*Philosophical (and Scientific) Progress: A Hinge Account**

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> Evidently, however, none of these arguments are really decisive, and the position is extremely unsatisfactory to any one with real curiosity about such a fundamental question. In such cases it is a heuristic maxim that the truth lies not in one of the two disputed views but in some third possibility which has not yet been thought of, which we can only discover by rejecting something assumed as obvious by both the disputants.
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> — Frank Ramsey (1925: 404)

Many philosophers think of themselves as in the business of knowledge production. Just as we have biological knowledge or mathematical knowledge, we also have something like *philosophical knowledge*: knowledge of various philosophical truths, whatever those may be. But knowers attract doubters, and philosophical knowledge seems ripe for the skeptical picking.[1] Indeed, such skeptics maintain (in some way, shape, or form) that philosophers don't have good, truth-tracking reason to know or justifiably believe the philosophical views they defend and advance. Such philosophers, that is, accept some form of *philosophical skepticism*.

Philosophical skepticism can be induced in different ways. But two prominent ways that have emerged in recent literature emphasize the evidential status of widespread disagreement within philosophy. In both cases, some feature of disagreement seems to inevitably lead us to philosophical skepticism.

The first way focuses on disagreements with *epistemic peers:* those that you have good, "dispute independent,"[2] reason to believe are as equally intelligent, well-informed, competent, and unbiased as yourself. Say, for

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[1] The early days of analytic philosophy saw philosophers as adding to the inventory of scientific truths that we already had. Think Russell, Neurath, Carnap, Mach, etc.

[2] See Christensen (2014: 144–45).

example, you find yourself in a philosophical disagreement with such a peer: you believe some philosophical proposition *p* and your peer believes *not-p*. Aware of this peer disagreement, how should you proceed, rationally speaking? Call this the *problem of peer disagreement*.

One tempting response to the problem is to be conciliatory and suspend your belief (or lower your credence) in *p*.[3] Your disagreement is evidence, higher-order evidence, of your ignorance. Pending further evidence, suspending your belief seems like the epistemically appropriate thing for you (and your peer) to do. Of course, while it may be reassuring to believe that *you* have better evidence than your peer, that *you* have "thought about this issue longer ... or that [*you*] are simply smarter than they are, [*your*] judgement superior to theirs"[4] it would be hard to rationally justify these inclinations given your interlocutor's status as a genuine epistemic peer.[5]

Assuming, then, that many, if not most, philosophical disagreements are disagreements between peer experts,[6] if the correct norm of belief revision for disagreement between peers is to rationally withhold belief, then it seems to follow that philosophers aren't rational in believing the views they defend and advance. And if they're not rational in believing the views they defend and advance, they certainly aren't rationally warranted in claiming any philosophical knowledge.[7]

Another route to philosophical skepticism emphasizes the lack of convergence and consensus in philosophy. If pervasive disagreement is the result of a lack of consensus—a lack of large, collective, expert convergence to the truth—and if consensus is a fairly reliable progress-tracking mechanism, then philosophy seems to be in trouble.[8] For without such

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[3] See Elga (2007), Kornblith (2010, 2013), Christensen (2014), Feldman (2010), and Lycan (2019) for discussion and related views. See also Fumerton (2010), Goldberg (2009, 2013), Licon (2012), and Barnett (2019) for discussion and defense of disagreement-based philosophical skepticism. See Kelly (2005, 2010) for a "steadfast" response.

[4] Kornblith (2010: 31).

[5] Again, the thought here isn't that *all* disagreements license such suspension; rather, only those disagreements had among *epistemic* peers.

[6] See Grundman (2013) for opposition to this premise.

[7] Assuming of course that justified belief is necessary for knowledge, or at least for knowledge in philosophy, where, like in mathematics, having arguments in favor of one's true beliefs is essential.

[8] Here it's assumed that progress is equated with the truth (progressing toward the truth, approaching the truth, etc.). Hence, the lack of progress in philosophy entails

convergence, so the worry goes, there seems to be no way of knowing whether (or which) philosophers have latched onto the truth, rendering philosophy an epistemically unreliable or unstable way of acquiring, or even aiming at the truth. Call this the *problem of convergence*.

The problem of convergence is made more acute when philosophy is compared to disciplines like mathematics or the natural sciences, disciplines in which genuine progress seems apparent and distinctive. Aristotelian physics, to take one example, isn't just a "deviant" or "unpopular" view in contemporary physics, but an inaccurate model of our observable universe.[9] Not so for Aristotelian conceptions of essence—the verdict in philosophy is still out on whether there are such essences or not.

The lesson for many is clear.[10] If the hard sciences are any guide, convergence on some kind of methodological standard seems to be the driver of progress.[11] Philosophy, lacking such "consensus premises"[12] as well as a methodological standard capable of generating the appropriate conditions for convergence, thereby fails to progress as a discipline. If philosophers intend to broadly model their discipline on the sciences—the dominant view among philosophers today—then comparing philosophy to the sciences

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lack of convergence to the truth. But even if philosophy doesn't progress in this way, it doesn't mean that it doesn't progress in other ways. See Chalmers (2015: 14) for further discussion.

[9] Although see Rovelli (2015).

