

The Supposed Spectre of Scientism

Amanda Bryant

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Abstract: This chapter considers the assumptions required to make scientisms of different forms genuinely threatening to philosophers, where a genuine threat would consist of a concrete risk to their statuses, the value of their teaching and research, their livelihoods, their preferred research methods, or the health of the discipline. I will find that strong and weak forms of scientism alike require substantive assumptions to make them threatening in those regards. In particular, they require sometimes heavy-handed circumscriptions of philosophy and science, as well as their epistemic credentials and achievements, methods, and subject matters. They also require restrictive pronouncements upon the epistemic and non-epistemic goods that are valuable, worth promoting in academic contexts, and relevant to disciplinary health. My aim in this chapter will not to be defeat those assumptions but rather to make them explicit and to emphasize their frequent strength and contentiousness.

1. Images of Scientism

There is a kind of arrogantly dismissive attitude toward non-scientific fields of inquiry and ways of knowing — often associated with publicly prominent physicists and so-called new atheists — which sometimes gets called ‘scientism’ (the kind described by e.g. Pigliucci 2018). There is also a kind of admiringly respectful attitude toward science, paired with an optimism regarding its import for traditionally non-scientific questions — often associated with avowedly naturalistic philosophers — which sometimes gets called ‘scientism’ (the kind espoused by e.g. Ladyman et al. 2007). Some philosophers pick fights about what the term *really* means or what

really falls under its rubric. Yet there is no use warring over the label and its essential connotations, since terms of art such as this can mean what we want them to.¹

However, the history of a term can make us less terminologically flexible than we might be ideally. Defenders of scientism face an uphill battle to convince others of the palatability of at least some scientisms. Part of the difficulty stems from the history of the label, in which the term was inherently pejorative (Dupré 1993, Haack 2003, Sorell 1991). Notwithstanding the term's well-known reappropriation by naturalists such as Rosenberg (2011) and Ladyman et al. (2007), defenders of scientism are apparently still working to unsaddle the term of its baggage.

For instance, Ladyman (2018) proposes to give scientism *a humane face*, which suggests that its usual face is generally thought to be inhumane. Buckwater and Turri (2018) defend a *moderate* form of scientism, which suggests that the usual form is generally thought to be immoderate. Mizrahi (2017) asks *what's so bad* about scientism and defends what he calls *weak scientism*, which suggests that scientism is generally thought to be both bad and unduly strong. These authors think that scientism need not be inherently vicious or threatening, but rather that philosophy can benefit from adopting some appropriately temperate form of it. If these defences of 'nice' scientism are any indication, defenders of scientism are working to overcome a rather mean-looking image.

So there is a clear sociological narrative according to which scientism is generally regarded by philosophers as (echoing Haack 2017, 41) a spectre, to be regarded with fear or hostility. Mizrahi (2019) even sets out to empirically test possible explanations as to why many philosophers find scientism threatening. But even if some philosophers are threatened by it — as evidenced by the occasional “ferociousness” with which they respond to it (Mizrahi 2019, 1) — there is still a question as to the prevalence of the sense of threat. In a well-known study, Bourget and Chalmers showed that “philosophers have substantially inaccurate sociological beliefs about the views of their peers” (2014, 489). This shows the importance of substantiating our

¹ By this, I mean that we can stipulate meanings for terms of art. There are of course reasons why certain choices might be impractical or strange. For instance, it would be impractical to define 'scientism' in a way that had nothing to do with how anyone else uses it. Moreover, it would be strange to define it in a way that had nothing to do with science. But even if it would be impractical or strange for us to do these things, we still could.

sociological narratives. We ought to empirically confirm that the running sociological narrative represents philosophical sentiment.

However, without introducing some operative definition of scientism, the question of *how philosophers really feel about scientism* is too ambiguous to constitute a well-defined research question. As we have seen, in the broadest strokes, there are at least two competing images of scientism: the mean one and the comparatively nice one. To complicate matters further, attempts to generate a specific and contentful formulation of scientism have produced vastly many substantively distinct theses, both of the inherently negative variety (Haack 2003, 2012, 2017; Pigliucci 2010; Sorell 1991) and of non-negative varieties (Buckwalter and Turri 2018, Ladyman et al. 2007, Mizrahi 2017, and Rosenberg 2011). This has, in turn, resulted in the need to catalog, compare, and taxonomize the various formulations (Hietanen et al. 2020, Peels 2018, Stenmark 2018). So at this complicated juncture in the dialectic, it is clear that there is no one thing, *scientism*, about which we can gauge overall philosophical sentiment. Rather, there are a range of scientisms, our attitudes toward which require much more directed and detailed sociological investigation. So what we need in order to test our sociological narrative is unambiguous hypotheses; then, since such hypotheses would concern conscious individual feelings, the natural way to proceed (as de Ridder 2019 [and possibly this volume] and Wilson 2019 [and possibly this volume] point out) would be via survey and interview.

Setting aside the sociological question of how philosophers actually feel about various scientisms, I propose to consider whether they *should* feel threatened by any forms of scientism, and if so, which ones and why. For the purposes of this chapter, for philosophers to ‘feel threatened’ by a form of scientism is for them to believe that its truth — or perceived truth — would harm, disrupt, or undermine their professional standing or certain other things they value. *Inter alia*, philosophers feeling threatened by scientism could involve their believing it poses some concrete risk to:

- their prestige or status
- the value of their teaching and research
- their livelihood
- the fruitfulness or continuation of their preferred research methods

- the health of the discipline

Given this characterization of what it means for philosophers to ‘feel threatened’ by a form of scientism, it follows that for it to be the case they *should* feel so threatened would be for them to be *correct* in their belief that the truth or perceived truth of the relevant form of scientism could potentially harm, disrupt, or undermine the sorts of things I have listed. What I am interested in is what sorts of epistemological, methodological, and value-theoretic assumptions would warrant such a belief. So, ultimately, my question is: which, if any, forms of scientism are threatening, on which assumptions?

Section 2 will distinguish a number of scientisms. Section 3 will spell out the sorts of assumptions required to make strong scientisms — which are the most *prima facie* threatening scientisms — plausibly true and plausibly threatening to philosophers in the ways I have spelled out. Section 4 will do the same for Mizrahi’s ‘weak scientism’, and Section 5 will conclude.

2. Scientisms

To answer the question of which forms of scientism are threatening under which assumptions, I must first distinguish a variety of scientisms. Space limitations allow me to consider just a smattering of available positions, but I hope it to be adequately representative. For a fuller taxonomy of scientisms and their logical relations to one another, see Peels (2018).

