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ORIGINAL ARTICLE

Knockdown Arguments

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Abstract David Lewis and Peter van Inwagen have claimed that there are no "knockdown" arguments in philosophy. Their claim appears to be at odds with common philosophical practice: philosophers often write as though their conclusions are *established* or *proven* and that the considerations offered for these conclusions are *decisive*. In this paper, I examine some questions raised by Lewis's and van Inwagen's contention. What are knockdown arguments? Are there any in philosophy? If not, why not? These questions concern the nature of the philosophical enterprise and our answers have implications for the limits on the attitudes of informed, rational thinkers.

> "Perhaps philosophers need arguments so powerful they set up reverberations in the brain: if the person refuses to accept the conclusion, he *dies*."—Robert Nozick

What is philosophy good for? Some have recently said what it *isn't* good for—devising knockdown arguments. David Lewis confesses:

> The reader in search of knockdown arguments in favor of my theories will go away disappointed. Whether or not it would be nice to knock disagreeing

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> philosophers down by sheer force of argument, it cannot be done. Philosophical theories are never refuted conclusively. (1983: x)[1]

Peter van Inwagen claims:

> There are…no knockdown arguments in philosophy. There are no philosophical arguments that all qualified philosophers regard as compelling. (2009:105, cf. 34)

To a first approximation, a knockdown argument is one that establishes its conclusion conclusively. Many philosophers, perhaps unreflectively, try to do exactly what Lewis and van Inwagen say can't be (or at least isn't) done: they write as though their conclusions are *established* or *proven* and that the considerations offered for these conclusions are *decisive*.[2]

So, we're faced with some important questions. What are knockdown arguments? Are there any in philosophy? If not, why not? If so, what are they, and why are they knockdown? These questions concern the nature of the philosophical enterprise, but they have not received due attention.[3]

In this essay, I will begin to answer those questions. In Sect. 1, I shall characterize knockdown arguments in a way that fits with common talk. Then, after clarifying in Sect. 2 the position staked out by Lewis and van Inwagen, I will assess in Sect. 3 some reasons for thinking there are no knockdown philosophical arguments. In Sect. 4, I'll propose and defend an argument against the idea, suggested by van Inwagen, that there are knockdown arguments in non-philosophical fields, but none in philosophy.

Before moving on, it's worth observing that another philosophical question hides beneath questions about knockdown arguments. How *wide* are the limits on the doxastic attitudes of rational, informed people?[4] Bertrand Russell raised a similar

[1] In Sect. 2 I discuss Lewis's exceptions [viz., "(…Gödel and Gettier may have done it.)"]. It's worth comparing this passage to a couple others. Lewis declared: "I am an atheist. So you might suspect that my purpose is to debunk free-will theodicy, and every other theodicy besides, so as to provide—at last!—a triumphant knockdown refutation of Christianity. I am convinced that philosophical debate almost always ends in deadlock, and that this case will be no exception" (1993: 150). In a posthumous paper (edited by Philip Kitcher using Lewis's notes and Kitcher's memory of conversation with Lewis), Lewis writes: "In my view, even the most ambitious version (of the argument from evil) succeeds conclusively. There is no evasion, unless the standards for success are set unreasonably high" (2007: 231). Perhaps this late text represents a change to Lewis's earlier view: he might be read as suggesting there is a knockdown philosophical argument against theism. An alternative reading is that he thought requiring a knockdown argument as the "standard for success" was "unreasonable" and that the argument from evil didn't succeed by such a standard. (But then why would Lewis say that any version of the argument "succeeds conclusively"?)

[2] Van Inwagen remarks that most present-day analytical philosophers "believe that there are knockdown arguments in philosophy. (And it is certainly true that they believe that there could be.)" (2004: 339). Notably, he admits that writing as if there are no knockdown arguments in philosophy is virtually impossible for philosophers, himself included (2006: 37–38), cf. (2004: 338–339).

[3] To my knowledge, no recent journal article or book chapter systematically explores knockdown arguments. (Wreen (1995) is entitled "Knockdown Arguments", though it's concerned with the *argumentum ad baculum*, not what we'll call knockdown arguments.)

[4] Closely related questions have been raised in discussion of "rational uniquness": see White (2005), Feldman (2007: 204–205), Kelly (2010: 117–121), and Ballantyne and Coffman (2011).

question to begin *The Problems of Philosophy*: "Is there any knowledge in the world which is so certain that no reasonable man could doubt it?" (Russell comments on his question: "This question, which at first sight might not seem difficult, is really one of the most difficult that can be asked" (1997: 7).) That kind of question has a long history, going back to Descartes, Locke, Hume, and Kant, who investigated the limits of rational inquiry and knowledge. As I will suggest in Sect. 1, if there are knockdown arguments, there are theses that no rational, informed person should doubt—there are some strict limits on the attitudes that such people could have. Indeed, if rational and informed people may take a range of attitudes toward *all* philosophical theses, then there are no knockdown arguments in philosophy. So whether or not there are (or could be) knockdown arguments reveals something about the limits of rational inquiry. We may begin to address this further issue by exploring knockdown arguments.

1 What is a Knockdown Argument?

Knockdown is a metaphor. What, exactly, is a knockdown argument supposed to knock down? A person (as Nozick's line may suggest)? Perhaps a thesis? I take such arguments to knock down particular attitudes. If a knockdown argument has some proposition p as its conclusion, what gets knocked down is belief in not-p and suspension of judgment regarding p. A knockdown argument is one that, in some sense, establishes its conclusion *conclusively* so that failing to accept that conclusion is not a rational option.

But what is it for an argument to do that? Can we say more? For starters, I will try to spell out what some philosophers mean when they talk about "knockdown arguments". I do not mean to define a vague technical term. The goal is to examine a few suggestions about what a knockdown argument is, and then to explore logical space using those suggestions as a springboard.

