists and philosophers alike) to critically evaluate and improve scientific work.
- Philosophy of science enables members of society to assess the validity and limits of expertise (including their own, Strand 2019), which is very important if it is to be relied upon, and held accountable, in a democratic society. This can be particularly useful in cases of controversies, where different experts (possibly from different scientific disciplines) have diverging points of view.

For philosophy of science to be useful (not only with respect to science or the science-society relationship, but also with respect to the 'big questions'[14]), the answers it comes up

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[12] 'In setting high standards for precision and clarity, the Anglophone philosophy of the past half century can be valuable for Deweyan practitioners—just as finger-tangling etudes can be excellent preparation for aspiring pianists. Yet unless one can show that the more abstract questions do contribute to the solution of problems of more general concern, that they are not simply exercises in virtuosity, they should be seen as preludes to philosophy rather than the substance of it.'

[13] 'The criterion by which to judge the success of philosophy is not its function as an auxiliary discipline but its capability of elucidating world-view issues. Nothing is wrong with the exertion of philosophical skills on applications or on purely technical issues, so long as the ultimate connection with philosophy's central issues is cherished. But if that connection is lost, then these skills are no more philosophical than surgery would be medical if it developed into the artful cutting and sewing of living tissues, with no curative objective whatsoever.'

with must have some *relevance*[15] for science itself, as well as for science stakeholders (decision-makers steering science or relying on its results, the general public, etc.). Philosophy of science is not metaphysics, it should not be practised on its own, in its ivory tower[16], but carefully study its object, science, which is, what is more, a human (institutionalised) activity (in contradistinction to metaphysics or even epistemology), itself embedded within the larger civil society. As Kitcher (2011, 251–52) writes: 'Philosophy might aspire to [...] the framing of conceptions that can assist existing disciplines, or even initiate new modes of inquiry. At important moments in its history it has done just that, but its success has resulted from careful attention to features of the state of knowledge or of the broader human condition. There is no internal dynamic of building on and extending the problem-solutions of a field that can be pursued in abstraction from other inquiries.' Indeed, if philosophy of science is to be a science (in the large sense), then it must respect, and cooperate with, the other sciences (especially, of course, those it takes as objects of study), as all sciences do.

More precisely, by relevance I mean that philosophy of science:

- fairly accurately describes
  - scientific practice (of course, philosophy of science does not have to justify actual scientific practice, but its idealisations must nevertheless be based on to this practice, which presupposes a good knowledge or experience of this practice);
  - the relationship between science and society, i.e. how science influences society (e.g. how political decisions are taken on the basis of scientific knowledge) and conversely how society influences science (e.g. how social values influence the various phases of scientific activity);
- can realistically hope to normatively influence scientific practice or, more generally, the way science and society interact. To do so, its (normative) proposals must be *realistic* (descriptively informed) and *applicable* (i.e. not too far from existing practice). Their *consequences* (including social ones) must also be thoroughly assessed.

A philosophy of science failing to answer such requirements would not, in my opinion, be relevant and therefore could not be useful. Again, one may argue that philosophy of science may be practised for its own sake, that it is an enjoyable and meaningful activity in itself.

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[14] Otherwise, these big questions are no more informed by *science*, and are addressed from the point of view of something else than philosophy of science (perhaps theoretical philosophy or one of its other subfields).

[15] Relevance is a relational concept, always with reference to something else. An activity can be devoid of any relevance (as opposed to irrelevant) if it is an end in itself. I am here concerned with the relevance of philosophy of science with respect to science or the science-society relationship, following my 'objective' conception of usefulness (I have excluded subjective usefulness according to which it may be performed for its own sake).

[16] In fact, I believe no field of philosophy should be practiced so, if it is indeed to answer the 'big questions', but this is not the place to argue for this.