First, consider the inherently negative variety, which builds in elements such as unwarranted, exaggerated, excessive, or uncritical attitudes. For instance, take Susan Haack’s characterization of scientism as “inappropriate, uncritical deference to the sciences” (2017, 41). The question of whether this sort of scientism could potentially harm, disrupt, or undermine philosophy is not particularly interesting. In fact, the answer is virtually trivial. That’s because it doesn’t take a particularly strong or controversial view of what’s healthy or unhealthy for the discipline to think that *any* unwarranted, exaggerated, excessive, or uncritical philosophical attitudes would, if sufficiently prevalent, be bad for it. Unwarranted, exaggerated, and excessive attitudes are inherently inappropriate, so their prevalence in philosophy would be intrinsically bad. At any rate, insofar as I see questions regarding the advisability, worth, and epistemic

virtuousness or viciousness (Kidd 2018) of scientism as both live and interesting, I believe we should prefer neutral definitions.^{2,3} With that said, I set the inherently negative definitions aside.

As far as neutral definitions go, the category is remarkably heterogenous. Consider the following theses, in which slashes indicate alternate formulations, and which vary in substance (epistemological, methodological, and disciplinary) and strength (strong, moderate, and weak):

Strong Epistemological Scientism: Science is the *only/only good* source of certain epistemic goods (knowledge, justified belief, evidence...).

Moderate Epistemological Scientism: Science is the *best* source of certain epistemic goods.

Weak Epistemological Scientism: Science is a *comparatively excellent* source of certain epistemic goods.

Strong Methodological Scientism: Given their epistemic aims, inquirers/philosophers should *only* use the methods of science.

Moderate Methodological Scientism: Given their epistemic aims, inquirers/philosophers should *primarily* use the methods of science.

Weak Methodological Scientism: Given their epistemic aims, inquirers/philosophers should *to some extent* use the methods of science.

Strong Disciplinary Scientism: Science will/should subsume/replace *all* other forms of inquiry.

² Though I acknowledge that this *ponens* could well be *tollens*-ed.

³ Similarly, Mizrahi argues that our definition shouldn't be *persuasive* in the sense of being inherently disapproving (2017, 352).

Moderate Disciplinary Scientism: Science will/should subsume/replace *most* other forms of inquiry.

Weak Disciplinary Scientism: Science will/should subsume/replace *some* other forms of inquiry.

The list is neither exhaustive nor authoritative. Other variations are certainly possible. For instance, methodological naturalism might be formulated non-prescriptively, as a value-theoretic claim stating that scientific methods are superior to all others.⁴ Of course, such a claim might be thought to lead naturally to the prescriptive claim that inquirers *should* use those methods.

What I have called ‘disciplinary’ scientism can be interpreted as a form of ‘scientific imperialism’, according to which the boundaries of the discipline or institution of science will or should extend outward to enfold erstwhile independent disciplines such as philosophy. Such scientisms claim neither that science has any special role in securing epistemic goods (epistemological scientism), nor that philosophy should use scientific methods (methodological scientism), but rather that philosophy will or should become part of science or be eliminated in its favour, depending on the formulation. The precise content of the thesis needs to be specified. For instance, one possible disciplinary thesis could prescribe that faculties of arts be disbanded and that departments such as philosophy be enfolded under faculties of science. An alternate thesis could prescribe that philosophers be fired and their jobs given to scientists. There is a lot of room for variation.

Epistemological, methodological, and disciplinary varieties of scientism should not be conflated. Epistemological varieties concern the capacity of science to secure epistemic goods; methodological varieties concern the integration of scientific methods into philosophy or other areas of inquiry; disciplinary varieties concern disciplinary boundaries. These different sorts of

⁴ In characterizing methodological scientism prescriptively, I have followed Peels, according to whom “on methodological scientism, all or some academic disciplines different from the natural sciences should adopt the methods of the natural sciences in order to solve the problems of those fields” (2018, 49).

thesis might interrelate in interesting ways. For instance, the idea that science has a monopoly on knowledge (strong epistemological scientism) could motivate the claim that science should replace all other forms of inquiry (strong disciplinary scientism). Notwithstanding such possible connections, the distinctions among these scientisms should be kept clearly in mind.

Whether all of the above theses count as bonafide forms of scientism is an open question. However, as I indicated at the outset, I take it to be a merely terminological one, to which there is no definitive or interesting answer. Whether all candidate formulations of scientism could be unified under a single overarching thesis is another open question. However, I believe the prospects for unification to be slim, given the heterogeneity of available conceptions.

There are still further distinctions to be drawn, in addition to the ones already highlighted. For instance, while Rosenberg claims that “Thoroughgoing scientism leaves no room for normative values” (2020, 50 [and possibly also this volume]), some scientisms are themselves thoroughly normative, since some make methodological prescriptions, and since some (I would argue most) are premised on the epistemic or pragmatic value of science. Other formulations of scientism are modal, such as those that claim that only science *can* address certain kinds of questions. Others still are descriptive, such as disciplinary theses claiming that science *will* subsume or replace other forms of inquiry. Moreover, we can distinguish scientisms not only in terms of strength, but also in terms of scale. For instance: a *global* form of epistemological scientism might say that science is the best source of evidence regarding *any question whatsoever*. A comparatively *local* form might say that science is the best source of evidence regarding *certain sorts of questions* (such as metaphysical or moral questions). So scientisms have many distinguishing features and differ in a variety of interesting and important ways.

These sorts of distinctions ought always to inform our discussions of scientism. Some philosophical terms are so thoroughly contested and variably defined that we cannot hope to have a productive conversation about them without disambiguating clearly at the outset. Scientism is one of those terms. Failing to disambiguate leads to ignored distinctions, misconstruals and cross-purposes, as well as obscured lines between scientism and a constellation of nearby epistemological and methodological positions and practices, such as

empiricism, physicalism, realism, naturalism, and interdisciplinarity.⁵ So I hereby plead: if we're going to talk about 'scientism', let's always start with a definition.⁶

3. Making Spectres of Scientisms

The question at hand is: which assumptions warrant a sense of threat among philosophers in response to which forms of scientism? In this section, I will identify a number of assumptions required to make scientisms plausibly true and plausibly threatening to philosophers' statuses, livelihoods, preferred research methods, and so forth. While the assumptions are compatible with scientism, they are not entailed by it and therefore not necessarily held by its proponents. Rather, all of the assumptions must be *appended* to scientism and held by individual philosophers who find scientism threatening, in order for their sense of threat to be warranted. I will focus on the most *prima facie* threatening forms of scientism — the strong scientisms — since, given their strong formulations, it would not be surprising if they turned out to be most threatening in the ways I have outlined. I will not aim to defeat the assumptions here but rather to make them explicit and to emphasize their frequent strength and contentiousness.