Van Inwagen's remark that a knockdown argument is one that "all qualified philosophers regard as compelling" offers a starting point. A given argument, we may say, lies in a particular field of inquiry (geology, physics, history of Soviet biological science, whatever), and that field has *experts*, namely those who count as "qualified". Among philosophers and non-philosophers alike, it is sometimes implied that knockdown arguments bring about agreement among experts. Van Inwagen remarks that he once thought that Church's Thesis, a thesis in mathematics, could be proven in such a way that meets this high standard. But then he learned that

> an important authority (László Kalmár) had his doubts about the cogency of the argument I had found so impressive and was in fact inclined to think that Church's Thesis was false. Since I was unwilling to suppose that Kalmár was mad or irrational, I changed my mind. "Back to zero," I thought. (2006: 39–40)

The suggestion here, it seems, is that the rejection of an argument by an expert implies it is not knockdown.

Can this idea be used to characterize knockdown arguments? We can put it as follows:

> A: X is a knockdown argument iff all experts accept X's conclusion on the basis of X's premises.

Notice that A characterizes knockdown arguments in *sociological* terms—I mean, in terms of a sociological fact, namely, agreement among experts. But if we assume that experts can make mistakes, even when they agree, their agreement over some thesis need not entail there is a knockdown argument. It is possible, after all, that fallible experts accept X's conclusion on the basis of its premises, even though it is not a knockdown argument. Perhaps X is an awful argument; X is so patently awful that many non-experts, unblinkered by professional commitment, can see as much. Yet the experts are biased and thus happen to think X is conclusive. So, all experts accepting X's conclusion on the basis of its premises is not sufficient for it being a knockdown argument. Neither is it necessary. It is possible that some experts (mistakenly) do not accept X's conclusion on its premises, even though X is a knockdown argument; and it is possible that some experts for some reason haven't so much as heard of that argument. But A implies any argument that such experts fail to accept is not knockdown and that seems dubious.

Perhaps knockdown arguments are better characterized in *normative* terms. The idea might be that a knockdown argument is one that were someone to understand the argument, it would be *epistemically irrational* for her not to accept it. As we saw with A, the class of experts was at issue; a better characterization might focus on thinkers more generally. Van Inwagen appears to presuppose something similar:

> [A]nyone who does not agree that the continents are in motion either does not fully appreciate the data and arguments a geologist could put forward in support of the thesis that the continents are in motion, or else is intellectually perverse. (There exists an organization called the Flat Earth Society, which is, as one might have guessed, devoted to defending the thesis that the earth is flat. At least some of the members of this society are very clever and are fully aware of the data and arguments—including photographs taken from space—that establish that the earth is spherical. Apparently this is not a joke; they seem to be quite sincere. What can we say about them except that they are intellectually perverse?) (2009: 21)

The reason these flat-earthers are "intellectually perverse" is supposed to be obvious: there is a knockdown argument that they understand perfectly well but they do not accept its conclusion. They apparently have strong reason to accept the premises of that argument but they resist its conclusion, and their doxastic perversion makes them irrational. (I assume that intellectual perversity implies irrationality, though not vice versa.) This geological argument is supposed to render irrational anyone, expert and non-expert alike, who grasps it but does not grant its conclusion. With that idea in hand, here is an initial stab at a normative characterization:

> B: X is a knockdown argument iff, were any subject S to understand X, then S would be irrational not to accept X's conclusion on the basis of its premises.

B faces a counterexample. Suppose that X is a knockdown argument and that Claire comes to appreciate X. Before accepting X's conclusion, however, Claire comes to

believe this: she has accidentally ingested peyote. She knows that peyote inhibits proper cognitive function. She has not in fact eaten peyote; but since she has excellent reason to believe otherwise, she suspects that she has failed to understand X. To put it another way, Claire has acquired an *undercutting defeater* for thinking that she has understood X: she has understood it, but her reason for thinking as much has been removed. The following observations apply to the example: (*i*) X is a knockdown argument, (*ii*) Claire understands X, (*iii*) she does not accept X's conclusion, but (*iv*) there is nothing irrational about her not accepting that conclusion, given her good reason to believe she has ingested peyote is thereby a reason for her to doubt she has understood X. This example shows that the conditional on B's right-side is not necessary for X being a knockdown argument: X can be a knockdown argument without that conditional coming out true.

One way to repair B is to rule out defeaters for the thought that we have understood the argument (i.e., defeaters for S's *believing* that S understands it).

> C: X is a knockdown argument iff, were any subject S to understand X and lack defeaters for believing S understands X, then it would be irrational for S not to accept X's conclusion on the basis of its premises.

There is reason to think C is not satisfying. Supposing C is true, any argument—no matter how powerless it is to conclusively establish its conclusion—might come out as a knockdown argument. Take an example to see why: Wilson understands a weak, non-knockdown argument, W, while lacking defeaters for thinking he has understood it. Let's suppose that W's premises lend some small support for its conclusion, but if Wilson thought about it for a few moments, he would recognize that it is inadequate. While none of Wilson's current beliefs count as good reasons for rejecting W (that is, reasons to deny W's premises or to deny that the premises support W's conclusion, or even reasons to deny W's conclusion itself), he nevertheless rejects W. Keep in mind that Wilson is not aware that W is weak and has no reason to reject it. Isn't there *something* irrational about his rejection of W? It appears so. Now let's assume that there is nothing special about Wilson. Were *any human subject* to understand W and lack defeaters for believing they understand W, it would be irrational for them not to accept W's conclusion on the premises, too. Here, the right-side of C is satisfied and that implies that W is knockdown. But we should never say a weak argument like W is knockdown. So, C's right-side is not sufficient for its left-side.[5]

C stands in need of tinkering. It may be tightened up by distinguishing between different *degrees of irrationality*. In the above example, it seems that something goes wrong if Wilson rejects a weak argument like W *without reason*. Yet whatever goes wrong is not on a par with what goes wrong if someone rejects a knockdown argument. There are misdemeanors—and there are felonies. If Wilson rejects W absent reason to do so, he does something *weakly* irrational. That is expected because, as we have assumed, W is a weak argument. Crucially, a knockdown argument makes a conclusion *so evident* for a thinker that it would be *strongly* irrational for her not to accept it. So here's the fix:

[5] An anonymous referee helpfully pressed me to clarify this objection.

