

ON KNOCKDOWN ARGUMENTS

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1. INTRODUCTION

In science, history, and mathematics, knockdown arguments abound. According to David Lewis and Peter van Inwagen, however, there are no knockdown arguments for substantive *philosophical* conclusions.¹ If there are no knockdown arguments for substantive philosophical conclusions, the aspirations of philosophy must be significantly tempered. While such a retreat might leave philosophers with something to aspire to *personally*, such as increasing their own understanding or knowledge,² it would severely limit the ability of philosophy to settle disputes in the public domain. Given how many public disputes have philosophical presuppositions, this would be a lamentable result indeed.

Recently, however, Nathan Ballantyne has argued that Lewis and van Inwagen's conclusion is mistaken.³ Ballantyne defends the **Equity Thesis**: there are knockdown arguments in philosophy if there are knockdown arguments outside of philosophy.⁴ In this note I argue that Ballantyne's argument for the Equity Thesis is unsound, thus leaving us with Lewis and van Inwagen's lamentable result.

2. BALLANTYNE'S ARGUMENT

2.1. Knockdown Arguments. Ballantyne provides the following account of knockdown arguments:

Knockdown Argument: 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. (Ballantyne [2014], p. 530)

This is a nice refinement of the idea that knockdown arguments convince all rational comers: on this view, a knockdown argument will convince all rational comers who *understand* the argument and who *lack defeaters* for thinking they understand the argument. It is worth stressing that, both pre-theoretically and according to Ballantyne's account, knockdown arguments must provide compelling reasons to accept their conclusions *on the basis of* their premises—they are supposed to (be

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¹See, e.g., the Introduction of Lewis [1983] and van Inwagen [2006], ch.3. Timothy Williamson defends a similar conclusion in Williamson [2007]. What counts as a substantive conclusion is itself a substantive question that I cannot address here.

²See Keller [forthcominga]

³In Ballantyne [2014]

⁴On p. 542 Ballantyne restricts his thesis to "certain sorts of arguments", but we can bypass this complication by focusing on arguments that Ballantyne himself discusses.

able to) *produce* conviction, rather than merely providing justification for what one already believes.

2.2. Transfer Arguments. Ballantyne’s argument for the Equity Thesis is presented in terms of *established facts*: the conclusions of knockdown arguments. (So there are established facts if and only if there are knockdown arguments.) His argument attempts to transfer the “established” status of certain non-philosophical theses to (substantive) philosophical theses. We can represent the general form of the argument as follows, where ϕ is a non-philosophical fact and ψ is a substantive philosophical thesis:

- (1) It is an established fact that ϕ .
- (2) ϕ entails ψ .
- (3) *Therefore*, it is an established fact that ψ .

Call arguments of this form **Transfer Arguments**. Ballantyne suggests several different pairs of theses that he thinks can be validly substituted for ϕ and ψ . He argues, first, that if it is an established astronomical fact that the Earth is in motion (rotating around its axis), then, *contra* Zeno, it is an established fact that there is motion. Second, he argues that if it is an established historical fact that Oscar Peterson was born in 1925, then, *contra* Russell, it is an established fact that the world was not created five minutes ago. Finally, Ballantyne argues that if it is an established geological fact that there are continents, then, *contra* Spinoza, it is an established fact that (non-priority) monism is false.

Substituting ‘the earth is in motion’ for ϕ and ‘there is motion’ for ψ yields the following Transfer Argument, which we can call the **Motion Argument**:

- (1) It is an established fact that *the earth is in motion* (rotating around its axis).
- (2) That *the earth is in motion* entails that *there is motion*.
- (3) *Therefore*, it is an established fact that *there is motion*.

2.3. Against Transfer Arguments. Setting worries about whether the existence of motion is a substantive philosophical thesis aside,⁵ let us consider the merits of the Motion Argument. While it may seem compelling at first glance, the argument contains a subtle flaw that is revealed upon reformulation. Recall that established facts are defined in terms of knockdown arguments, and then consider the **Knockdown Motion Argument**:

- (1) There is a knockdown argument that *the earth is in motion*.
- (2) That *the earth is in motion* entails that *there is motion*.
- (3) *Therefore*, there is a knockdown argument that *there is motion*.

To see the flaw with this argument, consider the **Explicit Motion Argument**:

- (1) There is a sound, non-question-begging argument that *the earth is in motion*.
- (2) That *the earth is in motion* entails that *there is motion*.
- (3) *Therefore*, there is a sound, non-question-begging argument that *there is motion*.