[10] "Pessimists" about philosophy generally think that, compared to the sciences at least, there is relatively little progress in philosophy. Brennan (2010), Dietrich (2011), Horwich (2012), Chalmers (2015), Beebee (2018), Lycan (2019), and possibly van Inwagen (2004), are all pessimists in this sense. Importantly, the pessimist needn't think that *no* progress of any kind has been made in philosophy. To be sure, there is some progress, but nothing, as Lycan (2019: 93) pithily puts it, "to write a song about." Of course, where there are pessimists, there are also optimists. Gutting (2009), and more recently, Stoljar (2017a, 2017b), see philosophy's glass as being half-full.

[11] The "pessimist"/"optimist" labels are unfortunately misleading, as one might think nothing "pessimistic" or "optimistic" follows *per se* from the lack (or abundance) of philosophical progress. If, for example, one conceives of philosophy in a different way from current trends, say, as a discipline in which the type of progress philosophy makes is very much *unlike* the sciences—the kind of "non-epistemic" progress that one typically finds in disciplines like art and literature (see the later Wittgenstein or Waismann's (1968) *How I See Philosophy*)—then the lack of (epistemic) progress in philosophy isn't anything to be "pessimistic" or "optimistic" about. Or else, one might object to convergence as a measure of philosophical progress, and take it more as a sign of fad. See Chalmers (2015) for further discussion.

[12] Ibid.

on this score is apt, for the "progress" (or lack thereof) that philosophy makes seems importantly different from the sciences.[13, 14]

Just as skepticism about our knowledge of the external world is thought to engender a kind of despair, skepticism about our *philosophical knowledge*, if true, engenders a despair of a similar kind. Indeed, if the philosophical views we defend and advance—at talks, in journals, amongst ourselves and our peers—cannot be justifiably believed, let alone known, what exactly then do we take ourselves to be doing when we *do* philosophy? If philosophy is understood as a discipline wholeheartedly after The Truth, philosophical skepticism seems like a deep problem worth despairing over.[15]

We remain optimistic. Despair, we urge, needn't get the best of us. Philosophical knowledge *is* attainable. Progress is possible. But we aren't overly optimistic either. Philosophical skepticism has its place. Indeed, our view appeals to skeptical *and* anti-skeptical intuitions concerning the possibility and scope of philosophical knowledge and philosophical progress. As we'll explain, we take this to be an advantage of our view rather than a cost. Our plan in what follows is to shed light on the above two problems, the problem of disagreement and the problem of convergence, with special attention to the latter,[16] as well as the skeptical attitude they

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[13] To clarify, the claim isn't that the sciences aren't vulnerable to disagreement or to fads and fashions. The claim is that, compared to the sciences, philosophy is *more* vulnerable to such forces perhaps because it lacks a methodological standard that philosophers can agree upon, i.e., a clear empirical or mathematical way of adjudicating between competing theories and hypotheses.

[14] Although these two roads to philosophical skepticism can be taken independently, they intersect and overlap. Instead of suspending belief in the face of a peer disagreement, for example, one might instead remain "steadfast," tempted by the thought that *you* somehow got it right and your peer got it wrong. Now, this seems like a reasonable response if there is some methodological standard by which to measure the competency or quality of your evidence with respect to your peer. But assuming you and your peer are being logically consistent, what else beyond possessing the "right" philosophical intuitions could rationally support you remaining steadfast here? After all, philosophical theories are highly general and abstract, and largely insensitive to empirical matters. As Lycan (2019: 86) puts it, philosophical theories "face the tribunal of experience only at a huge remove." Without a shared methodological standard to fall back on, one is led to a more epistemically modest response: suspend belief!

[15] On *one* conception of philosophy at least. See footnote 11.

[16] We have dealt more extensively with the problem of disagreement in Coliva and Doulas (2022a). A first stab at dealing with both problems within a hinge-epistemology framework is Coliva and Doulas (2022b). Interested readers will do well to look at those

generate, by showing how our preferred epistemological framework—hinge epistemology—can help.

1 Hinge Epistemology

Here is what we take to be an extremely natural view about knowledge:

> Much of our knowledge rests on taking various assumptions for granted (or, put in a slightly different way, much of our knowledge stems from a system of assumptions).

Though this needs further fleshing out, we take the basic idea to be pre-theoretically compelling, commonsensical even. You know where your car is where you last parked it; yet, you know this only insofar as it's assumed (or taken for granted, or accepted) that your car hasn't been stolen or towed in the past hour. You know that you will be in Europe before the new year; yet this knowledge assumes that your flight won't be canceled due to poor weather conditions or that the pilots won't go on strike. Intuitively, these are assumptions that you take for granted but don't seem to know.[17]

Yet, some of the assumptions we take for granted are even more "basic" or "fundamental" than the ones mentioned above. Not only does your knowledge that your car is where you last parked it rest on various assumptions about local theft and parking laws, it also rests on taking for granted a number of other more fundamental assumptions: that your memory is mostly reliable, that nature trades in regularities and that your car didn't (and won't) just spontaneously combust, that your car is a physical mind-independent entity and not an idea of your mind, and that it exists even when unperceived, that you aren't dreaming or that an evil demon isn't radically deceiving you into thinking you own a car, and so on.

What is the epistemic status of these more "basic" or "fundamental" assumptions? Some have thought that while such assumptions aren't

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papers for details we cannot take up here, where our focus is more on the comparison between philosophy and science and mathematics and the problem of convergence as relevant to the idea of philosophical progress.