> D: X is a knockdown argument iff, were any subject S to understand X and lack defeaters for believing S understands X, then it would be strongly irrational for S not to accept X's conclusion on the basis of its premises.

There are questions about how to understand degrees of irrationality. I'll ignore those here and proceed to discuss knockdown arguments, using D as a working characterization.[6]

According to D, a knockdown argument is not one that brings about agreement. Instead, it is one that *ought to* bring about agreement, were everyone to understand it while lacking defeaters for thinking they understand it. Importantly, if X is a knockdown argument, but those who understand it are biased or intellectually perverse, X won't lead to agreement. That may be disappointing, but complaints should be lodged with the audience, not the argument. D also leaves the logical properties of a knockdown argument open. Such an argument might be deductively valid or not. Of course, if we think, for instance, that both some mathematical proofs and some biological arguments, which depend on various inductive and abductive inferences, can be knockdown, then we will want to permit knockdown arguments to be either deductive or non-deductive. So far as I can tell, D fits with what some philosophers mean when they talk about "knockdown arguments".[7]

It is worth underlining that knockdown arguments most directly concern evidence and rationality, not the truth. As a result, there may be knockdown arguments for false theses. Here is a plausible example from physics.[8] In the nineteenth century—prior to Einstein's famous 1905 paper on special relativity, and its aftermath—all of the best physicists agreed that light and other electromagnetic phenomena were carried by a medium they called the "luminiferous ether". On the basis of the most advanced science of the day, physicists agreed that the ether was everywhere. But for a variety of reasons, including the implications of special relativity, we now know that luminiferous ether is a fiction; and one of the revolutions in early twentieth-century physics was the banishment of this idea from dignified science to the intellectual scrap heap. Plausibly enough, before Einstein's paper, there were knockdown arguments for propositions such as *the luminiferous ether exists* and *the ether has such and such properties*. That is true, I surmise, even though there are nowadays knockdown arguments for the proposition that the ether doesn't exist. The moral of the story: knockdown arguments guarantee the strongest of rational credentials for our beliefs, but not the truth itself.

[6] I am at moments inclined to use "maximally irrational" in place of "strongly irrational" in D, but that would imply that there are not degrees of strength among knockdown arguments. I choose to leave the issue unsettled.

[7] Perhaps what philosophers do mean isn't what they should mean. As best I can tell, D mostly fits with van Inwagen's use of "knockdown argument" in his (2009) and (2004), and one proposal for "philosophical success" (2006: 39–40) (namely, an argument that "should convert any rational person"). And van Inwagen tacitly assumes in (2004) that he and Lewis use that term in the same way. I submit van Inwagen's tacit assumption as fairly good evidence that D also fits with Lewis's use of the term. The philosophers I've informally polled have agreed that something like B or C or D, but not A, is what they and their colleagues mean by the term.

[8] For the details, I am indebted to Benjamin Wilson.

2 Questions and Distinctions

Are there any knockdown arguments? And are there any in philosophy? These are important questions and, as I've noted, they give us a handle on the limits of rational inquiry. It's worth considering some answers given by van Inwagen and Lewis. Van Inwagen answers the first question affirmatively: there are such arguments in fields like geology, mathematics, physics, history, and the like.[9] Lewis is silent on that question. Both answer the second question negatively: there are (almost) no knockdown arguments in philosophy. (See the quotations in the introduction.)

The second answer comes with a qualification, however. Both van Inwagen and Lewis allow that there may be knockdown arguments of a special sort in philosophy. Lewis remarks that "[p]hilosophical theories are never refuted conclusively. (Or hardly ever, Gödel and Gettier may have done it.)"[10] And Van Inwagen agrees with Lewis here,[11] bringing the qualification into somewhat sharper relief by distinguishing between *substantive* and *minor* theses. To follow van Inwagen's idea, the two philosophers actually deny that there are knockdown arguments for substantive theses, while allowing there may be some such arguments for minor theses. A substantive thesis is, for example, the claim that free will is incompatible with determinism or that knowledge is justified true belief. A minor thesis is, for example, the claim that the analysis of knowledge *isn't* justified true belief.[12]

(But why must the line between substantive and minor theses get drawn *there*? I don't see why the thesis that knowledge isn't justified true belief, or the thesis that there is not a complete and consistent set of axioms for mathematics, *aren't* substantive theses. If you take epistemologists' folklore seriously, you will think that for a long time—from Plato until 1963—philosophers accepted the JTB account of knowledge. Isn't it rather significant that Edmund L. Gettier III (or, decades earlier, Russell) showed the error in this way of thinking? And doesn't that suggest the thesis Gettier established is indeed substantive? Leaving that aside, how are we supposed to discern that one thesis is substantive and another is minor? Van Inwagen doesn't tell us. That is all just to say: if we draw the line between substantive and minor a little differently than van Inwagen has, we may well say that there are knockdown arguments for substantive philosophical theses.)

From here on in, when I discuss the claim that there are no knockdown arguments in philosophy, only arguments for substantive theses are at issue. Unfortunately, neither Lewis nor van Inwagen has made explicit his reasons for thinking there are no knockdown arguments in philosophy. True, both Lewis and van Inwagen don't present themselves as offering knockdown arguments. They both run "cost counting" methodologies instead. For them, the intuitive and theoretical costs and benefits of a thesis, not a knockdown argument for or against it, determine whether it is fit for acceptance. But *that* doesn't much reveal why there are no knockdown

[9] See van Inwagen (2009: 10ff) and (2004: 335, 339).

[10] Lewis (1983: x), cf. Lewis (1993: 150) (the relevant part of which is quoted in footnote 1 above).

