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## WHO IS AFRAID OF EPISTEMOLOGY'S REGRESS PROBLEM?

**ABSTRACT.** What follows is a taxonomy of arguments that regresses of inferential justification are vicious. They fall out into four general classes: (A) conceptual arguments from incompleteness, (B) conceptual arguments from arbitrariness, (C) ought-implies-can arguments from human quantitative incapacities, and (D) ought-implies can arguments from human qualitative incapacities. They fail with a developed theory of “infinetism” consistent with valuational pluralism and modest epistemic foundationalism.

Insofar as we strive to be rational, we strive to believe on the basis of good reasons. For those reasons to be good, they must not only support our first belief, but they themselves must also be believed for good reasons. This is where we begin to see a disturbing pattern. If that first belief is to be held on the basis of good reasons, it seems we are in need of a very long chain of reasons. This is a rough and ready picture of the regress problem. It seems endemic to the project of believing on the basis of reasons. And thereby, it seems endemic to the very project of being rational.

This problem is *old*. Aristotle made it famous when he used it to show the necessity for first principles (*A. Post.* 72b 6–15).<sup>1</sup> Agrippa and Sextus Empiricus made it infamous when they used it to show the inescapability of skepticism (DL II.88–90 and PH 1.164–177). And the problem is not just old, it is *deep*. Children, when they understand the game of giving and asking for reasons, see its protean ability to manifest itself anywhere, and they easily exploit it by continuously asking “why?” And it is not just deep, it is *obvious*. In many cases, the obviousness of the problem is fodder for anti-intellectualism and irrationalism. Some may look cursorily at the project of giving reasons, see

the problem, and abjure the project from the start. Given the regress problem, some often say, so much the worse for that notion of rationality. Better faith, or revelation, or hedonism, or carelessness and inattention... or externalism.

But for as old and deep and obvious as the problem is, only recently have we made progress understanding how and why it really is a problem. The longest-standing and most intuitive starting point with the regress problem is to just take the regress as absurd. Aristotle and Sextus (and presumably, his Stoic interlocutors<sup>2</sup>) just took it for granted. Modern and contemporary epistemologists that motivate tensions between foundationalism and coherentism also often assume that giving reasons on to infinity is patently absurd. A few, though, have not run past the issue and have bothered to give arguments for why there cannot be an infinite series of inferentially justified beliefs. What follows is a taxonomy of those arguments and a series of criticisms.

I will argue three theses: (1) Arguments against the possibility of epistemic infinitism<sup>3</sup> come in two basic forms: one I will call “conceptual arguments,” the other “ought-implies-can arguments.” Conceptual arguments proceed either (A) from the incompleteness of the regress, or (B) from some arbitrary conclusion justified by it. Ought-implies-can arguments proceed from the fact of human finitude in (C) the quantity of beliefs, or (D) the quality of beliefs necessary to amount of epistemic justification. (2) Present instantiations of these arguments are either incompletely probative against or are irrelevant to a developed theory of epistemic infinitism consistent with valuational pluralism and weak foundationalism. And, (3) epistemic infinitism offers a *positive theory* of justification, not a negative theory, so it is not the cynical epistemology we may suspect. Instead, it offers a safe haven for evidentialism as an ethics of belief.

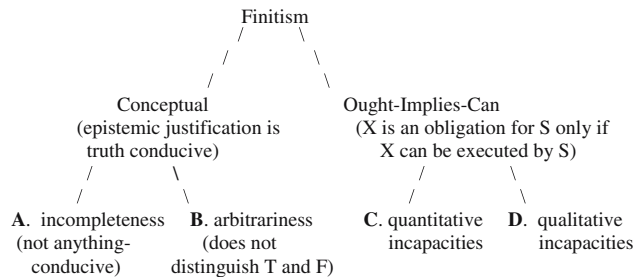
This is not the first account or defense of epistemic infinitism. It is often noted that Peirce (1965) and Popper (1935) may plausibly be read as infinitists, and a number of epistemologists have expressed a sympathy with the position, for example, Reichenbach (1952), Foley (1978), and Hardwig (1988). Dale

Jaquette (1996) and Peter Klein (1999, 2000, 2003) and are the only philosophers explicitly articulating and defending infinitist epistemologies. In the case of Jaquette, a good deal of the defense rests on rejecting the semantics of classical logic. I will show that a more modest means of defending infinitism is possible. In the case of Klein, the defense depends on the unexceptionability and details of two requirements of justification, the Principle of Avoiding Circularity and the Principle of Avoiding Arbitrariness (1999, pp. 298–299). I hope to show here that a more robust defense of infinitism is possible, in that the argument can often be taken into and against the premises driving the objections.