This would allow philosophy of science to escape the concept of relevance altogether[17]. But I take this conception to be incompatible with the very definition of philosophy of science. Therefore philosophy of science *must* be relevant, in order to be useful for science and the science-society relationship. Most philosophers of science are certainly aware of these requirements, and indeed pretend to come up with relevant philosophy of science. But as we will see, this is not always the case. When irrelevant work is presented as relevant, the situation is even more problematic than when there is no pretence to relevance whatsoever, because of the potential detrimental consequences this may have (see §4). In my experience, the lack of relevance seems more widespread in general philosophy of science than in the philosophies of the special sciences, probably because general philosophy of science stands further away from its object(s) of study. When talking about irrelevance, it is also tempting to blame over-specialisation, which threatens all the sciences (including philosophy of science), in the same way natural scientists can, by over-specialising, become dogmatic in their favourite theory or model, or reductionist in their discipline, and/or loose sight of the big picture of science. But, less than any other discipline should philosophy, which aims precisely at fighting dogmatism and reductionism, indulge in such an explanation.

3. How philosophy of science can become useless

3.1. Philosophical skills undermining philosophy

Ironically, the skills needed to practice philosophy mentioned above (conceptual analysis, thought experiments and idealisations) can also hinder consensus in philosophy, which itself hinders progress (because there is no accumulation of a body of philosophical knowledge on which everyone can agree). Lack of consensus makes any useful contribution from philosophy of science impossible, or at least very difficult to achieve, because one simply does not know which claims are correct and should be used for application.

Discussions in philosophy of science often develop through always more refined conceptual distinctions dividing the problem at hand into cases, sub-cases, sub-sub-cases, and so on; and through thought experiments, based on diverging idealisations (each keeping or abstracting different aspects of the problem), providing counter-arguments, counter-counter arguments, etc. This way of proceeding can easily lead to stalemates, as Kitcher (2011, 251) writes: 'Any defense of the idea that philosophy, like particle physics and molecular biology, proceeds by the accumulation of reliable answers to technical questions would have to provide examples of consensus on which larger agreements are built. Yet, as the philosophical questions diminish in size, disagreement and controversy persist, new distinctions are drawn, and yet tinier issues are generated. Decomposition continues downwards, until the interested community becomes too exhausted, too small, or too tired to play the game any further.' This situation is clearly different from classical

[17] Note that I do not deny that philosophy of science can, or should, be considered *partly* as an end in itself. But it is *not only* that: it is also a means to describe, evaluate and improve science and the science-society relationship.

specialisation (which is the fate of any science) because here there is no progress: matters are not settled, consensus is not found, and instead an endless discussion goes on until protagonists loose interest in it and move on to something else.

According to Hansson (1994, 321), idealisation (and meta-idealisation, i.e. the right way to conduct idealisations) has a major responsibility in the lack of consensus in philosophy of science (contrary to idealisation in natural science). This is because '[t]here is always some feature of the real world which it does not take into account, and in general it is possible to devise a counter-example in which that feature plays a decisive role and seemingly invalidates the standpoint (theory)'. This is where the issue of relevance (see §3.2) becomes crucial: while in natural science scientists manage to agree on which features of the object of study are relevant and which are not (and can therefore be neglected), this is generally not the case in philosophy of science. Of course, as Hansson remarks (1994, 322), lack of progress is not always to be deplored, since it enables to capture new aspects of reality. Nevertheless, there should be *some* consensus and progress if philosophy is to deserve to be called science, and to have some usefulness. In fact, according to Hansson 'there has been significant progress within each of several competing traditions that has a relatively unified view of its idealizations' (1994, 322). However, even that claim seems disputable, or the traditions in question are so small that they do not deserve this name. While one should not be surprised that endless conceptual refinement and thought experiments are particularly acute in theoretical philosophy, one could expect that the situation is not so extreme in philosophy of science because the latter is supposed to have a better connection to the empirical world (through science itself), which is supposed to be the ultimate arbiter[18]. But this is not always the case. For example, within general (analytic) philosophy of science, even in the subfield of values in science, there is hardly a consensus to be found on which influence values should have in science (at the normative level), or even do have (at the descriptive level) (see e.g. Elliott and Steel 2017).