[11] See van Inwagen (2004: 335) and (2006: 39).

[12] The distinction between substantive and minor theses won't be clear cut. Van Inwagen (2006: 40) says that there may be "borderline" cases of substantive theses.

arguments. So next I will canvass and assess a few reasons that might be offered to think there are none. Then I'll criticize the position van Inwagen has suggested, arguing that it is preferable either to admit that there are knockdown arguments in philosophy or to deny that there are particular knockdown arguments outside philosophy. The thought that there are knockdown arguments outside philosophy, but none inside, is hard to sustain.

3 The Case Against Knockdown Philosophical Arguments

Let us suppose that someone is unsure whether or not there are knockdown arguments in philosophy. What reasons might we give this person to think there are none? Although there are many potential reasons, I will limit the discussion here to five.

The first reason appeals to a common sentiment: that there is a *fundamental difference* between philosophy and the sciences with respect to the sort of conclusions practitioners can expect from their subject matter.[13] The sentiment is captured in Russell's memorable quip that "[s]cience is what you know, philosophy is what you don't know."[14] (Of course, if Russell counts that claim as the handiwork of philosophy, he should not claim to know it.) Van Inwagen hints at this difference, too, when he says there are "established facts" in fields like geology and mathematics, but no such facts in philosophy.[15]

While there undeniably is a difference between philosophy and other fields, it is hard to say exactly what it amounts to. One possibility is that the difference *just is* that there are no knockdown arguments in philosophy. But that won't do. It is question-begging. Remember that we are trying to offer someone who is unsure whether there are knockdown arguments in philosophy a reason to think there are none; she will quite properly find this reason unimpressive. An alternative possibility is that the difference is something that entails, or makes it probable, that there are no knockdown arguments in philosophy. Then there's a question: what is that something? I can't myself say. There are certainly ways in which philosophy differs from the sciences. It is sometimes suggested that the *subject matter* of philosophy has to do in part with very general and abstract concepts like knowledge, causation, luck, and justice. And so the *methodology* of philosophy depends critically on "rational insight" or "intuition" in exploring its subject matter. Or it may be that the critical distinction between science and philosophy concerns

[13] Conversations with E.J. Coffman and Stew Cohen helped here.

[14] Russell (1995: 204). Compare to Russell's remarks near the end of *The Problems of Philosophy*, which should at least remind us of the position van Inwagen has staked out: "[I]t cannot be maintained that philosophy has had any very great measure of success in its attempts to provide definite answers to its questions. If you ask a mathematician, a mineralogist, a historian, or any other man of learning, what definite body of truths has been ascertained by his science, his answer will last as long as you are willing to listen. But if you put the same question to a philosopher, he will, if he is candid, have to confess that his study has no achieved positive results such as have been achieved by other sciences" (1997: 154–155).

[15] Van Inwagen (2009: 10ff).

agreement about what constitutes a proper test or experiment of a thesis: in science there is (arguably/some) agreement, in philosophy there is not.

Perhaps there is a way to argue from these claims about subject matter and methodology to the conclusion that there are no knockdown arguments in philosophy. If so, it isn't obvious how the argument would go—and surely these claims about the subject matter and methodology will be disputed by some. Maybe there is a reason in the neighbourhood to think there are no knockdown arguments in philosophy, but it is not immediately apparent what it is.

Another reason employs a familiar idea about *epistemic underdetermination*. The idea is that whenever a thinker's "web of belief" must be revised, the question of which belief(s) to revise is underdetermined. It might be claimed on that basis that there are no knockdown arguments in philosophy. Perhaps, for any putative knockdown argument, a thinker can understand it but reject one of its premises or assumptions, and thereby do nothing irrational by not accepting its conclusion. That may be defensible and I don't mean to dispute it here. I want to observe, though, that this reason to think there are no knockdown arguments in philosophy seems to count equally against knockdown arguments outside philosophy. It is no help if we claim there are knockdown arguments in other domains.

A third reason, related to the previous one, connects a thesis about *the limits of rational belief* with knockdown arguments. According to "rational uniqueness" or the "uniqueness thesis", given any set of evidence E and any proposition *p*, there is (at most) one uniquely rational doxastic attitude (i.e., believing, disbelieving, suspending judgment) to take toward *p* on the basis of E.[16] For present purposes, we may limit the scope of *p* to all substantive philosophical theses. Roughly put, uniqueness implies that there's one rational attitude determined by some bit of evidence. Some epistemologists reject uniqueness and embrace "rational permissiveness" instead. According to one quite strong version of permissiveness, for any *p* and evidence E, E allows someone to rationally accept *p* or deny *p*. There is a link between this brand of permissiveness and knockdown arguments: if strong permissiveness is true, then knockdown arguments are impossible. To see why, suppose that X is an argument with *p* as its conclusion and E is the premises including the relevant evidence for those premises. If X is a knockdown argument, then it is such that if someone were to understand X and have the relevant evidence E while lacking defeaters for thinking she understands X, it would be strongly irrational for her not to accept *p*. Now suppose that, on the basis of E, there is *not* only one rational attitude to take toward *p*; there is more than one rational attitude—that is, strong permissiveness is true. But then X couldn't be knockdown, for it would be rational to understand X and have E while failing to accept *p*. If we think uniqueness is false because strong permissiveness is true, there can be no knockdown arguments.