Epistemologies posited on the viciousness of an infinite regress of inferential justification I will call “finitist.”<sup>4</sup> Arguments for finitism come in two families: *conceptual arguments* and *ought-implies-can arguments*. Conceptual arguments start from the deep, and I think right, intuition that epistemic justification should be truth-conducive. That is, that epistemic justification aims at (and is a reliable marker of) truth. Then the argument turns to how infinite regresses are not truth-conducive. There are two ways this can be done: either by rooting the problem in the *incompleteness* of the regress (so it is not conducive of *anything*) or by rooting the problem in the constitution of the regress itself (in that because it is infinite, the regress allows *arbitrariness*, so it is just as likely to justify a false belief as it is a true one). Conceptual arguments, then, appeal only to the incompatibility of the concept of epistemic justification and regresses.

Ought-implies-can arguments appeal to facts beyond the concept of epistemic justification, namely, the fact of human finitude. Ought-implies-can arguments start from the premise that any obligation, if it is truly an obligation, is one we can perform. If we cannot perform what is asked of us, then that task is not truly obligatory. There are two ways to show we cannot perform the task of completing the series of infinite inferential justification. On the one hand, there are arguments that the *quantity* of beliefs (and inferences) necessary is beyond us (for various reasons). This is the argument from quantitative incapacity. On the other hand, there are arguments that the

*quality* (or kind) of belief necessary to complete the regress appropriately is one we simply cannot have. That is, because some belief in or about the series (and necessary for the series to provide epistemic justification) will be so complex, we cannot have it. And thereby, we cannot maintain the series in a way capable of amounting to epistemic justification. This is the argument from qualitative incapacity. The complete taxonomy<sup>5</sup> looks as follows:



[A.] Conceptual arguments from incompleteness exploit the thought behind inferential justification that beliefs get their justificatory status from the beliefs that directly precede them inferentially.<sup>6</sup> As a consequence, if reasons go on to infinity, then as far as the series goes, there will always be a further belief necessary for all the preceding beliefs to be justified. If there is no end to the chain of beliefs, then there is no justification for that chain to inherit in the first place. William Alston captures the argument as follows:

If there is a branch [of mediately justified beliefs] with no terminus, that means that no matter how far we extend the branch the last element is still a belief that is mediately justified if at all. Thus, as far as this structure goes, whenever we stop adding elements we have still not shown that the relevant necessary condition for mediate justification of the original belief is satisfied. Thus the structure does not exhibit the original belief as mediately justified. (1986a, p. 82)

Henry Johnstone captures the thought: “X infinitely postponed is not an X,” since the series of postponements shortly becomes, “inane stammering” (1996, p. 96). The same kind of

thought can be captured with an analogy. Take the one R.J. Hankinson in his commentary on Sextus uses:

Consider a train of infinite length, in which each carriage moves because the one in front of it moves. Even supposing that fact is an adequate explanation for *the movement of each carriage*, one is tempted to say, in the absence of a locomotive, that one still has no explanation for *the motion of the whole*. *And that metaphor might aptly be transferred to the case of justification in general.* (1995, p. 189)

These stories generally have two moves: First is the distinction between a mediate perspective (that from the relation between one belief and another, one train-car and another) and an external, global perspective (that on the whole chain of beliefs, the whole train of cars). From the mediate perspective, another belief or car is always necessary to explain why one belief in question is justified or how one car is moving. And from the global perspective, we imagine these beliefs and cars linked together, stretching out to infinity.

And now here's the second move. From the global perspective, Alston says we *stop adding elements*, Johnstone looks at *the short run*, and Hankinson evokes *locomotives*. The problem with the arguments is here.