3.1 Strong Epistemological Scientism

First, take the strong epistemological view that science is the *only* source of certain epistemic goods like knowledge. What are the implications of this particular scientism for

⁵ On the relation of scientism to physicalism, see Ney (2018); on the relation of scientism to philosophical naturalism, see Stenmark (2018); on the relation of scientism to realism, see Nickles (2017). On the confusion of scientism with interdisciplinarity, see Bishop (2019 [and possibly this volume]).

⁶ The variety of substantially different conceptions leading to confusion and cross-purposes suggests that 'scientism' is *conceptually fragmented* in a manner described by Taylor and Vickers (2017). They argue for the elimination of fragmented concepts; however, I tend to think 'scientism' can be used innocuously so long as we remain diligently conscientious.

philosophers? It might be thought to imply that science can get, let's say, knowledge *while philosophy can't*.⁷ But this is only implied if one takes the following assumption for granted:

(1) *Demarcation*: Philosophy isn't science.

It might initially appear that this assumption is entailed by scientism, but it need not be. Proponents of scientism can recognize a continuum in which philosophy and science aren't cleanly demarcated, but bleed into one another, and yet think that the philosophical side of the continuum stretches too far from the scientific side. On such a view, it just isn't true that science *and not philosophy* can get knowledge. Now, it is trivially true from an institutional perspective that philosophy isn't science — philosophers have their own departments, and scientists have theirs. However, it is not as obviously true from a philosophical standpoint. That's because we lack adequate, uncontroversial definitions of science and philosophy in virtue of which we can definitively distinguish them. The demarcation problem in the philosophy of science is famously intractable. Moreover, we lack a good answer to parallel questions about the distinctive nature of philosophy and the delineation of its borders. So *Demarcation* lacks an adequate philosophical foundation.

You might reasonably suggest that even if we cannot resolve these demarcation issues by supplying necessary and sufficient conditions, it is common sense that philosophy differs from science in certain important and identifiable respects, some of which are undoubtedly relevant to knowledge. After all, many scientists spend their time using highly sophisticated and expensive equipment to test predictions that have (given certain auxiliary hypotheses) specific observable consequences, while philosophers... don't. So, you might think that in order to derive the conclusion that philosophy can't get knowledge from the claim that only science can, you need not solve the demarcation problem by identifying all the essential differences between

⁷ While I formulate the assumption in general terms, knowledge will be my running example of science's allegedly proprietary epistemic good. However, we could equally well substitute another epistemic good, or more than one, in its place.

philosophy and science; you need only assume that science and philosophy differ *in epistemically relevant ways*.

(2) *Epistemic Distinctness*: Science and philosophy are distinct in ways relevant to the acquisition of the epistemic goods on which science has a monopoly.

For example, you might say that science and philosophy differ *qua* sources of knowledge. Philosophy must lack certain qualities that science possesses, in virtue of which science is knowledge-conducive, or else philosophy must possess certain knowledge-compromising qualities that science lacks. The epistemology of science and the epistemology of philosophy must diverge in some epistemically difference-making respect or respects, which the defender of strong epistemological scientism must identify.

Suppose we were to grant that ‘only science gets knowledge’ implies that philosophy doesn’t. Strong epistemological scientism would still not obviously threaten philosophers’ statuses, the value of their teaching and research, or their livelihoods. On the one hand, we would have to grant that philosophers’ attempted contributions to knowledge universally fail. On the other hand, that would not mean that it is impossible for philosophy to produce other epistemic goods. For instance, if the particular scientism at issue says that science is the only source of knowledge, it leaves open the possibility that philosophy might be a source of epistemic goods such as justified belief, evidence, understanding, and so forth. In order for it to follow that philosophy is epistemically worthless, we would have to assume:

(3) *Epistemic Value Monism*: The epistemic goods on which science has a monopoly are the only genuine epistemic goods.

This precludes justified belief, evidence, understanding, or other putative epistemic goods from counting as bonafide epistemic goods, i.e. as epistemically valuable in their own right. Moreover, in order for strong epistemological scientism to undermine philosophers’ statuses, the value of

their teaching and research, or their place in the university, we would have to assume something like:

(4) *Professional Value (Restrictive)*: For philosophers to be considered serious academics, for their teaching and research to be valuable, or for them to have a proper place as faculty members in universities requires that they promote those epistemic goods on which science has a monopoly.

In other words, promoting other sorts of good is insufficient for philosophers and their work to be valuable and respected. But if promoting other goods is insufficient to make philosophy valuable, that must mean that no other goods are valuable in and of themselves. If so, then *Professional Value (Restrictive)* entails that the *epistemic* goods on which science has a monopoly are the only *goods simpliciter* worth recognizing, preserving, or promoting in academic contexts. To accept this, we would have to deny that aesthetic or pragmatic goods are genuinely valuable in academic contexts — or valuable enough to be worth pursuing for their own sakes. So strong epistemological scientism threatens philosophers' statuses, work, and livelihoods only holding fixed an extremely restrictive view regarding value in academic contexts.

What about the implications of strong epistemological scientism for philosophers' preferred research methods? Well, if science sometimes gets knowledge and philosophy never does, then whatever methods science employs are sometimes knowledge-conducive, and whatever methods philosophy employs aren't ever. For this story to be plausible, we have to assume:

(5) *Methodological Distinctness*: We can distinguish distinctively 'scientific' from distinctively 'philosophical' methods.⁸

⁸ While this assumption is similar to *Demarcation*, which declared philosophy and science to be distinct, it is more specific. It is consistent with *Demarcation* that philosophy and science are distinct in virtue of something other than their methods (such as their subject matters).

In other words, beyond saying that a method happens to be implemented in philosophical or scientific practice, we can point to certain methods and say *those are squarely scientific methods*, and we can point to other methods and say *those are squarely philosophical methods*. The question is how — and on what basis — to decide which methods are which. A historical who-used-it-first approach to the question would risk giving a historically contingent answer to a deeper philosophical question (not to mention that philosophy would have an unfair advantage, since it predates the advent of modern science).