[17] Importantly, these knowledge claims aren't conditional. That is, they shouldn't be interpreted as saying: assuming my car hasn't been stolen, then I know that my car is where I parked it. The idea is simply that one's assumptions make certain knowledge possible—not that they guarantee knowledge given certain assumptions.

known, they are at least justifiably believed.[18] Such accounts take seriously the evidentialist requirement on epistemic rationality, the familiar thought that rational thinkers respect their evidence.[19] While knowledge rests on various assumptions that we take for granted, these assumptions—while not themselves known—are *justified* in that they are evidentially supported.

But it's hard to see how exactly assumptions such as these (e.g., that one isn't radically mistaken or deceived or that one's memory is mostly reliable, or that there are physical objects) could be, without threat of regress or circularity, justified or evidentially warranted. Take, for example, G.E. Moore's infamous two-handed proof. Moore's ordinary empirical experience as of seeing two hand-like objects, absent defeaters, seems to provide justification for his belief that he has two hands only insofar as he assumes that physical objects exist, that his sense organs work mostly reliably, and so on. For any reasons Moore may advance in favor of such assumptions would seem to presuppose their truth and therefore couldn't be appealed to in order to rationally ground belief in them.[20]

Though we can't defend the view here in detail,[21] we reject the evidentialist requirement on epistemic rationality and take seriously the Wittgensteinian idea[22] (originally defended in Coliva [2015]) that our most fundamental assumptions are evidentially *unwarrantable* but nevertheless *rational.* Epistemologists, we maintain, have operated with a conception of epistemic rationality that is overly narrow. Epistemic rationality "extends" to the evidentially unwarrantable; rationality itself requires us—skeptics and non-skeptics alike—to assume the existence of an external world, among other things. Indeed, *all* knowledge and justification take place amongst a backdrop of such assumptions. Following the Wittgensteinian metaphor,[23] we characterize such assumptions in terms of *hinges*: those things that must "stay in place" or "remain fixed" for justification and

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[18] See especially Harman and Sherman (2004, 2011).

[19] The evidentialist requirement on epistemic rationality is widely shared by epistemologists (although not necessarily under that name). See, for example, Hume (1748/1999), Quine and Ullian (1970), and Ayer (1972).

[20] Furthermore, as argued by Coliva (2015, 2020a), a priori or entitlement-style reasons in favor of them are hard to come by.

[21] For such a defense, see Coliva (2015, 2022).

[22] See Wittgenstein (1969, OC §§196–206, 110, 130, 166, 121, 559).

[23] See Wittgenstein (1969, OC §§341-343, 655).

knowledge of certain beliefs, empirical beliefs especially, to be possible. In short, we embrace *hinge epistemology*.[24]

2 A Hinge-Contextualist Account of Philosophical Disagreement

Consider again Moore's ordinary empirical belief that he has hands. Provided that Moore has the relevant experiences as of two hand-like objects before him (absent defeaters) Moore's belief is justified (and may even amount to knowledge) thanks to various hinges that are taken for granted, e.g., "My sense organs work mostly reliably," "There are physical objects", and so on. Hinges, then, make the justification for (and knowledge of) many ordinary empirical beliefs possible.

But not all our beliefs are empirical in this way. Some are philosophical. Hinges not only then make it possible for us to acquire justification for and knowledge of our ordinary empirical beliefs: they also make it possible for us to acquire justification for and knowledge of our *philosophical* beliefs too. Following Coliva and Doulas (2022a, 2022b) call such hinges *philosophical hinges* and call the philosophical beliefs that are made possible by taking for granted these hinges our *intra-theoretical* philosophical beliefs. Realism, in its various guises, for instance, may be considered a philosophical hinge, as opposed to anti-realism or idealism; similarly, theism—in some form or other—as opposed to agnosticism or atheism, may be another example of a philosophical hinge.[25]

On our way of carving up things, then, the object of our philosophical disagreements can either be philosophical hinges, intra-theoretical philosophical beliefs, or both:

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[24] Hinge epistemology is a family of loosely connected views. See, for example, Strawson (1985), Wright (1985, 2004, 2014), Williams (1991), Moyal-Sharrock (2005), Kusch (2013, 2016a, 2016b, 2017), Schönbaumsfeld (2016), Pritchard (2015, 2019), Coliva (2015, 2020a, 2022), and Barranco Lopez (2023). For alternative, evidentialist accounts of hinges see Piedrahita (2021), and Neta (2021). For virtue-theoretic forms of hinge epistemology, see Sosa (2013), Greco (2016, 2021), Ohlhorst (2023). Note: the hinge epistemology we assume here is explicitly that of Coliva (2015).

[25] Writing in a very different context, Sider (2011) nicely captures the phenomenology of philosophical hinges: "A certain 'knee-jerk realism' is an unargued presupposition of this book....This picture is perhaps my deepest philosophical conviction. I've never questioned it; giving it up would require a reboot too extreme to contemplate; and I have no idea how I'd try to convince someone who didn't share it" (18).

HINGE PHILOSOPHICAL DISAGREEMENT: Two parties to a philosophical disagreement *hinge-disagree* with one another if and only if they accept incompatible philosophical hinges.