Let us take the example, within the subfield of values in science, of the so-called inductive risk argument. According to this argument, in accepting or rejecting a hypothesis, a scientist has to consider the risk of being in error, by either wrongly accepting an actually false hypothesis ('false positive') or wrongly not accepting an actually true hypothesis ('false negative'). Because of these risks, scientists should let non-scientific values (such as social or political values) influence their decisions to accept or reject a claim (more precisely the level of evidence they require), if they are to uphold their responsibility towards society (an argument originally formulated by Rudner 1953). An example is typically to lower their standards of evidence for a claim which may have detrimental non-scientific effects. Now there are at least four counter-arguments to this argument (Elliott 2022, 23). Let us take two of them:

- The objection that scientists can avoid inductive risk by reporting probabilities instead of accepting or rejecting a claim (Jeffrey 1956):

[18] Of course this connection with the empirical is more complex for the normative aspects of philosophy of science, but even normative claims about science must, as argued above, be reasonably connected to how science is actually practiced, on pain of being unrealistic, inapplicable and therefore useless.

    - A response to this objection (counter-counter argument) is to claim that there are still inductive risks associated with these probabilities (Steele 2012).
        - A response to this response (counter-counter-counter argument) is to say that these higher-order probabilities become irrelevant at the fifth order (Betz 2017).
            - I am pretty sure a response (counter*4 argument) will be found in due time to this counter-counter-counter argument, on the basis of some conceptual thought-experiment (for example that these higher order probabilities are never or rarely used, or impossible or very difficult to compute) or perhaps empirical counter-examples. And another one after that (e.g. claiming that one does not need to reach the fifth order). Etc.
- The objection that scientists can avoid inductive risk by 'hedging' their claims (e.g. by specifying the uncertainty associated with the claim, or all the value-laden decisions made with respect to the claim) (Betz 2013).
    - A response to this objection (counter-counter argument) is to say that hedged claims are not sufficiently precise for the needs of policy-makers (Elliott 2022, 27), or that it is unrealistic to expect to keep track of all the value-laden decisions and then transmit them to policy-makers (who would be overwhelmed) (Havstad and Brown 2017).
        - A response to this response is to offer, on the contrary, counter-examples of sufficiently precise hedged claims (Stamenkovic 2023).
            - Again, I am sure that a counter*4 argument or example will follow soon (for example, that these counter-examples are not representative). And yet another one. Etc.

Therefore, even in a highly specialised sub-sub-field of philosophy of science, consensus is not to be found. I fear that there will never be a consensus on how values should influence science (regarding the acceptance / rejection of hypotheses), in the same way there has never been an agreement on how to distinguish science from non-science (see Resnik and Elliott 2023). That does not mean, of course, that I do not have my own position for both of these debates (following Hansson (2018)), which I take to be settled. But that is of little help: as long as the philosophical community will not show a consensus to the outside world, its production will probably not be relied upon and used.

3.2. Lack of descriptive and normative relevance

As Stamenkovic (2023, §4) suggests, there are arguments in the philosophy of science literature based on a misconception of how science is actually practiced, and how it is actually used in society. Several authors advocating the influence of values in science