How else might we distinguish distinctively philosophical from distinctively scientific methods? Sometimes the tendency is to believe that philosophical method is essentially *a priori* (a belief that Mizrahi 2019, for example, attributes to many philosophers), while scientific method is essentially *a posteriori*. There is a morsel of truth here, since, as I said above, scientists often do test hypotheses empirically, while philosophers often don't (and often can't). However, we must also take care not to rely on imprecise or simplistic caricatures. The ambiguity of the term '*a priori*' (see Field 2005) and, correspondingly, of the term '*a posteriori*' complicates matters. If a method's apriority requires that it not involve experience in any respect, then arguably even 'traditional' philosophical reflection fails to be *a priori*. That is because it is often beholden to explanatory demands that invoke judgments of plausibility, unifying power, and likelihood *relative to a background of experientially based beliefs* (Bryant 2020). Moreover, Kidd points out that "philosophy is very methodologically pluralistic and has welcomed and, indeed, often introduced empirical methods" (2019, 53 [and possibly this volume]). It isn't clear why we should think that, in so doing, philosophical practice has diverged from *essentially* philosophical method. So it is not obvious that philosophical method must be or always is *a priori*.

At the same time, as Chakravartty (2013) points out, science isn't purely *a posteriori*, either. He explains, "not all sciences actually make novel predictions (evolutionary biology), or employ experiments (string theory), or are successful in manipulating things (cosmology)" (2013, 34). To state the point more positively, scientists implement a range of methods that might be considered *a priori*, including thought experiments (Einstein's train);

computability theory, modal logic, and category theory (used in computer science); mathematics (ubiquitous in science); and even armchair speculation (string theory).⁹ Given these sorts of considerations, I believe that equivocating between ‘scientific’ and ‘empirical’ is ill-advised. At any rate, distinguishing distinctively philosophical and scientific methods by appeal to at least some of the characterizations of the *a priori-a posteriori* distinction is clumsy and misleading. If we are to find some plausible basis for distinguishing them, it will have to be a good deal subtler.

Supposing that philosophy and science do have their own distinctive methods, in order for it to be plausible that scientific method is sometimes knowledge-conducive, while philosophical method never is, we would need an account of the differences between them that explain their differential success. One possibility is that scientific method has distinctive components that are necessary for knowledge, which philosophical method lacks. To capture this thought, we would need the following assumptions:

(6) *Scientific Indispensability*: No combination of distinctively philosophical methods is sufficient to produce the epistemic goods on which science has a monopoly; producing them requires using some distinctively scientific methods.

(7) *Philosophical Failure*: Philosophers either never use or never *successfully* use the distinctively scientific methods implicated in the success of science with respect to its proprietary epistemic goods.

In other words, scientists can get knowledge and philosophers can’t *because* scientists do certain distinctively scientific things that philosophers don’t. *Scientific Indispensability* implies that if certain reflective methods, such as the use of thought experiments, count as distinctively philosophical, their implementation is insufficient for knowledge even in some scientific contexts. For instance, it implies that Einstein’s armchair speculations did not become objects of

⁹ Of course, it is disputed whether the less empirical pockets of science (such as string theory) count as bonafide science (see Castelvechi 2015). Moreover, the alleged apriority of mathematics and logic is a matter of longstanding controversy (see, for instance, Kitcher 1983). So I grant that this is a quick and contentious way of making the point.

knowledge until they were confirmed empirically. This sort of view is defensible but clearly contentious.

By contrast, *Philosophical Failure* is less defensible, since it suggests that the philosophers who implement scientific methods (of which there are many) just happen never to implement the knowledge-conducive ones, or else always screw up when they do. Since philosophers use a wide variety of scientific methods, it would be spectacularly unlucky (not to mention incredibly bad news for science) if of none of those methods are knowledge-conducive. Moreover, while it's clear that philosophers sometimes attempt to use scientific methods that they haven't been adequately trained to use and fail (poorly designed statistical surveys come to mind), it's wildly implausible that no philosopher who uses scientific methods ever does so correctly. *Philosophical Failure* also implies that if science and philosophy share certain methodological features in common — such as evidential or rational standards, underlying logic or inferential patterns, or criteria for theory selection — then, regardless of whether those features count as distinctively philosophical or distinctively scientific, insofar as philosophers implement them correctly, they can never be independently adequate for knowledge. At any rate, a defender of strong epistemological scientism who explains the differential epistemic standing of science and philosophy by appeal to *Scientific Indispensability* and *Philosophical Failure* will have to identify the distinctively scientific ingredients that are necessary for the relevant epistemic successes.

In addition to it being possible, according to strong epistemological scientism, that philosophy fails to produce knowledge because its practice excludes knowledge-conducive methods, it is also possible that its epistemic failures are due to its reliance on falsity-conducive or justification-undermining methods. If so, then we need the following assumptions:

(8) *Unique Culpability*: All methods implicated in the failure of philosophy vis-à-vis the relevant epistemic goods are distinctively philosophical.

(9) *No Contamination*: When science successfully produces its proprietary epistemic goods, its practice includes none of the methods implicated in the failure of philosophy vis-à-vis those goods.

In other words, philosophers always fail to get knowledge while scientists at least sometimes don't *because* philosophers do certain distinctively philosophical things that scientists at least sometimes don't. For example, if it is the speculative aspects of philosophical method that doom philosophy's epistemic prospects, then epistemically successful science must implement no such speculative methods.¹⁰ Note how much heavy-handed methodological circumscription these assumptions require. At any rate, if the defender of strong epistemological scientism opts for this explanation of differential success, then she must identify the failure-conducive features of philosophical method.

One final question before we can move on from strong epistemological scientism. Does the view that science is the only source of epistemic goods like knowledge, if true or if broadly believed to be true, threaten the health of the discipline of philosophy? It does only on the following assumption:

(10) *Disciplinary Health (Restrictive)*: The health of the discipline of philosophy requires that philosophy produce the epistemic goods on which science has a monopoly.

For example, we would have to assume that the health of the discipline requires that philosophy produce knowledge. If we were to allow, *contra* (3) above, *Epistemic Value Monism*, that there are other genuine epistemic goods, it would not be sufficient for disciplinary health that philosophy produce them. Likewise, if we were to allow, *contra* (4) above, *Professional Value (Restrictive)*, that there are non-epistemic goods worth pursuing in academic contexts, it would

¹⁰ A defender of this position might have to appeal to something like the distinction between contexts of discovery and of justification in order to handle cases where speculation demonstrably lead to discovery and advancement in science (such as well-known Einsteinian thought experiments).

not be sufficient for disciplinary health that philosophy promote them. On the contrary, *Disciplinary Health (Restrictive)* makes producing the epistemic goods on which science has a monopoly a *necessary* condition of disciplinary health and implies, as such, that failure to produce such goods immediately compromises disciplinary health.