INTRA-THEORETICAL PHILOSOPHICAL DISAGREEMENT: Two parties to a philosophical disagreement *intra-theoretically disagree* with one another if and only if they believe incompatible intra-theoretical propositions (but largely share the same philosophical hinges).

As we'll argue below, though hinge disagreements cannot be *epistemically* rationally resolved (this reflects the *skeptical* dimension of our position) they are nevertheless immune to the problem of peer disagreement—or at least, they cannot be resolved by appeal to evidential (and non-evidential) justification or warrants.[26] On the other hand, intra-theoretical philosophical disagreements are capable of rational resolution. Such disagreements, that is, *can* be rationally resolved, creating room for the possibility of philosophical knowledge (this reflects the *anti-skeptical* dimension of our position). But we'll save a full defense of this claim for the next section (§3).

2.1 Hinge Disagreements

Consider first disagreements over philosophical hinges, e.g., "There are physical objects", or "God exists." A philosopher of a broadly realist persuasion will assume the former hinge, while a philosopher of a broadly idealist persuasion will not (at least on one parsing of "physical"). Similarly, a theist might assume the latter, as opposed to an agnostic or an atheist.

As a way of motivating their realism, the realist might marshal perceptual evidence—*here are some hands*—in favor of their view. But the idealist will be unmoved. The perceptual evidence that the realist advances will be taken to show that such objects are really constructions out of sensory experience and therefore mind dependent. Similarly, for "God exists". The theist will appeal to biblical testimony or religious experiences, for instance. Yet, their opponents will simply consider that evidence question-begging. The Bible is a reliable source of information about God only if it is the revealed word of God. Thus, it owes its epistemic status to the antecedent

[26] We will omit this qualification in the following. So, whenever we talk of rationality, it should be understood as epistemic rationality, if not otherwise indicated.

assumption that God exists and reveals himself in it. Similarly, certain experiences will count as genuinely religious, even mystical ones, rather than delusions, say, only by taking for granted that God exists and manifests himself through those experiences.

Disagreements like these—let us call them *hinge disagreements*—seem incapable of rational resolution.[27] For consider two features that hinges such as "There are physical objects" are often taken to lack:

(i) *truth-evaluability*: hinges can't be evaluated for truth or falsity because they are neither true nor false;[28] and

(ii) *being the object of specific doxastic attitudes*: hinges aren't the sort of things that can be believed or disbelieved (neither for that matter can they be known nor unknown).[29]

If these two features are required for the rational resolution of most disagreements,[30] then given that hinges lack such features, *hinge disagreements* don't seem capable of rational resolution. This isn't to say that hinge revision is impossible; revising one's hinges is certainly possible, but such

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[27] This is what Coliva and Palmira (2020, 2021) call "the problem of rational inertia." See also Coliva and Doulas (2022a, 2022b) for discussion. Note: It must be stressed that by "rational resolution" we mean "epistemically rational resolution," that is resolution based on epistemic evidence, as opposed to a broadly pragmatic resolution, i.e., resolution based on pragmatic considerations. Coliva (2015) may be seen as a way of providing an epistemic, non-evidential resolution for the debate about "There are physical objects." Wright's (2004), although advertised as epistemic and non-evidential, has been claimed to be pragmatic in kind. For discussion, see Coliva (2015, chapter 2). Yet, Coliva's solution is based on an account of epistemic rationality that extends to the hinges that make it possible to acquire empirical evidence for or against ordinary beliefs about physical objects. Note, however, that Coliva (2023a) claims that such a move won't be possible in case of "God exists" if interpreted as a hinge of religious discourse. And it remains that even if epistemically rational on an extended notion of epistemic rationality, hinges would not be known or justifiably believed.

[28] This is the case for several hinge epistemologists: most notably, Moyal-Sharrock (2005). Coliva (2018), following Williams (2005), claims that hinges can be true in a minimalist way, rather than in an epistemically robust sense. Thus, their truth isn't due either to their correspondence to a world of mind-independent facts, or to their being justified or warranted at the limits of inquiry or independently of any other additional information.

[29] They aren't "beliefs" in the sense of being supported by reasons (or what is sometimes referred to as j- or k-apt beliefs). Note, however, that hinges can be the objects of belief-like attitudes such as acceptance. See Coliva (2022, chapter 4), and fn. 31.

[30] Truth, belief, and related notions are generally thought to be constitutive of disagreement. If we think disagreements are rationally resolvable, notions like truth, belief, etc., at least seem to be presupposed.

revision can't be induced in any epistemically rational way (say, by philosophical argument).

Even if we held that hinges are true in the minimalist way suggested in Coliva (2018), they would not be the object of j(ustification)-apt or k(nowledge)-apt belief,[31] for the reasons which could be adduced in their favor would ultimately presuppose them. Hence, they would not be the content of the kind of belief which normally figures in epistemic-peer disagreements, and which is liable to epistemic evaluation, such that at most only one party is correct.

This is the skeptical component to our proposal. Like the philosophical skeptic, we maintain that many of our philosophical views, specifically those that correspond to our philosophical hinges, are neither known nor justifiably believed, but rather assumed, or taken for granted, or accepted. Of course, our "skeptical" conclusion is reached in a different way from the ways discussed above. On our view, such assumptions aren't the sort of things that can be object of evidence-dependent disagreement because of their status as hinges. Our suggestion, then, is that a large swath of philosophical disagreements involve disagreements over hinges. This is why, we submit, so many philosophical disagreements seem irresolvable; they seem irresolvable *because they are*—at least if rational resolution is taken to depend on having conclusive evidence for or against a given proposition.