either: claim (on the descriptive level) that non-scientific values are inevitable for doing science, that it is basically impossible to do science without them; or (at the normative level) that values should take precedence over evidence in some cases. An example of the first claim is given by Douglas (2017, 83–84), who claims that 'none of these jobs [performed by epistemic values] can tell you whether the evidence you have is *strong enough* to make a claim at a particular point in time. [...] the "internal" or "epistemic" virtues of science are not designed to assist with the judgment of whether the evidence is sufficient. They can assist with assessments of whether the theory or claim at issue is minimally adequate, with how strong the evidential support is, and with whether further research is likely to be productive. The question of how strong the evidence needs to be remains unanswered by such considerations.' An example of the second claim is given by Brown (2013, 2017), who has disputed the 'lexical priority of evidence over values', advocating 'an account [which] would allow that evidence may be rejected because of lack of fit with a favored hypothesis and compelling value judgements, but only so long as one is still able to effectively solve the problem of inquiry' (2013, 838). One thing seems clear: accepting a claim is not fully, algorithmically rule-governed (as is, probably, the vast majority of scientific activities[19]), and some value judgements are inevitable. This does not mean, however, these such values are *non-scientific*. It seems doubtful that not only a mathematician checking his proof, or a particle physicist setting his statistical significance level, but also a molecular biologist exploring the structure of an enzyme, a palaeontologist studying a fossil or even a toxicologist studying a structure-activity relationship of a molecule, have recourse to non-scientific values when making their claims. *Contra* Douglas, I rather think that scientific practice would be practically *impossible* if scientists had to take non-scientific values into account each time they make a claim – and not that they make such claims possible in the first place, as Douglas seems to think. It seems more plausible that in many (and probably most) cases, especially – but not only – for disciplines which don't have social implications, scientists follow their own, intra-scientific and intra-disciplinary standards of evidence (much in the spirit of Levi's (1960) 'canons of inference'), governed by intra-scientific values, the first of which is probably, and simply, error avoidance (i.e. trying to assert as few false statements as possible, Hansson 2020b). Brown's position seems even more extreme, and one wonders what the reaction of a scientist would be if she was told to disregard evidence in favour of values. Such claims, which are apparently aimed at all scientific fields, do not seem to correspond to actual scientific practice and in any case must be *empirically* assessed[20]. This also holds for Brown's normative claim, in the sense that it must be realistic and not too far from scientific practice, on pain of being irrelevant. Such puzzling claims can lead to descriptive

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[19] One can perhaps think of the calibration of instruments, or performing standardised experimental tests, as counter-examples.

[20] It would be interesting to try to assess empirically, and as systematically as possible: 1) the scientific fields where non-scientific values are irrelevant; 2) whether even in fields which are *prima facie* relevant for non-scientific decisions, there are many claims for which non-scientific values are irrelevant; 3) whether even for claims where non-scientific values are relevant, the latter do not make any difference with respect to the acceptance of claims. But it would probably be impossible to perform a truly systematic review of these issues (which would require to screen the entire scientific corpus), and one should probably be content with representative examples. I thank Sven Ove Hansson for suggesting these research avenues.

and normative irrelevance, which hinders any usefulness from philosophy of science: if the claims in philosophy of science are not based on a correct assessment of how science works, they are probably not reliable and should not be used.

The problem of irrelevance is in fact illustrated by philosophical research itself. Let us apply the argument of inductive risk mentioned above to publication practice in philosophy (not just the subfield of values in science). The acceptance rate of philosophy journals is notoriously low (apparently less than 10%[21]). Now according to the argument of inductive risk, this very low acceptance rate would be justified only if false positives were socially detrimental, which seems most unlikely[22]. Indeed, it seems very unlikely that philosophical claims have such a big impact on society that it justifies such stringent standards. At the same time, and quite ironically, for the fields whose false positives *are* socially detrimental, acceptance rates are much higher (around 30% for education and 50% for health!). Of course that does not mean that the latter, high acceptance rates are the right way to go, but 10% is below any of the surveyed fields by Sugimoto et al. (2013), and seems exceedingly low. In any case the social impact of philosophical research is certainly much lower than the impact of the empirical sciences, such as medical science, typically. Of course such a stringent editorial practice can have a positive impact on philosophical research, in the sense that authors will polish their papers and publish their arguments only if they are extremely well justified and argued for. But it will also decrease the total number of accepted articles, some of which are certainly worth publishing (as indeed many of us have experienced when being forced to reject a valuable paper because it has been negatively reviewed), hence decreasing the usefulness of philosophy[23]. In any case, there does not appear to be a reason why philosophy should have such low acceptance rates in comparison to other disciplines, quite the contrary. What this editorial practice rather shows is that philosophy has developed on its own, disconnected from its applications and usefulness. More than any discipline probably, philosophy is able to grow in 'soilless cultivation'.