To sum things up so far, I have been cataloguing the assumptions required to make strong epistemological scientism, according to which science is the only source of certain epistemic goods such as knowledge, threatening to philosophers. I suggested that the view threatens philosophers' statuses, the value of their teaching and research, as well as their livelihoods only if we draw heavy-handed taxonomic and epistemological distinctions between philosophy and science, and only if we recognize a narrow range of epistemic and non-epistemic goods worth preserving and promoting in academic contexts. Moreover, strong epistemological scientism impugns philosophical method only if we assume there are distinctively philosophical research methods that differ from scientific ones in identifiable ways, which difference adequately explains their differential epistemic success. Finally, the truth of strong epistemological scientism implies compromised disciplinary health only if we assume that to be healthy, philosophy must produce precisely those epistemic goods that, according to strong epistemological scientism, it cannot possibly produce.

I have not argued that all of these assumptions are indefensible. Some are undoubtedly more defensible than others. Instead, my aim has been to bring to light the background assumptions required to make this form of scientism truly threatening to philosophers and to emphasize their frequent strength and potential contentiousness, as well as the considerable work that would be required to adequately defend them. It should now be clear that strong epistemological scientism is not inherently threatening to philosophy or to philosophers; it is threatening only if we endorse some combination of the assumptions I have laid out.

3.2 Strong Methodological Scientism

I now turn to strong methodological scientism. Since I'm concerned with the potential threat of scientisms to philosophers, I'll address the formulation that concerns them directly: philosophers should only use the methods of science. Note that this thesis requires

Methodological Distinctness ((5) above), which posited distinctively scientific methods. Now, there's an immediate question as to the coherence of this thesis, because one might think that philosophers would cease to be philosophers if they exclusively used the methods of science.¹¹ If so, then the thesis seems to prescribe a contradictory state of affairs: philosophers doing something in virtue of which they are not philosophers (or doing *nothing* in virtue of which they *are* philosophers).¹² The problem stems from the thought that doing philosophy is essential to being a philosopher. In the interests of examining a *prima facie* coherent view, let's not assume as much.¹³

Why might one think that philosophers should use only the methods of science? One reason might be the belief that only scientific methods can produce desired epistemic goods. In other words, strong methodological scientism may naturally rest on strong epistemological scientism. Philosophers should use only the methods of science *because* that's the only way to get knowledge or whichever epistemic goods science has sole access to according to one's preferred version of strong epistemological scientism. If strong methodological scientism comes as a package deal with strong epistemological scientism, then the question of whether it is plausibly true and plausibly threatening to philosophers should be treated as the question of whether the package deal is plausibly true and plausibly threatening to them. Whether we think so depends on whether we accept some combination of assumptions (1)-(10) above, plus whichever additional ones the methodological thesis invokes.

Let's consider those additional assumptions. If science has a monopoly on certain epistemic goods (strong epistemological scientism), and those goods are the only genuine epistemic goods (as per (3) *Epistemic Value Monism*) or the only goods worth pursuing in

¹¹ Note that it's the strength of the thesis that generates this worry. Weaker formulations don't face the same problem, since it's completely coherent to imagine philosophers *sometimes* using non-philosophical methods.

¹² Alternatively, the thesis might be interpreted as the claim that philosophers should stop being philosophers and start being scientists, which improves on the previous interpretation with respect to coherence but remains remarkably strong.

¹³ However, we will consider a related assumption (*Essentiality*) below, which, instead of claiming directly that method makes philosophers, will claim that method makes philosophy.

academic contexts (as per (4) *Professional Value (Restrictive)*), and if distinctively scientific methods are required for the production of those goods (as per (6) *Scientific Indispensability*), then in order for it to follow that philosophers should use only scientific methods (strong methodological scientism), one must additionally assume:

(11) *Restricted Value Promotion*: Philosophers should promote only the epistemic goods on which science has a monopoly.

To synthesize the operative assumptions, the idea is that philosophers should exclusively use the methods of science *because* that's the only way to promote the epistemic goods on which science has a monopoly, which philosophers should exclusively promote *because* those are the only goods worth their time.

Sometimes methodological scientisms are formulated in terms of 'empirical methods' or 'the empirical methods of science'. For instance, Mizrahi writes that scientism advocates "the use of empirical methods of observation, experimentation, and the like" (2019, 1). An empirical formulation of strong methodological scientism states that philosophers should exclusively use the *empirical* methods of science. Proponents of this empirical formulation may require additional assumptions, depending on how they view the relation between empirical and scientific methods. As we saw above, not all methods employed by science are empirical. If so, the thesis that philosophers should exclusively implement empirical methods is more specific than the thesis that they should exclusively implement scientific ones. If defenders of the empirical formulation acknowledge that the category of scientific methods exceeds the category of empirical methods, then their thesis requires the following assumption:

(12) *Unique Credit*: Only the empirical methods of science are implicated in the success of science vis-à-vis its proprietary epistemic goods.

We would need an assumption of this kind to justify using only the empirical methods of science. Note that *Unique Credit* is ambiguous between the claim that philosophers should exclusively

use *all* of the empirical methods of science and the claim that they should exclusively use *some* of them. If the claim is that all of its empirical methods should be used, then it must be assumed that:

(13) *Total Credit*: All of the empirical methods of science are implicated in the success of science vis-à-vis its proprietary epistemic goods.

If the claim is that only some of the empirical methods should be used, then it must be assumed that:

(14) *Partial Credit*: Only some of the empirical methods of science are implicated in the success of science vis-à-vis its proprietary epistemic goods, and we know what they are.

The clause that *we know what they are* is needed because, on this interpretation, strong methodological scientism prescribes the exclusive use of those specific methods.

Proponents of the empirical formulation might avoid the need for these additional assumptions by denying that the category of scientific method exceeds the category of empirical methods. For instance, they might define ‘scientific method’ as essentially empirical, such that any non-empirical methods scientists happen to use are by definition not genuinely scientific. However, they would have to provide a non-*ad-hoc*, non-question begging rationale for defining scientific method so narrowly.