I doubt this is a compelling reason for someone who happens to be unsure whether there are knockdown arguments to think there are none. First, there is disagreement over the truth of uniqueness. Roger White (2005) and Richard Feldman (2007: 204–205) raise some considerations against strong

[16] See White (2005), Feldman (2007: 204–205), and Kelly (2010: 117–121) for discussion.

permissiveness.[17] Suppose you claim that given one's total evidence, it is rational to either accept that *p* or deny it; you affirm strong permissiveness. As it happens, you believe that *p*. The critial question: why believe *p* rather than deny it? Given the way you deny uniqueness, it can't be that the evidence that *better supports* one attitude over the other; but then it doesn't seem as though there is a good reason to believe *p* rather than deny it. Absent good reason to take one attitude rather than the other, your attitude ends up looking arbitrary—it is not obviously different than an attitude formed by flipping a coin. But an attitude based on a coin flip isn't rational. So why think your attitude is rational, given your denial of uniqueness? A second worry about the above reason is this: even if that strong permissiveness is true, it doesn't follow that it is irrational to accept that there are knockdown arguments. To see why, suppose that some set of evidence, E, bears on the claim *that there are no knockdown arguments*, N. If strong permissiveness holds, does E determine that belief is *the* rational attitude to take toward N? Not necessarily. For all we know, it might also be rational to disbelieve N or suspend judgment on it. So, even granting permissiveness, we need not accept N: we might be able to rationally accept N's negation or suspend judgment on N. Finally, note again that if the above reason precludes knockdown arguments in philosophy, it does the same outside philosophy. It thus doesn't sit comfortably beside the claim that there are knockdown arguments outside philosophy.

A fourth reason to think there are no knockdown arguments involves a philosophical expert who offers some *testimony*: "Well, I've been working in the field for years, searching carefully for knockdown arguments. But I haven't found any and I don't believe any are to be found." Experts like Lewis and van Inwagen are ready to testify. On the basis of an expert's say-so, someone who is unsure whether there are such arguments might come to believe there are none. Yet, as van Inwagen observes, "most present-day analytical philosophers … do believe there are knockdown arguments in philosophy. (And it is certainly true that they believe that there *could* be.)"[18] So, there are many other experts who are willing to supply contrary testimony. Indeed, if van Inwagen has gotten the sociology right, perhaps the majority view weighs against his view. But without a way to decide which experts to trust, or how to balance the testimonial evidence, testimony for or against knockdown arguments in philosophy is of small help.

Finally, consider a reason for thinking there are no knockdown philosophical arguments that begins with *disagreement*. As we observed in Sect. 1, characterizing knockdown arguments in terms of the agreement they might produce is problematic. Yet disagreement in philosophy may count as evidence against the claim that there are knockdown arguments in that field. An argument in this spirit might proceed as follows. If there were knockdown arguments in philosophy, then there would be widespread agreement among philosophers about some substantive theses. But there is no such widespread agreement. Therefore, there are no knockdown arguments in philosophy for any substantive thesis.

[17] The following argument sketch approximates a more detailed argument in White (2005). Ballantyne and Coffman (2011) critically assess White's case for uniqueness.

[18] Van Inwagen (2004: 338–339).

In my view, there are reasons to be unsure whether philosophers would agree even if there were knockdown arguments. If that is so, then the above argument's conditional premise should be *counterbalanced* for us—our reasons to accept it are no stronger than our reasons to deny it.

Let me argue this out. One reason here starts with the doubt that there is philosophical expertise. Plausibly, some might say, philosophers can be experts about what some philosopher once said, for example, or how to construct a valid argument, but not about what substantive theses are *true*. Without experts on substantive philosophical theses, why think that the philosophers' proposals about what's true are reliable? Accordingly, as the doubt continues, there will not be agreement over substantive theses. So, there is one reason to expect there won't be agreement and this reason should be in force even if there were knockdown arguments.

A second reason begins with the idea that understanding philosophical arguments is hard and misunderstanding them is easy. Understanding an argument in theoretical physics or mathematics is hard, too, though in a different sense. There is a kind of *conceptual squishiness* or *mushiness* in philosophical discourse and this makes presenting philosophy hard in a different way than other fields happen to be hard. This is plausibly so because of the cognitive limitations of practitioners[19] and the vagaries of language that philosophical arguments often involve. It isn't that philosophical propositions are hard to grasp when presented with clarity—it is that they are not often presented with clarity. In fairness, perhaps that is because the philosophical labourers are few. And maybe there is a much higher degree of agreement in the sciences than philosophy because significantly more lives and resources have been devoted to scientific work. It is possible, we may hope, that more effort in philosophy will serve to identify and clarify knockdown arguments, leading to more widespread agreement than we find at present.[20]

So even if there were knockdown arguments, we should think it is unclear that there would be more agreement among philosophers, given that it is hard to understand, and easy to misunderstand, philosophical arguments. Given considerations like these, even if there were knockdown arguments, it is hard to see whether they would bring about widespread agreement. I propose, then, that we neither affirm nor deny the conditional that if there were knockdown arguments in philosophy, there would be widespread agreement. We should suspend judgment here. But then the argument from disagreement to no knockdown philosophical arguments fails.

If you agree with Lewis and van Inwagen, none of the above need dishevel your opinion. In fact, some or all of the reasons considered might play into an overall assessment that, while not conclusive, favours your view. But I want to observe that these five reasons against knockdown arguments in philosophy are inconclusive. Reasons may be multiplied, but inconclusiveness will remain. That should be

[19] This is a central theme in McGinn (1993). And see van Inwagen (2009: 14) for his comparison between acrobats and metaphysicians.

[20] Parfit makes a similar point about ethics (1984: 453–454).

unsurprising, for one natural way to *conclusively* establish that there are no knockdown arguments in philosophy remains off-limits: a knockdown argument.[21]

4 From Non-Philosophical Knockdown Arguments to Philosophical Knockdown Arguments

It sure seems easier to find knockdown arguments outside philosophy than inside. Witness the remarkable accomplishments of fields like physics, mathematics, biology, and chemistry, and also the widespread agreement among informed, intelligent people on such matters. These rational successes overshadow the endless disagreement and confusion among philosophers. So it's natural for us philosophers to despair of gaining conclusive results from our arguments while at the same time admiring the triumphs of physics, et al.[22] As mentioned in Sect. 2, van Inwagen gives voice to this bittersweet mix of admiration and despair: there are knockdown arguments in non-philosophical fields, he says, but none in philosophy. Tempting though this view may be, I shall argue that it's hard to maintain.