3.3. How values influence philosophy of science (including the subfield of values in science)

Both claims in the previous section also provide an illustration of the fact that philosophy of science (including especially the subfield of values in science) should reflect upon its own values. The first claim about descriptive and normative irrelevance illustrates how some proponents of what might be called the 'value-laden turn' in philosophy of science do

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[21] https://dailynous.com/2018/05/24/insanely-low-acceptance-rates-philosophy-journals/.

[22] Note that I am here talking about *professional (i.e. academic)* philosophy which is the one obeying to this 10% standard. There are of course public intellectuals calling themselves philosophers who may perhaps have a big impact on society (let me mention, in France, Alain Finkielkraut or Michel Onfray), but they do not belong to academia and do not respect its very stringent standards (and, ironically enough, do not produce valuable work which is nevertheless published, but this is another problem).

[23] To be rigorously assessed, this claim would have to balance the quality vs. the quantity of published papers: raising the bar leads to better and fewer papers, lowering it to less quality and more papers. But the bar cannot be raised indefinitely, and an optimum has to be found. This big issue would be the subject of an article in itself (at least), but *prima facie* the acceptance rates of philosophy seem very (too) low.

not consider sufficiently seriously the reasons scientists have to make their claims. In other words, while rightfully promoting the social responsibility of science, they do not take sufficiently seriously scientific truth and objectivity, somewhat in the same way Science and Technology Studies authors (where some of these philosophical authors indeed find inspiration) have done, and have been criticised for (for example with respect to how social constructionism promotes climate science denialism, see Hansson 2020a), although in less radical way. I therefore believe it would be helpful for philosophy of science to reflect upon this 'value-laden' trend[24], in both senses of 'value-laden': as a trend asserting the influence of values in science (as its descriptive and/or normative claim); and as a trend being itself value-laden (as its motivation, which is, like any motivation, value-driven, and promotes specific research avenues). One may summarise this double influence by saying that such authors have a *research agenda* (with respect to the goals they pursue and the claims they want to put forward, typically the good social impact of science), where certain values are explicitly promoted (see e.g. Kourany 2010). This trend can also be qualified as relativistic, in the sense that scientific facts are more or less established relatively to the context (and hence values) of interest (see again Brown 2017). Although this kind of philosophical relativism is different from, much more rigorous and less extreme than the one advocated by some authors in science studies (such as Latour and Woolgar 1979/1986; Latour 1984; for a critique, see Stamenkovic 2020b), nevertheless it shares (to a lesser extent) the same approach to put into question conceptual distinctions such as the one between facts and values, scientific and non-scientific values (e.g. Longino 1996, Rooney 2017), or science (descriptively establishing the facts) and politics (normatively deciding what to do with these facts) (Douglas 2009, Kourany 2010).

The second claim of §3.2 is a nice illustration of the fact that philosophy (including philosophy of science) does not apply the argument of inductive risk to itself, and does not take into account the consequences of its claims on society. It is again an illustration of the fact that philosophy of science (including especially the subfield of values in science) should engage into a self-reflection on how its own values influence its practice, not only as it already does, but by fully, and reflectively applying the conceptual tools (such as the argument from inductive risk) it has developed for dealing with such situations. Whatever values may explain the very high standards of publication in philosophy (either scientific values related for example to extremely high standards of knowledge which have developed on their own, or non-scientific values related for example to the lack of jobs and the generalised competition), philosophy must reflect upon, and criticise them.