Notice, then, that the problem of peer disagreement doesn't arise here. In a disagreement between two epistemic peers, suspending or weakening one's belief may very well be a rational response to such a disagreement *but only if the disputants think they have evidence for their respective assumptions in the first place*. If these assumptions are hinge assumptions, however, given that hinges are evidentially unwarrantable a hinge disagreement, even between two epistemic peers, wouldn't license such a conciliatory response; neither for that matter would it license a "steadfast" response. Again, such disagreements aren't evidence responsive, hence an evidence-based resolution is not possible.

It might be urged that all this pushes the worry to a different place on the carpet. For our account seems to imply that the resolution of such

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[31] "Belief" in ordinary parlance covers a broader notion including what we consider acceptance or even faith. As stated in the main text, by "belief" here we are interested in j- or k-apt beliefs, which are constitutively apt for epistemically rational evaluation.

disagreements—hinge disagreements—is entirely arbitrary. And arbitrariness certainly seems like a reason to worry.

Now, even though our account entails that such disagreements aren't capable of rational resolution, resolution needn't be, in general, entirely arbitrary.[32] Adjudicating between different, incompatible philosophical hinges may be done on grounds that, at the very least,[33] certain hinges cohere better or worse with one's standing worldview. Holding that there are mind-independent physical objects, for example, may cohere better with our standing naturalistic worldview, which is predicated on the possibility of investigating nature empirically, where nature, in turn, is a figment neither of the human mind nor of a divine mind. A different worldview—a non-naturalistic worldview perhaps—would therefore yield different hinges. So, philosophical hinges can be evaluated on the basis of their virtues or vices depending on where one stands, so to speak; that is, depending on one's worldview. Again, these virtues or vices shouldn't be understood in a robustly epistemic way. They aren't truth-tracking and they don't provide evidential support for or against various philosophical hinges. But that doesn't mean they are entirely arbitrary either.

2.2 Intra-Theoretical Disagreements

Consider now a second kind of disagreement: disagreement over what we are calling intra-theoretical philosophical beliefs, the kind of beliefs that are made possible by one's philosophical hinges. While hinge-disagreements might be incapable of rational resolution, this doesn't mean intra-theoretical philosophical disagreements are rationally irresolvable. For unlike our philosophical hinges (which, as we explained above, are evidentially unwarranted) intra-theoretical philosophical beliefs are evidence responsive.

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[32] See Coliva and Doulas (2022a).

[33] Coliva (2015) defends a stronger claim at least with respect to those hinges that are constitutive of epistemic rationality, such that there are physical objects and that our senses work mostly reliably. Being constitutive of epistemic rationality, they are mandated by skeptics and non-skeptics alike. Notice, however, that this is not a direct response to skepticism—it does not show that, contrary to what skeptics hold—we know, and justifiably believe that there are physical objects. Rather, it is an indirect solution, which shows a flaw in the skeptical argument. Namely, that unless a proposition is held true based on epistemic reasons, it isn't epistemically rationally held. For reasons of space, we can't rehearse here the anti-skeptical moves made in Coliva (2015).

For example, taking for granted that there are physical objects allows one to meaningfully (and rationally) debate how physical objects are represented in perception, or what conditions need to obtain for beliefs about them to be true and/or justified or known. Taking for granted that there are other minds allows one to meaningfully debate how we can know other subjects' specific mental states, whether phenomenal (like pains and tickles) or representational (like perceptions and beliefs). Taking for granted the Principle of the Uniformity of Nature allows us to meaningfully debate how inductive generalizations work.

So, by virtue of taking for granted various philosophical hinges, reasons for or against our intra-theoretical philosophical beliefs can be produced, thereby making them *rationally held philosophical beliefs* which may be corroborated and may, at least in some cases, count as instances of genuine philosophical knowledge. Conversely, by taking for granted philosophical hinges, it is then possible to provide reasons for or against our intra-theoretical philosophical beliefs. This is the anti-skeptical component to our proposal. Insofar as our intra-theoretical philosophical beliefs can be rationally held, philosophical knowledge *is* possible.

Above, we suggested that unlike hinge disagreements, intra-theoretical philosophical disagreements are evidential (albeit thanks to one's hinges). But evidential in what way? Indeed, saying such disagreements are evidential or evidence responsive seems to imply that there are certain epistemic or methodological standards in place that constrain such disagreements making the rational resolution of such disagreements possible. Yet, as we mentioned in the introduction, it is often held that there don't seem to be any such standards in philosophy. Unlike in many of the sciences, philosophy is thought to lack such methodological standards and therefore it is thought not to "progress" in the same way (if it progresses at all). This, we noted, was one argument for philosophical skepticism.

We want to push against this. An intra-theoretical disagreement between two (or more) disputants who share many of the same hinges should, in principle, be amenable to rational resolution. The reason for this is because such disputants will be more likely to *converge* on a methodological standard, as we shall see in §4.