Following van Inwagen, let's call the conclusion of a knockdown argument an "established fact"[23] and grant that there are such facts in non-philosophical fields. Writes van Inwagen:

> It is an established fact, a piece of information, that the continents are in motion. We call the latter fact "established" because anyone who does not agree that the continents are in motion either does not fully appreciate the data and arguments a geologist could put forward in support of the thesis that the continents are in motion, or else is intellectually perverse. […] It cannot be said that the existence of an ultimate reality is an established fact, however … (2009: 21)[24]

('Ultimate reality' is whatever there really is behind appearances. It is the subject-matter of metaphysics; if there is no ultimate reality, metaphysics has no subject.[25])

[21] Someone may insist that the thesis that there are no knockdown arguments in philosophy is a piece of *metaphilosophy* and that metaphilosophy is not itself a branch of philosophy. So, if there can be knockdown arguments in metaphilosophy, that thesis might itself be conclusively established. It is less than obvious, however, why anyone would think that metaphilosophy isn't philosophy. (What else could it be?)

[22] Could we call this "Physics Envy"?

[23] Van Inwagen writes: "Consider those enviable theoretical disciplines in which 'pervasive agreement' is the order of the day. Consider any proposition that, as the result of the researches of the experts in these disciplines, is generally agreed to be true … Will there not in every case be at least one knockdown argument for the truth of this proposition (or at least an argument that the experts regard as a knockdown argument)?" (2004: 339).

[24] Compare: "Unlike the physical sciences, history does not have "a large body of settled, usable, uncontroversial theory" at its disposal but, like the physical sciences, it does have a large body of established and incontrovertible fact to work with. In philosophy, however, there is neither settled theory nor incontrovertible fact" (2004: 335). Van Inwagen's last observation applies to his philosophical position on the absence of knockdown arguments in philosophy: his position is neither settled theory nor incontrovertible fact (though he might think it is either one or the other).

[25] Van Inwagen (2009: 2–4).

Since van Inwagen here admits there are knockdown arguments in geology, yet none in philosophy, he is willing to say it is an established fact, for instance, that the continents are in motion, but not an established fact that there is ultimate reality. As I've said, this position seems plausible on its face and it is sometimes endorsed in conversation.

A concern for this position arises when we realize that an established fact in geology seems to *entail* that there is ultimate reality. What, after all, could it mean for it to be an established fact that the continents are in motion if it is not an established fact that there are continents? And if it is an established fact that there are continents, then isn't ultimate reality something that includes continents?[26]

We discover the worry creeping into other fields as well. For many a philosophical thesis, there is some putative established fact that appears to entail it. Take, for instance, the thesis that the world wasn't created five minutes ago. Although van Inwagen may deny there is a knockdown argument for that thesis, he will grant that there are established facts concerning history. Oscar Peterson, the Canadian piano master, was born in 1925, for example. But doesn't this established fact entail that the world wasn't created five minutes ago? Or consider the anti-Zenoian thesis that there is motion. It is a philosophical thesis, I surmise, and van Inwagen will deny that there is a knockdown argument for it. Astronomers, however, say that it is an established fact that the earth is rotating, and this fact seems to entail that there is motion.

Let us look at some objections to the above argument.

Objection 1. "The meaning of 'continent'[27] can be defined in terms of appearances. Then there remains a further question whether or not there is anything 'behind' appearances. Accordingly, that there are continents does not entail that there is ultimate reality."

Reply. Defining 'continent' in terms of appearances leaves a residual question: what is the status of appearances? Presumably, continents are *real*, for things must be real if there are any. It seems, then, that if there are appearances, there is ultimate reality in the sense that there is *something*. Maybe there being something isn't enough for what van Inwagen intends 'ultimate reality' to mean. Until he says more about what ultimate reality is supposed to be, I surmise that the entailment goes through.

So a salient question here concerns the meaning of the term 'ultimate reality'. We might worry that any argument for the existence of ultimate reality won't be knockdown precisely because there isn't a way to determine what 'ultimate reality' means. That worry can be short-circuited. Consider the thesis that there exists at least something. Let's say that is a substantial thesis and a philosophical one, too. And just as surely, *that* thesis is entailed by the established fact that there are

[26] Terry Horgan and Jonathan Schaffer independently reminded me that van Inwagen (1990) paraphrases statements about (e.g.) continents in terms of 'simples arranged continent-wise'. This doesn't supply reason for van Inwagen to doubt the entailment in question, for after the required translation, he will say that it is an established fact that there are simples arranged continent-wise. And if it is an established fact there are simples arranged continent-wise, it is an established fact that there are simples. Van Inwagen is back to ultimate reality.

[27] Or 'simples arranged continent-wise'. See footnote 26.

continents. Even if 'ultimate reality' remains problematic, there is at least one substantial, philosophical thesis entailed by particular established facts.

Objection 2. "In a geological or historical context, there are certain sorts of assumptions that hold. But in a philosophical context, quite different assumptions hold. For example, geologists don't doubt for a second whether there is an external, material world or whether it can be known. They just assume as much. Not so with philosophy, I say. When we begin with the established fact in geology that there are continents and then transport it to philosophy, we must notice that the game changes. What was an established fact in geology is disputed in philosophy. Consequently, the putative entailments from established facts in non-philosophical fields to philosophical theses fail to hold, or we'd fail to know they hold: since there are assumptions in philosophy not shared with, say, geology, what is an established fact in the latter isn't established in the former. The two fields are separate epistemic realms."[28]

Reply. Perhaps that is so. But according to many philosophers—and van Inwagen is included here, I think—philosophy and non-philosophical fields are *not* "separate epistemic realms" in the sense that completely different assumptions hold in them. In fact, van Inwagen regards science as contributing to the established pre-philosophical data, on which he builds his theories. He says that "the sciences … have a great deal to offer metaphysics. Many scientific discoveries are not only relevant to metaphysics but of inestimable metaphysical importance…" (2010: 185).