Let us start with the analogy. We should grant that trains do not move without locomotives, or something of that ilk. But this is where the analogy between causal explanation and epistemic justification may prove too thin to be probative. First, analogies between causal explanations and structures of justification can be elucidatory and powerful, but they are not independent arguments. Not a deep objection, really, but one that should make us aware of how certain pictures or metaphors can do our thinking for us. Unless we investigate and endorse the aptness of the analogy, it is empty verbiage. Here is where a second problem arises. The locomotive is a non-regressive explanation *only for certain purposes*. Causal explanations certainly abound for how the locomotive can do all that work. (Perhaps the story would include an account of what's going on in the boiler, how the coal and water got there, how the coal was turned into coal, how those carbon-based

molecules got to a place where they could become coal, etc.) So causal stories are not necessarily non-regressive, anyways.

The third problem with the analogy is that it is based on the thought that explanatory regresses and epistemic regresses share the exact (or relevantly similar) structure.<sup>7</sup> This is a serious presumption. One significant dissimilarity between the two structures is a modal one: that causal stories require the *actuality* of their objects for them to be true, but epistemic regresses do not require actual beliefs or speech acts in all cases. I will argue later that epistemic regresses may be *potential* infinities, but the important thing to note here is that if such a dissimilarity between the two structures is true and significant, the analogy is weakened profoundly. In most cases, the standing problem with explanatory regresses is that they require *actual infinities*. If that truly is the problem with such regresses, then the force of the analogy between explanation and justification is weakened.

Now, it's here that perhaps the depth of the analogy is to be felt – in the presumption against actual infinities. The most powerful objections against such sets or series depend on the principle of parsimony – simpler theories are more likely true than complex ones. Given that regresses have infinite components, it seems the cards are stacked against them. Now, if parsimony not only extends to actual objects, but also to potential ones, we can see the driving thought behind the objection to epistemic regresses: namely that even as potential objects, they are too complex to be true... even potentially true. Simpler alternatives must take precedence.

But I do not think the use of parsimony is a good move here. First, parsimony is a criterion for theory-*choice*, not a criterion for theory-*elimination*.<sup>8</sup> At this stage, when just faced with the infinite series, there is still only one option. The criterion may be a consideration at another stage of inquiry (like when competing theories surface), but it cannot at this stage serve to prevent infinitism from being a contending theory of justification.

Second, I think parsimony is an invalid criterion in matters of normative judgment. It may be right about descriptive

theories – we do not want or need the world to be populated by unnecessary objects. But it is wrong in valuational contexts, in that any pluralist about value will insist that the criterion requiring the fewest kinds of goods is wrong-headed. Else, we must tackle the bugbear behind the request that we explain our love for our spouses in terms of kegs of beer. Insofar as we haven't foreclosed the possibility of epistemic pluralism, we see we should allow Ockham's razor to rest on the shelf.

Johnstone's argument is that the series, as it progresses, shortly becomes inane stammering, since it only *repeats steps* (1996, pp. 96–97). But why must inferential justification *repeat* steps? If steps are repeated, then it seems the rule of circularity is being broken, which is irrelevant to the regress. Unless Johnstone can show that repeating steps is intrinsic to the series, the argument is a red herring. Moreover, why does the argument require the perspective of the *short run*? Problems may take more work than we initially suppose. How long does it take to tell a complete story?

Alston's argument is that when we stop adding elements (or stop moving to the next belief in the regress), we leave the justification incomplete. That's right. But why does he stop? If, from the external, global perspective, it is clear that there is an infinity of beliefs to move to next, then there is no need to stop. Alston seems to just have assumed that *we need to stop*, but in having done so, he has assumed finitism, and if that is the case, he begs the question against infinitism.<sup>9</sup> If the task is left incomplete when you stop, then do not stop.

The strategy of these arguments is that theories that postulate an infinite number of things in a domain known finite are known vicious (Nolan, 2001, p. 531). We *know* that we stop giving reasons, so we must *know* that an infinite series of reasons must be vicious. First, the premise begs the question. Second, the inference is invalid, since the simple descriptive fact that we stop giving reasons does not imply that the reasons may themselves not continue. We may leave off giving reasons for pragmatic purposes (e.g., we may have elicited assent or stimulated action), and continuing with reason-giving would be excessive for those purposes. But to assume that the reasons

relevant to epistemological reflection end there is already to assume infinitism is false, and perhaps to mis-conceive the very project of epistemology as a *normative* (as opposed to *descriptive*) discipline.