Does strong methodological scientism of the regular or of the empirical variety pose any special threat to philosophers, independently of its association with strong epistemological scientism? Let’s again consider the statuses of philosophers, the value of their teaching and research, and their livelihoods. Strong methodological scientism threatens those things only if:

(15) *Professional Value (Permissive)*: For philosophers to be considered serious academics, for their teaching and research to be valuable, or for them to have a

proper place as faculty members in universities requires it to be methodologically permissible for them to sometimes use non-scientific/non-empirical methods.¹⁴

Such non-scientific/non-empirical methods could include distinctively philosophical methods. On this assumption, for philosophers and their work to be respected and valued, it wouldn't be enough for them to implement scientific/empirical methods to address their own unique questions, even if they did so especially inventively or expertly, with interesting or fruitful results. Rather, the respectability and value of philosophers and their work hangs on philosophers' entitlement to implement other sorts of method, perhaps including their own proprietary methods.

As for philosophers' preferred research methods, strong methodological scientism threatens to undermine them only for those philosophers described by the following assumption:

(16) *Non-Naturalism*: Some philosophers' preferred research methods exclude scientific/empirical methods.

This assumption is relatively uncontroversial. For those it describes, strong methodological scientism does — if true — undermine their preferred research methods, since it says they ought to use other methods exclusively. The question is roughly what proportion of philosophers fall under this category, and how many of them would agree to clumsy circumscriptions of philosophical and scientific methods according to which, for instance, armchair speculation is inherently un-scientific and empirical research inherently un-philosophical.

Finally, strong methodological scientism threatens the health of the discipline only if:

(17) *Disciplinary Health (Permissive)*: The health of the discipline of philosophy requires it to be methodologically permissible for philosophers to sometimes use non-scientific/non-empirical methods.

¹⁴ As above, the slash indicates possible alternate formulations — I'm not using it to equate 'scientific' and 'empirical', which I have already said is an ill-advised conflation.

Why think that disciplinary health requires it to be acceptable for philosophers to use non-scientific/non-empirical methods? One reason might be the belief that philosophical questions cannot always be addressed by scientific/empirical methods or cannot always be addressed by them alone. In other words:

(18) *Scientific Insufficiency*: Scientific/empirical methods are insufficient for the purpose of addressing philosophical questions.

If so, and if philosophers were permitted to use only scientific/empirical methods, they would make limited headway on those questions.¹⁵

An alternate rationale might be that if philosophers were to adhere to a methodology that proscribed the use of philosophical methods, philosophy would cease to be philosophy. This is related to (but not strictly the same as) the earlier thought that doing philosophy is essential to being a philosopher. This related thought is as follows:

(19) *Essentiality*: Distinctively philosophical methods are essential to philosophy.

The idea is that what makes philosophy *philosophy* is its own distinctive approach to addressing its subject matter. According to *Essentiality*, if we adhered to methodological norms proscribing that approach, philosophy would be lost. Such a view isn't immediately implausible but would require spelling out and defending. In particular, it would require the elucidation of philosophy's distinctive methods, as well as a defence of their essentiality.

We have seen that since strong methodological scientism is likely motivated by strong epistemological scientism, the truth and plausibility of the one requires some of the same assumptions as the truth and plausibility of the other. Moreover, the claim that philosophers

¹⁵ This raises the vexed issue of whether and to what extent philosophers make progress on philosophical questions, anyway, as well as the question of how to measure such progress. I'll bracket those issue here.

should exclusively employ scientific methods requires the assumption that philosophers should exclusively promote those goods that are uniquely valuable and that science is uniquely equipped to promote. We saw that methodological scientisms can be formulated in terms of scientific methods or in terms of empirical methods. Those who prescribe the exclusive use of empirical methods while granting that some scientific methods are non-empirical must say whether *all and only* or just *some of* the empirical methods of science are implicated in the relevant scientific successes. We also saw that strong methodological scientism threatens the status and value of philosophers and their work, as well as their jobs, only on the assumption that those things depend on the methodological permissibility of using non-scientific/non-empirical methods. Moreover, strong methodological scientism threatens only the preferred research methods of those who accept a clean circumscription of distinctively philosophical methods and distinctively scientific/empirical methods, and who prefer the former. Finally, it threatens the health of the discipline only on the assumption that philosophy's disciplinary health requires it to be acceptable for philosophers to sometimes use non-scientific/non-empirical methods. Again, some of these assumptions are more *prima facie* plausible than others. The point is that some combination of them must be held fixed if strong methodological scientism is to be plausible and threatening to philosophers, and that establishing them requires substantial work.

3.3 Strong Disciplinary Scientism

Finally, we have strong disciplinary scientism, according to which science will/should subsume/replace all other forms of inquiry. Let's start with the prospect of replacement, since 'replace' has clearer connotations than 'subsume'. The prospect of science replacing philosophy makes sense only if the two are different things in the first place (as per (1) *Demarcation*). Once we assume so, the prospect of science *replacing* philosophy is threatening to philosophers — to their status, to the value of their teaching and research, or to their jobs — assuming the following:

(20) *Tribulations*: The replacement of philosophy by science entails the diminishment of philosophers' individual prestige, the cessation of their teaching and research, or the loss of their livelihoods.

The prospect of philosophy's 'replacement' by science does seem to suggest the replacement of *philosophers* by *scientists*, an accompanying loss of prestige, and the cessation of their teaching and research (at least in institutional settings). Moreover, their teaching and research couldn't very well be valuable if it ceased to occur. So strong disciplinary scientism spelled out in terms of replacement does seem straightforwardly threatening to philosophers, without especially strong assumptions.

As for philosophers' preferred research methods, some of the assumptions I have already discussed are required to make strong disciplinary scientism threatening in that regard: there are distinctively philosophical methods ((5) *Methodological Distinctness*), some philosophers prefer methods such as those to scientific ones ((16) *Non-Naturalism*), and the replacement of philosophy by science may involve the cessation of philosophical research (*Tribulations*). The replacement form of strong disciplinary scientism threatens philosophers' preferred research methods only on those assumptions.

Lastly, replacement formulations of strong disciplinary scientism do clearly threaten disciplinary health. That is because the replacement of the discipline of philosophy entails its elimination. The discipline cannot very well be healthy if it ceases to be! So, as a thesis about replacement, strong disciplinary scientism either normatively or predictively opposes the very possibility of disciplinary health.

All in all, replacement formulations of strong disciplinary scientism do threaten philosophers without much need for strong or contentious assumptions. However, we might wonder how many avowedly scientific thinkers actually endorse such an extreme form of scientism. Again, empirical research should support our sociological narratives, but I find it unlikely that many — otherwise sensible — people think philosophy should or will be consigned to the flames. So while this kind of strong disciplinary scientism poses a theoretical threat to philosophers in virtue of its content and some relatively reasonable assumptions, I don't believe

it poses an immediate practical threat to them in virtue of being broadly believed (though empirical evidence could prove me wrong).¹⁶

The *subsumption* of philosophy by science, on the other hand, does not pose so obvious an existential threat. Whether the prospect of subsumption should truly threaten philosophers depends on what subsumption entails. The term is meant to suggest the extension of the boundaries of science over philosophy, such that philosophy becomes part of science. This could entail changes to the organizational structure of universities:

(21) *Departmental Subsumption*: The subsumption of philosophy under science entails that philosophy departments become part of faculties of science.