⁵The philosophical conclusions Ballantyne discusses are things that almost everybody believes without argument, and so seem to be (at best) *borderline* substantive theses.

The Explicit Motion Argument is clearly invalid, since many sound, non-question-begging arguments for the motion of the earth *obviously presuppose* that motion exists—that *something* moves. Indeed, the *standard* argument for the rotation of the earth takes as its key premise the rotational motion of Foucault Pendulums. This premise is perfectly appropriate in an argument that the *earth* moves, but it is obviously question-begging in the context of an argument for the existence of motion! And knockdown arguments cannot beg the question⁶—they cannot obviously presuppose what they are intended to show—else they will not provide a compelling reason for all rational comers (who understand them and lack defeaters for thinking they understand them) to accept their conclusions on the basis of their premises. If we attempt to string together (an abbreviated version of) the knockdown argument for the rotation of the earth with the Motion Argument, the problem becomes obvious:

- (1) Foucault Pendulums move rotationally around their axes.
- (2) If Foucault Pendulums move rotationally around their axes, then the earth moves (rotationally around its axis).
- (3) *Therefore*, the earth moves.
- (4) That *the earth moves* entails that *there is motion*.
- (5) *Therefore*, there is motion.

I take it that there could be no serious question about whether *this* argument is knockdown! After all, it simply takes as a *premise* that Foucault Pendulums move. Knockdown arguments are supposed to provide reasons to accept their conclusions *on the basis of* their premises, but to accept this argument's conclusion on the basis of its premises would be to reason in a rather short circle. Perhaps, in some circumstances, it is rationally permissible to reason in such short circles. But it is clearly not rationally *obligatory*. So the Knockdown Motion Argument is invalid, and hence so is the Motion Argument.⁷

And of course this point generalizes: premises that are not question-begging in an argument for ϕ may well be question-begging in an argument for ψ , even if ϕ entails ψ . We cannot, then, establish that monism is false just by establishing that the continents are in motion, since the arguments for the existence of continental drift *presuppose* that there is more than one thing. This presupposition is perfectly appropriate in geological contexts. But if we then try to use conclusions established under that presupposition in an argument against monism, the presupposition becomes question-begging. *Mutatis mutandis* for Ballantyne's contention that if we have a knockdown argument that Oscar Peterson was born in 1925, we also have a knockdown argument that the world was not created five minutes ago. This is

⁶I say this reluctantly, since charges of question-begging are often confused. (See Sinnott-Armstrong [1999] for a nice discussion.) And indeed, I think that some "question-begging" arguments are perfectly good arguments. After all, many philosophical arguments seem to be intended merely to *measure the cost* of denying their conclusions, rather than to convince anyone. Some good arguments show that the costs of denying their conclusions are unacceptably high, even though the premises of those arguments obviously presuppose the truth of their conclusions. (See, e.g., the discussion of anti-skeptical arguments in §4.) But arguments with premises that obviously presuppose the truth of their conclusions cannot rationally *produce* belief in those conclusions, and hence cannot be knockdown.

⁷The argument is also needlessly complicated. The following argument is stronger and more straightforward: Foucault Pendulums move, *therefore* there is motion. See §4 for discussion of arguments like this one.

not so, since the argument that Peterson was born in 1925 presupposes that the world was not created five minutes ago. And finally, the same problem afflicts Ballantyne's claim that *there is a knockdown argument that there are continents* entails that *there is a knockdown argument that there is something*. Since the argument for the existence of continents presupposes that something exists, it cannot be repurposed as a universally compelling argument for that very conclusion.

2.4. The Complex Transfer Argument. I have attempted to show that Ballantyne's argument for the Equity Thesis is invalid. But Ballantyne gives what he takes to be a *knockdown argument* for its validity.⁸ This argument can be regimented as follows:

- (1) It is an established fact that *the earth is in motion* (rotating around its axis).
- (2) It is an established fact that *if the earth is in motion, then there is motion*.
- (3) If it is an established fact that *the earth is in motion*, and it is an established fact that *if the earth is in motion, then there is motion*, then it is an established fact that *there is motion*.
- (4) *Therefore*, it is an established fact that *there is motion*.

Call this the **Complex Transfer Argument**. Like the Motion Argument, while it may seem compelling at first, reformulation robs it of its luster. Consider:

- (1) There is a knockdown argument that *the earth is in motion*.
- (2) There is a knockdown argument that *if the earth is in motion, then there is motion*.
- (3) If there is a knockdown argument that *the earth is in motion*, and there is a knockdown argument that *if the earth is in motion, then there is motion*, then there is a knockdown argument that *there is motion*.
- (4) *Therefore*, there's a knockdown argument that *there is motion*.