Other philosophers, to be sure, have different conceptions of the assumptions and aims of philosophy, and of the relation between scientific discoveries and philosophy—and *they* sometimes host doubts about whether there is an external, material world and whether it can be known. These doubts serve to block, for them, the entailments from established facts in non-philosophical fields to philosophical theses. But van Inwagen seems to think the sorts of assumptions that hold in fields like geology sometimes overlap with the assumptions that hold in philosophy. Given this overlap of assumptions, and given how he makes use of scientifically-established data when theorizing, I don't see why a philosopher like van Inwagen should say the entailments in question fail. (I'll say more about this sort of objection shortly. Even those who see a great divide between philosophy and other fields may find some entailments from the latter to the former hard to resist.)

Objection 3. "The argument appears to presuppose this principle: if proposition p is an established fact, and p entails proposition q, then q is an established fact. But what if the class of established facts is not closed under logical entailment, just as Dretske (1970) argues holds for knowledge? The principle fails when there's a shift in standards from science to philosophy. And the standards for being an established fact in philosophy are stricter than the relevant standards in science: so when p is about science and q is about philosophy, q won't be established even when p is established and p entails q."[29]

[28] Stephanie Wykstra raised an objection along these lines and Gilad Tanay helpfully discussed replies.

[29] Thanks to Alex Skiles and an anonymous referee for an objection like this.

Reply. First of all, the argument I have offered needn't presuppose the general closure principle. Suppose the principle is false. Still, if geologists establish that the continents are in motion, they can easily recognize some entailment—say, *that there is an established fact*—and recognize the entailment is established, too, without appeal to the general principle. In the same way, we can recognize that a philosophical proposition entailed by a geological fact is itself established.

Moreover, even if shifting standards prevent the entailed philosophical propositions from counting as established facts by strict philosophical standards, those propositions can still count as established facts *by the relevant scientific standards*. Consequently, some philosophical propositions can be supported by knockdown arguments in whatever sense an argument is knockdown in the sciences. If different standards hold sway in philosophy, who cares? Again, some arguments for philosophical theses succeed by scientific standards—philosophers ought to celebrate. Recall that one reason to suspect there are knockdown arguments in science but none in philosophy is that arguments with philosophical conclusions never pack the same wallop as ones with scientific conclusions. This objection, if correct, shows they can.

Objection 4. "When we say, for example, that it is an 'established fact' that the continents are in motion, here is what we *don't* mean: that if Smith denies that the continents really are in motion, he either doesn't understand the arguments to support that thesis or is irrational. Instead, we mean that if Smith denies that the continents *appear to be* in motion, he either doesn't understand the arguments to support that thesis or is irrational. Consequently, the established fact in question does not entail anything about what *really is*, namely, ultimate reality; it only entails what *appears to be* the case."[30]

Reply. Perhaps someone could so respond, but that someone is not van Inwagen. First off, it sits uncomfortably beside some of van Inwagen's remarks. For instance, when clarifying his use of 'ultimate reality', he writes:

> [I]t is sometimes possible to 'get behind' the appearances the world presents us with and to discover how things really are: we have discovered that the earth is *really* rotating, despite the fact that it is *apparently* stationary. (2009: 3, emphasis in original)

Here, he contrasts the *reality* of the earth's motion with the *appearance* of its being unmoving. The idea is evidently not that we have (merely) discovered that reality *appears* to involve the motion of the earth. The thought is that it *really is* in motion. Otherwise, the contrast doesn't make sense. Second, the objection implies that the term 'established fact' is not univocal—some established facts are established in the sense that *they really are so*, whereas others are established in the sense that *they appear to be so*. Van Inwagen does not seem to trade on two senses of the term, though. He seems to think that if there were established facts in philosophy, these would be just like established facts in geology or history or mathematics. When van Inwagen says that philosophy is different from non-philosophical fields *because it*

[30] Josh Rasmussen shared an objection like this.

lacks established facts,[31] he takes it for granted that there is only one sense of 'established fact'.

Objection 5. "When geologists tell us that the continents are in motion, they really mean to assert a conditional claim: *if* there is an external world and the way things appear to us accurately reflect the external world, *then* the continents are in motion. The asserted proposition is drained of philosophical content—it only entails philosophical propositions if the antecedent obtains. But geologists don't tell us that the antecedent obtains. So, given the assertions geologists and others make about established facts outside philosophy are veiled conditionals, with philosophical assumptions tucked in the antecedents, whatever facts are established do not entail philosophical theses."[32]

Reply. This objection, if successful, divorces philosophy and science. Philosophy is concerned with propositions about whether sense experience is reliable and whether there's an external world, for example, whereas science is concerned with propositions that make philosophical content an "antecedent" assumption to be ignored by scientific investigation. Here are three points in reply.

First, van Inwagen will not go along with the objection, because he says that the sciences do occasionally "get behind" appearances to reveal how things in the world really are. That's because, for van Inwagen, geologists' assertions are not veiled conditional assertions, as the objection says.

Second, it may be impossible to completely purge the philosophical content from geologists' assertions. If there are established facts about continents in motion, taken in the veiled conditional way, note that at least two things follow: (*i*) that there is something and (*ii*) that some thesis is established. The first follows because if there are appearances, there is something, and that is a metaphysical thesis.[33] The second entailment is a distinctively epistemological thesis—not merely about science—and it rebuts a radical brand of skepticism about the scope of rational belief. Supposing something is an established fact, suspension of judgment concerning *everything* is not a rational option for informed thinkers, and geologists thereby defeat radical skeptics.

Finally, a further problem with the objection is that, plausibly, claims from science and philosophy sometimes "connect". For instance, the Copenhagen interpretation of quantum mechanics is a piece of science, but it's incompatible with certain forms of causal determinism that philosophers have sometimes defended. There *seems* to be contact between the relevant assertions—it *seems* that

[31] See especially (2004: 335) and (2009: 10ff).

[32] Josh Rasmussen suggested I discuss an objection like this.