Another, well-known aspect where values have an influence in science, and which is decisive in determining the potential usefulness of any research, is the choice of research avenues. Indeed, traditional arguments (Bush 1945) for the freedom to choose research avenues on the grounds of creativity or better response to societal needs have been challenged. There are now strong arguments against letting research avenues being determined on purely intra-scientific grounds, without consideration for the wider society in which science is embedded. Such arguments are based on non-scientific (e.g. social or democratic) grounds (basically, that society should have its say on what the science it

[24] The values here are non-scientific, such as social welfare or democracy.

finances searches for, see e.g. Kitcher 2001, Douglas 2009, Kourany 2010), but also on scientific grounds (related to the creativity of science, which is not necessary higher when research avenues are fully freely defined), and even on the usefulness of scientific results for society (claiming that full freedom to choose one's research avenue does not necessarily mean more creativity or usefulness for society, Ruphy 2017). This aspect of the choice of research avenues obviously applies to philosophy, where both scientific (epistemic interests, current state of the literature) and non-scientific (non-epistemic interests, career considerations, etc.) values are at play. Ironically, while philosophy has developed an elaborate reflection on the choice of *other disciplines'* research avenues (see e.g. Kitcher 2001), it has not, to my knowledge, applied this reflection to *itself* (I am talking here specifically about the debate on values in science). This is a pity because philosophy is probably the discipline where freedom to choose one's research avenues is the highest.

Let us take the example of climate change, which represents a vital threat for humanity and is obviously linked to non-scientific values (such as well-being and health, justice, the value we attribute to other species, or indeed our own survival as a species). In our current climate predicament, one could rightfully argue that research avenues and resources should be in priority dedicated to fighting and adapting to global warming. One could apply this reasoning to the choice of research avenues within philosophy, but also to philosophy as a whole, and question the relevance and usefulness, and even the ethical justification for, practising philosophy itself (at least some fields within it, say metaphysics) in a time of crisis, where any research should be carefully weighted for and potentially redirected[25]. One could prioritise some research avenues within specific areas of philosophy deemed useful in this respect (for example in ethics, political philosophy or philosophy of science), and, on the contrary, deprioritise others (such as, say, metaphysics or philosophy of language). Therefore, for each research avenue and each research field, a trade-off would ideally have to be made (although it would probably be impossible to perform rigorously) between what such research costs vs. what such research brings from an environmental point of view. Note that in the case of philosophy, the environmental impact of a given research avenue is essentially linked to the human, and hence financial, resources allocated to it: namely the job position, which could potentially be allocated to other research endeavours, better helping to fight climate change. It is not (or only negligibly) linked to the *way* research is conducted, for example how CO2 intensive it is[26]. To conclude, although the

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[25] Of course, one could also argue for the contrary, and maintain that philosophy does not have to be useful whatsoever for fighting even such a vital threat as climate change (or any more or less urgent threat, such as the trespassing of planetary boundaries, the fight for democracy, for truth in the public space, etc.), or that in general it does not have to take into account any extra-academic consideration, that it should remain in its ivory tower. As the preceding has made clear, this is not the conception I defend here, which I take to be incompatible with the very definition of philosophy.

[26] Among all disciplines, philosophy probably has the lowest environmental impact (together with pure mathematics), since it is essentially a purely conceptual, *a priori* discipline and does not require any experiments (except for few areas of 'empirical philosophy' related to some empirical activity like gathering data from surveys or interviews, but again it is probably much lower than in other empirical disciplines which perform lab experiments and require equipment). With respect to how research is conducted, the most important environmental impact is probably linked to academic traveling (which, when it is linked to gathering empirical data, can then make the latter problematic from an environmental point of view).

debate on values in science is very lively in the philosophy of science community, it has not, to my knowledge, been reflectively applied to this community itself, in particular with respect to the choice and relevance of this research avenue (namely, values in science) with respect to important extra-academic issues such as climate change.