This argument is unsound, since its third premise is false. The knockdown argument for the motion of the earth *presupposes* that there is motion, so it cannot be combined with the (established) fact that *if the earth is in motion, there is motion* to yield a knockdown argument for the existence of motion.

2.5. Different Standards? Does anything I have said presuppose that there are different epistemic standards governing inquiry within and without philosophy—that philosophy is its own special “epistemic realm”?⁹ Not at all: arguments that are supposed to *produce* belief in their conclusions must not obviously presuppose the truth of those conclusions, whether or not those conclusions are philosophical. Ballantyne-esque arguments for the existence of motion are not knockdown in *any* context, since they obviously presuppose what they are trying to show. The standard arguments for the rotation of the earth are *different* arguments—they have a different conclusion!—and for all I have said, they are knockdown in *every* context.

The difference between philosophical and other contexts is not a difference in *standards*, but a difference in the *conclusions* being argued for—in the questions we are trying to answer. An argument that does not beg any of the questions physicists are trying to answer may well beg questions philosophers are trying to answer. Likewise, arguments that do not beg any historical or geological questions

⁸See p. 541.

⁹See Objection 2, on p. 538, of Ballantyne [2014].

may beg philosophical questions. The fact that one and the same assumption begs the question in one context but not in another does not entail that there are two “separate epistemic realms” in any objectionable sense. Rather, it simply follows from the meaning of ‘beg the question’.¹⁰

3. NO KNOCKDOWN ARGUMENTS?

The Equity Thesis says only that there are knockdown philosophical arguments *if* there are (certain kinds of) knockdown non-philosophical arguments, not that there are, in fact, knockdown arguments for substantive philosophical conclusions. If the absence of knockdown arguments for the existence of motion makes skepticism about motion rationally permissible, and if, as I have argued, the arguments for the rotation of the earth *presuppose that* there is motion, then it would seem that the arguments for the rotation of the earth cannot be knockdown.¹¹

More generally, if *global* skepticism is rationally permissible, there are not any knockdown arguments at all, and so the Equity Thesis is vacuously true (c.f. p. 540 of Ballantyne [2014]). If we were willing to appeal to the rational permissibility of global skepticism, however, it is hard to see why we would be interested in Transfer Arguments, since the rational permissibility of global skepticism entails the Equity Thesis without further ado. So let us assume that global skepticism is not rationally permissible. Let us also assume that it is not rationally permissible to deny that there is motion. Still, we need not (and indeed should not) maintain that there is a *knockdown argument* for the existence of motion. This is because the existence of motion—like the law of non-contradiction—is plausibly something we know *non-inferentially*. After all, our perceptual knowledge is plausibly non-inferential, and we perceive that things move. We know that birds move, for example, because we *see* that they do. Indeed, our seeing that they move plausibly provides us with *compelling* justification for thinking that they move, making it irrational (in normal circumstances) to deny that birds move. So, if we have compelling non-inferential justification for the existence of motion, the lack of a knockdown *argument* for the existence of motion does not entail that the arguments for the rotation of the earth are not knockdown. Hence, the objection laid out in §2 does not inadvertently support the Equity Thesis.

Thinking about another case might make this more clear. Many philosophers hold that we can know (or be justified in believing) that the law of non-contradiction is true (and not false) non-inferentially. Some hold that it is irrational to deny that law. Nonetheless, there isn’t a knockdown *argument* for the truth (and non-falsity) of that law, since any such argument would presuppose what it was trying to show. We can still, however, give knockdown arguments that *rely* on the law of non-contradiction. The following triad is, then, consistent:

- (1) It is irrational to deny the law of non-contradiction.
- (2) There is no knockdown argument for the law of non-contradiction.

¹⁰I want to reiterate that I think that some arguments that “beg the question”—that obviously presuppose the truth of their conclusions—are perfectly good arguments, without being knock-down. See fn.6 and §4.

¹¹More carefully: if skepticism about motion is rationally permissible for those who understand the arguments for the rotation of the earth, and lack defeaters for thinking they understand those arguments, then etc. I’ll ignore these niceties from here on. Thanks especially to Nathan Ballantyne and Steve Petersen for pressing me to address this objection.

- (3) There are knockdown arguments that rely on (or presuppose) the law of non-contradiction: e.g., the proof that there is a unique even prime.