Thus, to summarize the proposal so far, we can say that while philosophical skeptics, contrary to philosophical "believers" or "dogmatists" (to borrow Sextus' expression) deny that we can have justified belief in (and therefore knowledge of) philosophical hinges – e.g. "There are physical

objects" – as well as justified belief in (and possibly knowledge of) their intra-theoretical downstream consequences – e.g. about how, for instance, perception of physical objects is possible; hinge epistemologists deny that we can have justified belief in (and therefore knowledge of) philosophical hinges,[34] while they affirm that we can have justified belief of their intra-theoretical downstream consequences.[35]

3 Science and De Facto Hinges

Many of those skeptical of philosophical progress (and hence of philosophical knowledge) think that philosophy lacks a certain methodological standard requisite for progress;[36] lacking such a standard is thought to be inimical to the production of genuine philosophical knowledge.

Methodological standards can range here, but examples from the hard sciences—mathematics and physics especially—are typically taken to be representative. For example, as Chalmers (2015) urges:

> The hard sciences have methods — proof in the case of mathematics, and the observational/experimental method in physics, chemistry, and biology — that have the power to compel agreement ... One difference [between the philosophical method and the method of the hard sciences] i(s) that the methods of experiment and proof start from widely agreed premises — observations in science, axioms in mathematics — and proceed from there to strong and surprising conclusions. (2015: 16)

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[34] Notice, however, that at least Coliva's version of hinge epistemology will claim that philosophical hinges are assumed (or accepted) – where assumption (or acceptance) is an attitude of holding a proposition true independently of having a posteriori or a priori evidence (or even non-evidential Wright-style entitlements) for its content. Furthermore, on her view, the particular philosophical hinge at hand, i.e. "There are physical objects", is among the few which are constitutive of epistemic rationality and therefore assumed (accepted) in an epistemically rational way. For details about the kind of attitude at issue and constitutively rational acceptance, see Coliva (2015, chapters 2, 4).

[35] Many thanks to Mark Walker for suggesting this incisive formulation. Of course, it is part of this position, especially as developed by Coliva, that the principle of Closure for epistemic operators such as justification and knowledge does not hold unrestrictedly, for it fails when (and, importantly, *only when*) the conclusion of an argument is a hinge, like in Moore's proof. For details, see Coliva (2015, chapter 3).

[36] When understood in a truth-tracking way. See footnote 8.

Again, apparently there is nothing quite like this in philosophy. As Chalmers goes on to point out, even if the denial of certain philosophical views can be surprising or implausible sounding, "the denial rarely has the implausibility of denying a mathematical axiom, or of denying a well-replicated experienced observation" (2015: 16–17)

There is a sense in which we think Chalmers is right about this. It would be a mistake to think that philosophical premises or conclusions are exactly in the same ballpark as mathematical or observational/experimental ones.

Nevertheless, we think "pessimists" about progress (such as Chalmers) who use scientific progress as a foil to philosophical progress tend to both *overstate* the amount of agreement there is in science and *overlook* just how similar the standards of theory choice/revision are in the sciences compared to philosophy.[37] Even if we can agree that philosophy lacks precisely the same sort of methodological standards that one finds in the sciences, it's not as if the standards typically found in the sciences *uniquely* determine which scientific theory is correct or incorrect. Indeed, it might be suggested that such standards have the power to compel agreement not *simpliciter* but only at moments of "normal science"; that is, moments at which a particular "paradigm" (or "exemplar")[38] is adopted. Such paradigms provide a community of practitioners (at a given time) with a shared set of norms or rules—standards for scientific practice—which are then used to evaluate theories, discoveries, and so on. Of course, these standards shift and change alongside each paradigm; they are then challenged, called into question, revised, or even abandoned at periods of "scientific revolution." The point is that *if* scientific knowledge is understood roughly in such a way—not as a cumulative progression towards the truth *per se* but something more non-cumulative—one might think that science and philosophy have much more in common, methodologically speaking, than commentators in the debate on philosophical progress have let on.

What we want to do in what remains is provide a rough sketch of how this specific picture of scientific knowledge and progress can help us better understand how philosophical knowledge and progress is possible on the hinge-theoretic view we have been developing here.

Consider the well-worn example of Galileo Galilei and Cardinal Robert

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[37] Perhaps one explanation for this that a kind of flatfooted scientific realism is usually presupposed from the get-go in these debates.

[38] Cf. Kuhn (1962/1970: 187–191).

Bellarmine and their dispute concerning planetary movements. Galileo controversially argued that the structure of the heavens could be explained by observational evidence he had acquired from his telescopic discoveries—a defense and vindication of Copernican ideas. Of course, at the time this spelled disaster for Galileo. The truth of the heavens was not, and could not, be demonstrated by experimental observation. Rather, so it was thought, the nature of the heavens was grasped through Scripture—biblical revelation—which found itself committed to various anti-Copernican ideas. Indeed, it was from this point of view that Bellarmine had mounted his arguments against Galileo.

As we know, Galileo's general method would eventually gain traction over Bellarmine's; observation (mediated by certain instruments), and not revelation, was to become a prominent pillar of the modern scientific method which would soon begin to privilege a more secular understanding of nature. Nevertheless, the eventual shift toward the Copernican paradigm wasn't due to the *decisive* observational evidence Galileo had at his disposal—indeed, he had no evidence of this sort. The apparent irregularities of the surfaces of celestial bodies that Galileo observed through his telescope could, after all, have been due to certain defects in the telescope itself and, as such, provided no certain proof of the revolution of the Earth around the Sun. Neither was it due to Galileo's evidence being correct: today, we think that the tides aren't caused by the rotation of the earth, but by the force of attraction exerted by the Moon on the surface of the Oceans. Yet, Galileo was highly convinced that the lunar theory of tides was wrong and mockingly rejected it on several grounds.