This would have practical consequences for course listings, program requirements, and so forth, but in being merely organizational, it would have no implications for our deeper questions about demarcation, epistemology, and methodology. Likewise, unless further conditions are specified (pertaining, for instance, to diminished budgets), it has few direct consequences for the professional standing of philosophers, the preservation of their methods, or the health of the discipline. In and of themselves, such organizational changes would harm philosophers professionally only if the following were true:

(22) *Professional Value (Departmental Autonomy)*: For philosophers to be considered serious academics, for their teaching and research to be valuable, or for them to have a proper place as faculty members in universities requires that departments of philosophy not belong to faculties of science.

¹⁶ If so, one might wonder why I have bothered to consider the replacement interpretation at all. As I mentioned at the start of the Section 3, I believe it is instructive to consider how *truly* threatening the most *prima facie* threatening forms of scientism are.

It isn't clear why this would be so. Moreover, since the merely organizational characterization of subsumption has no methodological implications, it does not threaten to undermine philosophers' preferred research methods. It harms disciplinary health only on the assumption that:

(23) *Disciplinary Health (Departmental Autonomy)*: The health of the discipline of philosophy requires that departments of philosophy not belong to faculties of science.

Again, it's not clear why this would be so. So on a merely organizational conception of disciplinary subsumption, strong disciplinary scientism is not obviously threatening.

Alternate conceptions of subsumption could entail more substantive transformations to the way we think about philosophy and to philosophy itself. For example:

(24) *Substantial Subsumption*: The subsumption of philosophy under science entails that philosophical questions are properly scientific questions, which can/should be addressed using only scientific methods.

According to the first clause of this assumption, what some philosophers erstwhile thought to be at least partly an independent subject-matter in fact belongs entirely to the domain of scientific interest and investigation. Such a view threatens philosophers professionally only if:

(25) *Professional Value (Substantial Autonomy)*: For philosophers to be considered serious academics, for their teaching and research to be valuable, or for them to have a proper place as faculty members in universities requires that philosophy have a subject-matter at least partly independent of science.

This assumption would need defending. As for their preferred research methods, the second clause of *Substantial Subsumption*, which I'll address momentarily, speaks directly to method.

Regarding disciplinary health, strong disciplinary scientism, paired with *Substantial Subsumption*, threatens the disciplinary health of philosophy only on the further assumption that:

(26) *Disciplinary Health (Substantial Autonomy)*: The health of the discipline of philosophy requires that it have a subject-matter at least partly independent of science.

This assumption would likewise need defending. So where strong disciplinary scientism prescribes or predicts the subsumption of philosophy by science, and where subsumption is taken to entail that the subject-matter of philosophy falls entirely under the purview of science, some meaty assumptions are required to make the view threatening to philosophers.

Different readings of *Substantial Subsumption* are continuous with different forms of strong methodological or epistemological scientism. For instance, the idea that only scientific methods *can* address putatively philosophical questions seems to follow from the thesis that science is the only source of evidence about certain sorts of question (one form of strong epistemological scientism), together with the assumptions that attribute science's epistemic successes exclusively to its proprietary methods ((5) *Methodological Distinctness* and (6) *Scientific Indispensability*). The idea that only scientific methods *should* be used to address our questions is equivalent to strong methodological scientism. If the subsumption formulation of strong disciplinary scientism invokes strong epistemological or methodological scientism, then the assumptions required to make those views plausible and threatening must also be invoked here.

In sum, as a thesis about the replacement of philosophy by science, strong disciplinary scientism threatens philosophers' professional standing and the health of the discipline of philosophy holding fixed relatively modest assumptions. Nevertheless, we may wonder just how broadly accepted such extreme forms of scientism are. As a thesis about the subsumption of philosophy by science, strong disciplinary scientism is less obviously threatening. If subsumption is understood to be merely organizational, then strong disciplinary scientism has rather dull teeth. If it is understood to be more substantively transformational, then strong

disciplinary scientism threatens philosophers only assuming the importance of a fully independent subject-matter, and only if we import some of the assumptions required to make strong epistemological or methodological scientism plausibly true and threatening.

I wish to pause at this juncture to consider the significance of what has been shown. We have seen that, for the most part, strong epistemological, methodological, and disciplinary scientisms must be supplemented by strong and often contentious assumptions in order to be truly threatening. Just one interpretation — the replacement interpretation of strong disciplinary scientism — was plausibly threatening under modest assumptions. This is striking! As I said at the beginning of the section, I focused first on the strongest forms of scientism, because if any forms are straightforwardly and acutely threatening, one would think it would be them! However, I have shown that this is largely not the case. For the most part, not even the comparatively extreme forms of scientism are terribly menacing in and of their own accord. I believe this is an important upshot. It would be far less surprising to find that more moderate forms of scientism aren't all that intrinsically menacing; after all, they're *moderate*! However, for the sake of completeness, it's still worth considering them — a task I turn to now.

4. Weak Scientism

I will take Mizrahi's *weak scientism* as a representative example of a more moderate form of scientism. According to weak scientism, "Of all the knowledge we have, scientific knowledge is the best knowledge" (2017, 354). Scientific knowledge is best, he claims, in terms of research output and impact, as well as with respect to its explanatory, instrumental, and predictive successes (2017, 356-357). By the lights of the characterizations of scientism I outlined in Section 2, this 'weak' scientism would count as a moderate form of epistemological scientism. However, I'll follow Mizrahi and others by calling it 'weak scientism'. Mizrahi intends weak scientism not to be inherently vicious (2017, 352); what sorts of assumptions would make it threatening to philosophers? As a weaker form of scientism, it shouldn't be surprising that making it plausibly true and plausibly threatening to philosophers will require assumptions that are, in some cases, even stronger than the ones we've seen so far.

Weak scientism may be thought to have negative implications for the epistemic status of philosophy. For instance, if scientific knowledge is the best form of knowledge, then we might think philosophical knowledge is a lesser form. This follows only if we assume:

(27) *Distinctive Knowledge*: We can distinguish distinctively ‘scientific’ from distinctively ‘philosophical’ knowledge.