Similarly, the following triad is consistent:

- (1) It is irrational to deny that there is motion.
- (2) There is no knockdown argument for the existence of motion.
- (3) There are knockdown arguments that rely on (or presuppose) the existence of motion: e.g., the argument that the earth rotates.

Indeed, these triads are plausibly not only consistent, but true.

4. NON-TRANSFER ARGUMENTS

So far we have looked at arguments for the conclusion that *there is a knockdown argument for the existence of motion*. But perhaps a better strategy for defenders of the Equity Thesis is to simply provide a knockdown argument for the conclusion that *there is motion*. Consider:

- (1) The earth is in motion.
- (2) *Therefore*, there is motion.

Call this the **Short Motion Argument**. Note that the Short Motion Argument isn't a Transfer Argument—it is a straightforward philosophical argument for the existence of motion. If 'the earth' were replaced by 'my fingers' or 'a dog' that would only make the argument stronger. So, if the Short Motion Argument is knockdown, we can argue for the existence of knockdown philosophical arguments directly, without worrying about the Equity Thesis. But *is* the Short Motion Argument knockdown? It seems transparently valid,¹² and its premise is clearly true. However, the argument falls prey to same objection that felled the original Transfer Argument. The premise obviously presupposes the conclusion: it is impossible to rationally believe the premise without believing the conclusion. No rational agnostic about the existence of motion could accept the premise, and so the Short Motion Argument cannot be used to produce conviction in its conclusion.¹³

For this reason, it is not "strongly irrational" for skeptics about motion to fail to accept the conclusion of the Short Motion Argument *on the basis of* its premise. For such skeptics will point out, correctly, that the argument for the premise of the Short Motion Argument *assumes* that there is motion, which is precisely what they deny. If we combine the argument for premise 1 of the Short Motion Argument with the Short Motion Argument itself, we get the **Expanded Short Motion Argument**:

- (1) Foucault Pendulums move rotationally around their axes.
- (2) If Foucault Pendulums move rotationally around their axes, then the earth moves (rotationally around its axis).
- (3) *Therefore*, the earth moves.
- (4) *Therefore*, there is motion.

The fact that the motion skeptic denies premise 1 of this argument *irrationally* is consistent with the argument's conclusion being obviously presupposed by that

¹²By 'transparently valid' I mean that its validity is rationally undeniable (for those that understand the argument and lack defeaters for thinking they understand it).

¹³As noted above, many philosophical arguments seem to be intended to merely *measure the cost* of denying their conclusions, rather than to convince anyone. Perhaps the Short Motion Argument is such an argument.

premise. So it is plausible that something would be rationally amiss with accepting the conclusion of the argument *on the basis of* its premise—and more than plausible that it is rationally permissible to decline to accept the conclusion of the argument on the basis of its premises. Which is just to say, the Expanded Short Motion Argument is not knockdown. But then the Short Motion Argument is not knockdown either.

Some might argue that the premise of the Short Motion Argument does not obviously presuppose the truth of its conclusion, since its premise is an uncontroversial *ordinary* claim and its conclusion is a controversial *metaphysical* claim. Interpreted thusly, however, the *validity* of the Short Motion Argument is called into question. For consider the **Short Numerical Argument**:

- (1) There are three prime numbers between two and eleven.
- (2) *Therefore*, there are numbers.

While one might think that the Short Numerical Argument is transparently valid, some (apparently rational) nominalists argue that while it is a proven, established, fact that ‘there three are prime numbers between two and eleven’ is *true*, there is not an established fact about what this truth requires, metaphysically, of reality.¹⁴ Perhaps, as platonists hold, it requires that numbers exist. But perhaps not. If the nominalists are correct, then the Short Numerical Argument is invalid, at least if the conclusion is interpreted metaphysically (i.e., as inconsistent with nominalism).¹⁵ Likewise, even if we have a knockdown argument that the earth is in motion, it is less clear what is required, at the level of fundamental metaphysics, for this claim to be true. Presumably, we would give the same arguments for the rotation of the earth if idealism, existence monism, or Leibniz’s monadology were true. Indeed, Berkeley, Spinoza, and Leibniz seem to think that such arguments would remain *sound* in those circumstances. It is just that the metaphysical truth-conditions of those arguments’ conclusions—the premise of the Short Motion Argument—would be different. And if this is true, the validity of the Short Motion Argument is called into doubt, assuming that we interpret the conclusion of that argument as something Zeno would deny: a claim about the way things *are*, rather than how they *appear*. Berkeley, Spinoza, and Leibniz all accept the (ordinary interpretation of) the premise of the Short Motion Argument while rejecting (the philosophically interesting reading of) its conclusion. Since Berkeley, Spinoza, and Leibniz are paradigmatically rational, the validity of the Short Motion Argument can be rationally denied.