The history of science is replete with cases like this one; that is, examples of propositions which were taken for granted only then to be overturned during so-called "scientific revolutions." The case above highlights one sort of shift in assumptions: the shift from the Ptolemaic assumptions of Bellarmine and the Church to the Copernican assumptions of Galileo. But what's important to note about such cases is that the overturning of one paradigm isn't always (or even usually) based on decisive or correct evidence. Now, we don't want to suggest that there is any doubt today about which system is correct, even less that they are on a par and that there is nothing like a proof of the correctness of the latter (or that the system of proof is not objective).[39] The point is, rather, that at the time of

[39] Thus, we diverge from Richard Rorty's (1979) famous take on this issue. For Rorty, it

the shift from the Ptolemaic to the Copernican system there was not any definitive proof—no decisive evidence—in favor of the latter and against the former, as historians of science have long been concerned to show and as the Galileo-Bellarmine dispute illustrates.

It's precisely in this respect, however, that on our view philosophical disagreement/progress begins to resemble scientific disagreement/progress. In the scientific realm, however, what counts as a hinge seems a little less straightforward. Indeed, if we understand philosophical hinges as those sorts of propositions that cannot be non-circularly proved, that are constitutive of epistemic rationality and of entire areas of discourse, that are not truth-evaluable, etc., it seems we find very few propositions in science that could play such a hinge-like role.

Perhaps in this way, philosophical hinges find a more natural analog to axioms in mathematics.[40] For in mathematics, proofs of theorems are possible only by taking for granted certain axioms, which, as such, aren't provable, within that theory. Yet, what counts as an axiom in one theory may not be so in a different one (it may be a theorem) or may even be rejected, like in the case of non-Euclidean geometries that reject the axiom of the parallels. We won't pursue here the issue of the precise status of mathematical axioms in a hinge-epistemology framework, even though, at least prima facie, they resemble the kinds of hinge we have been discussing so far.[41]

What we want to press, rather, is that it's important that we make the following distinction: that between *de jure* hinges and *de facto* hinges.[42] De jure hinges are those hinges that cannot be non-circularly proved. Philosophical hinges are instances of de jure ones. According to Coliva (2015),

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is just because we are "the heirs of three centuries of rhetoric" about the importance of distinguishes between Science and Religion that we can no longer go back to the Ptolemais system.

[40] Coliva (2020b) proposes to consider axioms as hinges. The same would go for logic, and indeed for the myriad of non-classical logical systems which reject what in other systems is considered an axiom in classical logic (such as the principle of non-contradiction), differently rejected by paraconsistent logics, or the law of excluded middle (rejected in intuitionistic logic), together with double negation elimination. These alternative axioms then constitute alternate theories which face intra-theoretical problems.

[41] See Coliva (2020b), Martin (2022).

[42] See Coliva and Palmira (2020, endnote iv). This distinction is at the core of Coliva (2023b).

these are hinges like "There is an external world," "There are other minds," and so on; hinges that are constitutive of epistemic rationality and of entire areas of discourse. De jure hinges such as these allow perceptual and behavioral evidence respectively to be brought to bear onto beliefs about mind-*in*dependent objects and non-observable *minds*.

Yet, there are also *de facto* hinges, which, unlike de jure hinges, can be subject to verification. Consider, for example, some of the hinges Wittgenstein himself mentions in *On Certainty*: "Nobody has ever been on the Moon," "The Earth is flat," "Water boils at 100° C." Indeed, Wittgenstein insists that hinges are striated—some are more fundamental and universal than other ones (OC 96-99). Considering the three examples just mentioned, the first two we know are false today. All three, however, were at some point or another taken for granted by those participating in different kinds of scientific inquiry. (Indeed, the negations of the first two propositions and the third proposition might be taken for granted by us now.) They were "taken for granted" in the sense that inquirers eventually stopped subjecting them to verification. Hence, their function in scientific inquiry took on a different role—namely, as a means for determining what *counts* as evidence for what, and being held fixed in the face of contrary, recalcitrant evidence. Holding fix such propositions allows justification and knowledge to accrue on top of them—until, of course, the next paradigm shift, where they first are demoted to the role of mere hypotheses and then are subjected to verification again. The first proposition, "Nobody has ever been on the Moon," for instance, played a hinge-like role for Wittgenstein and many others in the early twentieth century until developments in science and technology called the proposition into question decades later.

It is important to stress that, in a hinge-theoretical framework, hinges are not like empirical beliefs, in being just as revisable, in principle, and being kept fixed only for pragmatic reasons. Rather, they work as norms of evidential significance, contrary to ordinary empirical beliefs, and are held fixed even in the face of recalcitrant evidence. So there is a difference in kind between the two classes of propositions, even though in time, or in context, their role may change, and an empirical proposition may become a hinge and a hinge may be demoted and go back to the role of an empirical proposition, which is brought to face the tribunal of experience directly (albeit thanks to a different system of hinges).