We might make the distinction by claiming that scientific knowledge is found in the journal articles, textbooks, manuscripts, volumes, and other venues of research dissemination that are classified as scientific, while philosophical knowledge is found in the ones classified as philosophical. This seems to be Mizrahi’s preferred way of making the distinction when he considers things like impact factors. But it should go without saying that this way of making the distinction is conventional, historically contingent, and not necessarily philosophically well-founded.

Alternatively, we could say that scientific knowledge results from distinctively scientific methods, while philosophical knowledge results from distinctively philosophical methods. To do so, we would have to import (5) *Methodological Distinctness*, which distinguished the two forms of method. In that case, defending *Distinctive Knowledge* would require defending *Methodological Distinctness*.

Supposing we can cleanly distinguish scientific from philosophical knowledge, in order to conclude that philosophical knowledge is a lesser form of knowledge, we would also have to assume:

(28) *Exclusive Best-Making*: Scientific knowledge has features that philosophical knowledge lacks, in virtue of which it is best.

Mizrahi defends this sort of assumption when he points to the comparative differences between research output and impact in the sciences versus the arts and humanities (2017, 356-357), as well as differences in explanatory, instrumental, and predictive success between science and

philosophy (2017, 358-362). The point is that defenders of weak scientism need to spell out and defend the appropriateness of certain measures by which we can judge knowledge better or worse, and to show that science outperforms philosophy relative to those measures.

For weak scientism to undermine philosophers' prestige, the value of their teaching and research, or their livelihoods, we would have to assume the following:

(29) *Professional Value (No Inferiority)*: For philosophers to be considered serious academics, for their teaching and research to be valuable, or for them to have a proper place as faculty members in universities requires that philosophical knowledge not be a lesser form of knowledge.

But this isn't reasonable. Philosophers might be considered serious academics, their teaching and research might be valuable, and they might have a proper place as faculty members in universities even if philosophical knowledge were a lesser form of knowledge. That's because philosophical knowledge might still be valuable — even exceptionally valuable — even if it weren't the best form of knowledge. Moreover, philosophers might promote goods other than knowledge, both epistemic and non-epistemic. This shows that in order to truly undermine the status and value of philosophers and their work, something like (3) *Epistemic Value Monism* and (4) *Professional Value (Restrictive)* — which together ruled out the possibility of philosophy achieving anything worthwhile — would be needed. More specifically, we would have to assume:

(30) *Epistemic Value Monism+*: Scientific knowledge is the only genuine epistemic good.

(31) *Professional Value (Restrictive)+*: For philosophers to be considered serious academics, for their teaching and research to be valuable, or for them to have a proper place as faculty members in universities requires that they promote scientific knowledge.

These assumptions entail that promoting putative goods other than scientific knowledge is insufficient for philosophers and their work to be respected and valuable. They imply that in academic contexts, scientific knowledge is the only good *simpliciter* worth recognizing, promoting, and preserving. This is an exceptionally narrow view of what makes our academic activities valuable or worthwhile.

As for preferred research methods, it might be thought that the claim ‘scientific knowledge is best’ negates the value of philosophical method. However, it does so only if all we care about is producing scientific knowledge ((3) *Epistemic Value Monism*), if there are distinctively scientific and distinctively philosophical methods ((5) *Methodological Distinctness*), and if only the scientific methods can get you scientific knowledge ((6) *Scientific Indispensability*). For it to follow that we should stop using philosophical methods altogether, we’d have to add:

(32) *Restricted Permissibility*: A method should be used only if it conduces to scientific knowledge.

The reason for thinking this might be that we want our method to promote valued goods, and scientific knowledge is the only valuable epistemic good or the only good *simpliciter* worth recognizing, preserving, or promoting in academic contexts (i.e. *Epistemic Value Monism+* and *Professional Value (Restrictive)+*). Overall, a substantial package of assumptions is required for weak scientism to threaten the value and continued advisability of using philosophical methods.

Finally, regarding the health of the discipline of philosophy, weak scientism threatens it only on the following assumption:

(33) *Disciplinary Health (No Supremacy)*: The health of the discipline of philosophy requires that scientific knowledge not be the best form of knowledge.

A natural corollary might add that philosophy should be the best form. Yet it is not clear why this would be so, when in principle weak scientism allows that philosophical knowledge might still be a good — even exceptionally good — form of knowledge. Even if philosophical knowledge were an especially poor form of knowledge according to the metrics we use to gauge such things (as is apparently the case in Mizrahi 2017), it wouldn't obviously condemn the health of the discipline. That's because there would still be a question as to why we should privilege those particular metrics and not others. Moreover, it would still be possible for philosophy to promote other epistemic and non-epistemic goods that our assessment of disciplinary health should consider.

To sum up, like the strong forms of scientism, Mizrahi's more moderate 'weak scientism' poses an unintended threat to philosophers only holding fixed a number of meaty assumptions. Those assumptions must circumscribe philosophical and scientific knowledge and distinguish them in respects relevant to the bestness of the knowledge. Moreover, they must declare the production of scientific knowledge to be the only valuable academic end and the sole determinant of the worth of philosophers, their work, their methods, as well as the health of their discipline. This is certainly an extreme view, and if it has any defenders, they have their work cut out for them.

5. Conclusion

In this chapter, I set out to consider the sorts of assumptions required to make various scientisms threatening to philosophers, in the sense of potentially harming, disrupting, or undermining their prestige, the value of their teaching and research, their jobs, their preferred research methods, and the health of their discipline. In particular, I examined the assumptions required to make strong epistemological, methodological, and disciplinary scientism, as well as Mizrahi's weak scientism threatening in those respects. I found that most of the scientisms considered are neither straightforwardly nor inherently threatening to philosophers. Rather, most of them — including, tellingly, almost all of the strong scientisms — require the supplementation of substantive assumptions in order to be plausibly true and plausibly threatening to philosophers. The replacement form of strong disciplinary scientism was atypical in requiring the

addition of relatively modest and uncontentious assumptions. In general, the assumptions surveyed heavily-handedly circumscribe philosophy and science, their epistemic credentials and achievements, their methods, and their subject matters. They also severely restrict the epistemic and non-epistemic goods considered valuable, worth promoting, and relevant to disciplinary health. While I have scarcely begun to fully address each assumption or its merit, I have revealed the numerous and substantive assumptions required for the discussed scientisms to be genuine spectres. My hope for the future of the dialectic is that, in addition to consistently and carefully disambiguating ‘scientism’, we exhibit greater awareness of and attention to the epistemological, methodological, and value-theoretic assumptions on which rest our attitudes toward particular forms of scientism.

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