Note that this is *all* I am claiming: I don’t want to suggest that the earth’s being in motion *doesn’t* entail that there is motion, or that there being three primes between two and eleven *doesn’t* entail that there are numbers. In fact, I think they do. But I don’t think that those who disagree with me are necessarily *irrational*. And so neither the Short Motion Argument, nor the Short Numerical Argument, are knockdown.

¹⁴See, e.g., Keller [2015], Leslie [2007], Sider [2012], and Williams [2012] for further discussion of such metaphysical “requirements” (metaphysical truth-conditions) and their relation to semantically specified truth-conditions.

¹⁵Some contemporary nominalists say that ‘there are numbers’ is true, but not fundamentally true. This is just a way of saying that ‘there are three prime numbers between two and eleven’ doesn’t entail the philosophically interesting reading of ‘there are numbers’. See Keller [forthcomingb] for further discussion.

4.1. **Quinean Meta-ontology.** Arguments like the Short Numerical Argument are often given by Quinean meta-ontologists. I have argued that they are not knockdown, but I want to stress that I am not saying that they are no good. Good arguments do not need to be knockdown: an argument that does not provide a universally rationally compelling reason to accept its conclusion (on the basis of its premises) might still provide one with a good reason to accept the conclusion, and an argument that obviously presupposes the truth of its conclusion might still show the cost of denying that conclusion to be large or unbearable. Good responses to skepticism, for example, may presuppose that skepticism is false. As Williamson says,

[I]f one uses only premises and forms of inference that a skeptic about perception will allow one. . . one has little prospect of reaching the conclusion that one has hands. But that does not show that we should not be confident that we have hands. (Williamson [2007], p. 238)

And a bit later,

Of course, skeptics will say that. . . claims about our environment [like “dreams with the sustained coherence of waking life are very rare”] merely beg the question. . . But the claims were not addressed to skeptics, in a futile attempt to persuade them out of skepticism. Instead, they figure in our appraisal of skeptical arguments, from our current non-skeptical point of view. (Williamson [2007], p. 249)

Claiming that such “question-begging” responses to skepticism are *acceptable*, or *good*, does not of course entail that they are *knockdown*. After all, it isn’t irrational for *skeptics* to reject them, since the responses simply assume (as premises/evidence) what the skeptic denies: the very conclusion they are being used to defend. From the perspective of a non-skeptic, however, the responses assume only what we know to be true—they remain perfectly legitimate responses despite their inability to rationally persuade the skeptic. Arguments can be very good *defensively*—very good for showing that acceptance of their conclusions is *rational*—even if they are less good or even no good *offensively*: less good or no good for *producing conviction* in their conclusions. This is one consequence of “evidence non-neutrality”—the fact that there can be rational disagreement about what the evidence is.¹⁶ As a result, once we have gone down the road to skepticism—even if we have *irrationally* gone down the road to skepticism—there may be no rational way to get back.

5. CONCLUSION

I have argued that arguments which attempt to transfer the “established” status of some non-philosophical claim ϕ to a philosophically interesting entailment ψ of ϕ often fail, since ψ may have been *presupposed* by a premise of the knockdown argument for ϕ . And this is more than a possibility: this, or something close, is the case with the arguments Ballantyne uses in defense of the Equity Thesis. If that is correct, then unless there is some *other* reason to think that there are knockdown

¹⁶See Williamson [2007], Ch.7.

arguments for substantive philosophical conclusions,¹⁷ we should, following Lewis and van Inwagen, lamentably conclude that there are not.

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¹⁷See, e.g., Kelly and McGrath [forthcoming]. But Kelly and McGrath are primarily objecting to van Inwagen's argument for the conclusion that there are no knockdown arguments for substantive philosophical conclusions. Nothing they say undermines some of the other reasons for doubting the existence of such arguments, many of which can be found in Keller [forthcominga]. For example, if evidence is, in general, non-neutral, in the sense of Williamson [2007], it is doubtful that there are arguments that will convince all rational comers. Likewise, if, as subjective Bayesians hold, it is rationally permissible to have different priors, we can hardly expect that there are often arguments such that, when exposed to them, all rational people will reach the same conclusion.