4. Conclusion

In this article I have shown how philosophy of science (and in particular its subfield of values in science) can, and sometimes does, become useless. In my first section, I have explained what it means for philosophy of science to be useful: I have briefly proposed some definitions of philosophy and philosophy of science, insisting on their goals which must be met for them to be useful. In a second section, I have shown how philosophy of science can become useless, by misuse of philosophical skills, lack of descriptive and normative relevance, and failure to self-reflect upon how values influence its own practice. It is a pity that great intellectual energy is sometimes devoted by very brilliant people to activities whose usefulness can be questioned. Their resources should be put to a better use.

As a final remark, I have not addressed here an even worse problem than uselessness (i.e. the absence of a positive effect), namely the (potentially) detrimental consequences of philosophical practice (i.e. the presence of a negative effect), especially the extra-scientific ones. Note that I am talking about the detrimental consequences of *(professional) philosophy itself* (in the same way I was talking previously on the choice of research avenues in professional philosophy), not of science, on which philosophy has of course much reflected. Note also that this issue is larger than the choice of research questions (which falls under it), since it also addresses the consequences of what results are published once a research avenue has been chosen.

In this respect, philosophy of science can potentially have disastrous effects, since it deals with the critical issue of how science is received and relied upon in society (see again Hansson 2020a). This is especially so in the case of scientific controversies with social impact (such as in medical science), where philosophers should take great care before making recommendations (Stamenkovic 2023). But this discussion must be left for another occasion.

References

Betz, Gregor. 2013. "In Defence of the Value Free Ideal." *European Journal for Philosophy of Science* 3 (2): 207–20.

———. 2017. "Why the Argument from Inductive Risk Doesn't Justify Incorporating Non-Epistemic Values in Scientific Reasoning." In *Current Controversies in Values and Science*, 94–110. Routledge.

Brown, Matthew J. 2013. "Values in Science Beyond Underdetermination and Inductive Risk." *Philosophy of Science* 80 (5): 829–39. https://www.jstor.org/stable/10.1086/673720.

———. 2017. "Values in Science: Against Epistemic Priority." In *Current Controversies in Values and Science*, edited by Kevin Elliott and Daniel Steel, 64–78. Routledge.

Bush, Vanevar. 1945. "The Endless Frontier." *National Science Foundation–EUA. Washington*.

Douglas, Heather. 2009. *Science, Policy, and the Value-Free Ideal*. University of Pittsburgh Press.

———. 2017. "Why Inductive Risk Requires Values in Science." In *Current Controversies in Values and Science*, 81–93. Routledge.

Elliott, Kevin C. 2022. *Values in Science*. Elements in the Philosophy of Science. Cambridge University Press. https://doi.org/10.1017/9781009052597.

Elliott, Kevin, and Daniel Steel. 2017. *Current Controversies in Values and Science*. Routledge.

Hansson, S. O. 2008a. "Is Philosophy Science?" *Theoria* 69 (3): 153–56.

———. 2008b. "Philosophy and Other Disciplines." *Metaphilosophy* 39 (4-5): 472–83.

Hansson, Sven Ove. 1994. "Philosophical Craftsmanship." *Metaphilosophy* 25 (4): 316–25.

———. 2017. "Science and Pseudo-Science." In *The Stanford Encyclopedia of Philosophy*, edited by Edward N. Zalta, Summer 2017. https://plato.stanford.edu/archives/sum2017/entries/pseudo-science/; Metaphysics Research Lab, Stanford University.

———. 2018. "Politique Du Risque Et Intégrité de La Science: 6es Conférences Pierre Duhem." In *Risque Et Expertise*, edited by Alexandre Guay, 57–86. Presses universitaires de Franche-Comté.

———. 2020a. "Social Constructionism and Climate Science Denial." *European Journal for Philosophy of Science* 10 (3): 1–27. https://doi.org/https://doi.org/10.1007/s13194-020-00305-w.

———. 2020b. “Values in Pharmacology.” In *Uncertainty in Pharmacology*, edited by Adam LaCaze and Barbara Osimani, 375–96. Springer. https://doi.org/https://doi.org/10.1007/978-3-030-29179-2_16.