With the distinction between de jure and de facto hinges in place, we can better see how scientific disagreement can often involve disagreement

over scientific hinges. Consider again the shift from the Ptolemaic system to the Copernican system. Everyday experience seemed clearly in favor of the former. However, the apparent retrograde motion of planets was prima facie against it. The theory of epicycles was then invoked to safeguard the Ptolemaic system, as is typical whenever a proposition ends up playing a (de facto) hinge-like role; such a proposition becomes immovable and taken to be a norm of evidential significance, such that contrary evidence is explained away, or hypotheses added to make it compatible with the hinge it seems prima facie to be incompatible with. By contrast, as we mentioned, its overturn was not based on decisive or even correct evidence. Even though in time that evidence was acquired and "The Earth revolves around the Sun" is now what we might think of as an astronomical hinge.

4 Lessening the Gap

Let's now return to the issue of philosophical knowledge and progress. We said that disagreements over philosophical hinges like "There is an external world" aren't rationally resolvable but that intra-theoretical philosophical ones *are* rationally resolvable, at least in principle. This is because intra-theoretical debates involve epistemically grounded beliefs. We also said that the reason why such debates are rationally resolvable is because disputants are more likely to converge on a methodological standard when they share largely the same hinges.

We have tried to show how to make this view plausible by comparing it to our hinge-theoretic view of science sketched above. Indeed, though scientific paradigms don't shift in any epistemically rational way *per se* they nevertheless give rise to a kind of scientific knowledge and progress. Normal science is possible, that is, when practitioners converge on a cluster of de facto hinges and then start asking and answering questions based on those together with whatever evidence they may gather, especially of an experimental kind. Something similar, we suggest, goes on in philosophy. Philosophers are "puzzle solvers" in much the same way as scientists are in periods of normal science. Of course, the puzzles differ, but the spirit in which "normal" philosophical debate is conducted is along broadly "scientific" lines: by appeal to consistency, explanatory coherence and power, formal methods/axioms, and respect for the appearances (where "respect" entails that if one is going to reject the appearances one must have compelling reasons to do so). Philosophical disagreement is, in this way, no

more unusual or intellectually problematic than scientific or mathematical disagreement.

For example, once it's granted that there are mind independent physical objects (a philosophical hinge), it then becomes possible to ask questions about how what perceiving them consists in, and different proposals can be put forward to account for that. Those proposals, in turn, may be subject to various forms of control: Are they all coherent? Are they capable of solving a number of problems recognized as central to the domain under investigation? (Like, for instance, whether they can account for the fact that non-conceptual creatures, such as infants and animals, can perceive objects in their environment or whether perceptions can serve as reasons for the corresponding empirical beliefs, etc.) And, assuming at least some proposals pass muster, are they compatible with our best scientific theories about perception? If it turns out that all of them are compatible with our best scientific theories, then perhaps they are in fact empirically equivalent and we cannot conclusively embrace one over the other, at least for the time being.[43] But there's good reason to think that not all philosophical disputes are like this. In such cases, then, we might think that only the proposals that pass this final test will be retained.

The main and certainly relevant difference is simply that in science empirical—and especially experimental—evidence can eventually be gotten for or against a proposition that plays a hinge-like role, whereas this is hardly the case in philosophy, and for principled reasons. For, to repeat, in the former case, we are dealing with de facto hinges, whereas in the latter case we are dealing with de jure hinges, whose distinctive feature is to be such that they may not be non-circularly proved. This is tantamount to saying that all empirical evidence can be taken to be compatible with them as well as with their negation. Yet, a lot of science can be done and has been done while holding a certain proposition fixed, like at the outset of the Copernican system, without having decisive empirical evidence in its favor.

Nevertheless, on the hinge epistemology framework we have developed here, philosophy is not necessarily embarrassingly worse off than science,

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[43] Notice, moreover, that in science too there may be cases which do not (yet) admit of a determinate answer. Consider, for instance, the alternate accounts of light provided by the corpuscular and undulatory theories of light, which seem to fit in with different bodies of evidence.

or mathematics. For, as we have seen, in science and mathematics there too are hinges (either de facto or de jure), conceived of as theoretical assumptions or axioms. In science and mathematics too, there is a lot of intra-theoretical debate and narrowing down of admissible theories (which may not necessarily determine one single correct view). What remains different is that in philosophy there is neither proof, like in mathematics, nor any *experimentum crucis*, like in science. Yet, that pertains to the different nature of these disciplines and is no sign of lack of methodological rigor or of the impossibility of convergence or progress, despite sustained disagreement among philosophers.

5 Conclusions

Philosophy, we have argued, is not embarrassingly worse off than math and the hard sciences once these disciplines are conceived along the lines of hinge epistemology. Hinges characteristic of their respective domains are either de jure or de facto. In the former case, they aren't non-circularly provable, and in the latter case they are often first assumed without decisive, or even correct evidence in their favor. Furthermore, thanks to their domain-specific hinges, all these disciplines give rise to intra-theoretical beliefs, supported by domain-specific kinds of evidence. They give rise to disagreements too, which are epistemically rationally resolvable, at least in principle. Still, whatever higher degree of disagreement and lack of convergence among peers remains in philosophy should not be taken to show that there are no sound methodological standards in our discipline. Rather, it should be considered a sign of its specificity. That is, of its being neither an empirical discipline, like science, in which there may be an *experimentum crucis*, nor a purely demonstrative one, like mathematics, in which there is proof.

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