[33] The Metaontologist objects: "When we say 'there is a prime number between 4 and 6', we needn't be committing ourselves to anything ontologically significant—that is, we needn't be committing ourselves to a truth when the ontological expressions in the sentence are used in their technical senses appropriate for describing reality's structure. Let us say, then, that there is a special sense of 'there is' that is not ontologically committing. Either 'there is something' is ontologically committing or it isn't. If it is, then nothing scientists tell us implies it, in step with Objection 5. If it isn't ontologically committing, then it's no philosophical thesis." This is a fair objection, in light of recent debates over metaontology, and some metaontologists will be moved by the thought. I won't discuss this matter here. For more on the recent debates, see Korman (2013) and the papers cited and discussed therein. (Thanks to Alex Skiles and Josh Rasmussen for bringing this issue to my attention.)

propositions asserted about the Copenhagen interpretation evidentially challenge the propositions determinists assert (and vice versa). But that is actually so only if the scientists are not asserting veiled conditional propositions. To account for the presumed continuity between science and philosophy, which allows contact between claims on both sides, we should not assume that all scientific propositions are veiled conditionals. Without some reason to think the relevant non-philosophical propositions are in fact the conditional variety, the objection shouldn't move us.

So much for objections and replies. I myself find no good reason to deny the entailments from established facts in non-philosophical fields to philosophical theses. Why not think that there are knockdown arguments for ultimate reality, motion, the world's being older than five minutes, and so on? That question raises a further one: what sort of reason is there to believe that the entailments hold?

To answer we'll need some distinctions. Someone may have good reason to think that some entailment holds; it may be immediately obvious to someone that the entailment holds; or someone may have a knockdown argument that the entailment holds. The entailments at issue are, I think, immediately obvious. Now suppose we set out an argument beginning with (*i*) its being immediately obvious to us that (e.g.) *if it's an established fact that the earth is in motion, then it's an established fact that there is motion* and (*ii*) concluding with that selfsame conditional. Add whatever premises you need to see that the move from (*i*) to (*ii*) is acceptable. It seems that if we were to understand this argument and lack (undefeated) defeaters for thinking we understand it, then it would be irrational for us not to accept its conclusion. I think, then, that there are *knockdown arguments* for the entailments; so, the entailments are established facts. Since the antecedents of those entailments express established facts (e.g., it is an established fact that the earth is in motion), that is enough for the arguments from established facts in non-philosophical fields to philosophical theses to be knockdown.[34]

What is the status of the *argument* that there are such knockdown arguments? Do I mean to offer a knockdown argument that there are such knockdown arguments? To begin with, there is a difference between giving an argument that X is knockdown and giving a knockdown argument that X is knockdown. X may be knockdown, even if an argument for it being so is not itself knockdown. I do *not* mean to provide a knockdown argument *that the arguments for ultimate reality, motion, or the world's being older than five minutes are knockdown*. Instead, I mean to argue that van Inwagen and others like him should think that those sorts of arguments *are* knockdown. There may be escape routes (see the objections above), but I can't see how any are available to philosophers like van Inwagen. They have pretty good reason to think there are knockdown arguments, even if not a knockdown argument to think as much.

I readily admit that it's curious to say that commonsense claims about continents, planets, and a jazz pianist entail philosophical theses. But that's just the uncommon beauty of commonsense arguments. Van Inwagen and whoever shares his position

[34] That there are knockdown arguments in philosophy is certainly a (meta)philosophical thesis. Is it substantive? I suspect so but leave discussion aside, in part because I am unsure how to draw the distinction between substantive and minor theses. For more, see Sect. 2 above.

face trouble if they come to *appreciate* the entailment. Astonishingly perhaps, they would then possess knockdown arguments for philosophical theses—ones for which they would have geologists, astronomers, and historians to thank. (Who ever said analytic philosophy isn't interdisciplinary?)

When reflecting on widespread agreement in non-philosophical fields and widespread disagreement in philosophy, we may feel the pull and plausibility of the claim that there are knockdown arguments outside philosophy but none inside. The above argument highlights a difficulty for that claim (when it comes to certain sorts of arguments). Plausibly, doubt about knockdown arguments inside philosophy should be paired with doubt about knockdown arguments outside philosophy, *or* acceptance of knockdown arguments outside philosophy should be paired with acceptance of such arguments inside. I conclude that, for all Lewis and van Inwagen say, there may be knockdown arguments in philosophy if there are such arguments in other fields. It remains open for us to admit that there are knockdown arguments in philosophy or to deny that there are particular knockdown arguments outside philosophy.

5 Conclusion

Dare we think there are, or could be, knockdown arguments in our field? Answering in anything but a tentative way seems ill-advised. But the example of G. E. Moore may be instructive here as elsewhere. Moore laments the "peculiarly unsatisfactory state" of philosophy: there is no agreement about answers to philosophical questions "as there is about the existence of chairs and lights and benches". He continues:

> I should therefore be a fool if I hoped to settle one great point of controversy, now and once for all. It is extremely improbable I shall convince. […] Philosophical questions are so difficult, the problems they raise are so complex, that no one can fairly expect, now, any more than in the past, to win more than a very limited assent. And yet I confess that the considerations which I am about to present appear to me to be absolutely convincing. I do think that they *ought* to convince, if only I can put them well. In any case, I can but try. I *shall* try now to put an end to that unsatisfactory state of things, of which I have been speaking. (1903: III, 45)

Moore judges that the considerations he has are strong and that they ought to convince, even though he expects they won't bring about agreement. (He might have added, echoing David Lewis (1986: 115), that agreement would need a *spell*, not an argument.) Moore's expectation for continued disagreement does not lead him to doubt the rational strength of his argument. Perhaps it is uncommon for philosophers to think, like Moore, that they have a knockdown argument in hand. But suppose we take ourselves to have an argument that ought to convince.

Why can't we join Moore and *try* to put an end to that unsatisfactory state of things?[35]

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