Havstad, Joyce C, and Matthew J Brown. 2017. “Inductive Risk, Deferred Decisions, and Climate Science Advising.” *Exploring Inductive Risk: Case Studies of Values in Science*, 101–23.

Hoyningen-Huene, Paul, "Objectivity, value-free science, and inductive risk", *European Journal for Philosophy of Science* 13, 1 (2023), pp. 14.

Jeffrey, Richard C. 1956. “Valuation and Acceptance of Scientific Hypotheses.” *Philosophy of Science* 23 (3): 237–46. https://doi.org/10.1086/287489.

Kitcher, Philip. 2001. *Science, Truth, and Democracy*. Oxford University Press.

———. 2011. “Philosophy Inside Out.” *Metaphilosophy* 42 (3): 248–60. https://doi.org/https://doi.org/10.1111/j.1467-9973.2011.01684.x.

Kourany, Janet A. 2010. *Philosophy of Science After Feminism*. Oxford University Press. https://doi.org/https://doi.org/10.1093/acprof:oso/9780199732623.001.0001.

Latour, Bruno. 1984. *Les Microbes. Guerre Et Paix.* Paris: Métailié.

Latour, Bruno, and John Woolgar. 1979/1986. *Laboratory Life. The Social Construction of Scientific Facts*. Princeton University Press.

Levi, Isaac. 1960. “Must the Scientist Make Value Judgments?” *The Journal of Philosophy* 57 (11): 345–57. https://doi.org/https://doi.org/10.2307/2023504.

Longino, Helen E. 1996. “Cognitive and Non-Cognitive Values in Science: Rethinking the Dichotomy.” In *Feminism, Science, and the Philosophy of Science*, edited by L. H. Nelson and J. Nelson, 39–58. Dordrecht: Springer.

Resnik, David B., and Kevin C. Elliott. 2023. “Science, Values, and the New Demarcation Problem.” *Journal for General Philosophy of Science*. https://doi.org/10.1007/s10838-022-09633-2.

Rooney, Phyllis. 2017. “The Borderlands Between Epistemic and Non-Epistemic Values.” In *Current Controversies in Values and Science*, edited by Kevin Elliott and Daniel Steel, 31–45. Routledge.

Rudner, Richard. 1953. “The Scientist Qua Scientist Makes Value Judgments.” *Philosophy of Science* 20 (1): 1–6. https://doi.org/10.1086/287231.

Ruphy, Stéphanie. 2017. “La Science Doit-Elle être Autonome Pour être Utile.” *Science, Philosophie, Société, PUFC*, 61–79.

Stamenkovic, Philippe. 2020a. “On Precarity in Academia: Competition, Hypocrisy and Humiliation.” *Inscriptions* 3 (2): article 66.

———. 2020b. “The Contradictions and Dangers of Bruno Latour’s Conception of Climate Science.” *Disputatio. Philosophical Research Bulletin* 9 (3): 00–00. https://doi.org/http://doi.org/10.5281/zenodo.3567196.

———. 2023. “Straightening the ‘Value-Laden Turn’: Minimising the Influence of Values in Science.”

Steele, Katie. 2012. “The Scientist Qua Policy Advisor Makes Value Judgments.” *Philosophy of Science* 79 (5): 893–904.

Strand, Roger, "Vitenskapsteori: What, Why, and How?", in *Social Philosophy of Science for the Social Sciences* (Springer, 2019), pp. 31--43.

Sugimoto, Cassidy R., Vincent Larivière, Chaoqun Ni, and Blaise Cronin. 2013. “Journal Acceptance Rates: A Cross-Disciplinary Analysis of Variability and Relationships with Journal Measures.” *Journal of Informetrics* 7 (4): 897–906. https://doi.org/https://doi.org/10.1016/j.joi.2013.08.007.