**[B.]** Conceptual arguments from arbitrariness also exploit the requirement that epistemic justification be truth-conducive.<sup>10</sup> The tactic here is to manufacture a regress of inferences and show that in one use, the regress can be used to justify some belief, then turn to show that in another use, the same regress can justify that belief's negation. As a consequence, with an infinite series of inferential-justificatory moves, we can justify any belief and its negation, and thereby, we show that infinite regresses are not truth conducive.

There is a simple version of the argument. I will call it "the simplification *reductio*" (SR). Take some belief that *p*. Justification for *p* can come from the belief that (*p* and *q*) from simplification. Justification for (*p* and *q*) can come from the belief that (*p* and *q* and *r*). And so on. The simplification rule allows us to add beliefs on to infinity, and since we can add "not *p*" for "*p*" in the series without any trouble, we get the *reductio* (Oakley, 1976, pp. 227–228; Foley, 1978, p. 313).

There is a more complex version of the argument. I will call it "the *modus ponens reductio*" (MPR). Take some belief that *p*. Justification for *p* can come from the belief that [*q* and (if *q* then *p*)]. And justification for that belief can come from the belief that (*r* and {if *r*, then [*q* and (if *q*, then *p*)]}). And so on with an infinitely iterated chain of *modus ponens* inferences. Given that we can replace "*p*" with "not-*p*" without damaging the chain, we get the *reductio* (Pollock, 1974, pp. 28–29; Cornman, 1977, p. 290; Post, 1980, pp. 32–35, 1987, pp. 88–91).

There are a few serious objections to the two *reductios*. The first is to SR's *epistemic backwardness*. SR requires that *p* is justified on the basis of (*p* and *q*). What's epistemically backwards about the requirement is that if (*p* and *q*) justifies *p*, then *p* is part of its own justificatory ancestry. So *p* justifies itself. As a consequence, SR is not necessarily an argument against infinite regresses, but rather *against reflexivity in justification-relations*. Given the content of the beliefs in question, the

simpler belief should be part of the justificatory ancestry of the more complex belief, not the other way around. Were these empirical beliefs, the direction of inference should run from instances of believing that p and believing that q to believing that (p and q).<sup>11</sup>

John Post's version of MPR is designed to avoid this problem for SR. Pollock and Cornman's versions are open to the backwardness objection, but can be salvaged easily by Post's requirements that: (i) each belief in the series properly entails its successor, (ii) successors are not entitled by predecessors, and (iii) no belief is justified on the basis of any beliefs succeeding it (1980, p. 33; 1987, p. 90). So, the backwardness argument cannot work against Post's MPR argument.

A second problem with the SR and MPR arguments is that deductive inference rules play the role of inferential justification. The thought is intuitive enough: if deductive validity is truth-preservative and if epistemic justification is truth-conducive, then deductive validity is also preservative of epistemic justification. But that inference is wrong, because *neither reductio provides a series of inferences that necessarily amount to epistemic justification*. With SR, simplifying (p and q and r and s) to p and simplifying (not-p and q and r and s) to not-p are *formally equivalent*, but the two moves may still differ in some non-formal but *epistemically relevant* way.<sup>12</sup>

SR and MPR both require that justification be exclusively inferential. It is a common mistake with critics to suppose that infinitism depends on *the requirement that all epistemic justification is inferential*.<sup>13</sup> Infinitism *does* require that justification must have an inferential component. That's right. But there is nothing *prima facie* incoherent with the thought that an infinite regress of inferential justification could have other factors at play than inferential relations between beliefs. Some beliefs are more intuitive than others, some beliefs are caused by occurrent experiential states, and some beliefs have a kind of formal character to them that all stand as *sui generis* evidence. I think that this insight that drives foundationalism can be incorporated and appreciated in most meta-epistemic theories, and it certainly can work here – namely, what may distinguish the

inconsistent regresses of SR and MPR may not be any of the *doxastic* states of the subjects, but the subjects' *non-doxastic states*. The state of seeing something to be true, the state of being appeared to in a certain way, the state of being unable to think otherwise. These states have justificatory purport only in the context of inferentially rich support, but that condition does not mitigate their own independent, non-inferential justification. In this respect, an infinitism can be considered to be a form of weak foundationalism (or at least that weak foundationalism and infinitism are not necessarily inconsistent meta-epistemic theories).

Klein's criticism of both SR and MPR is that the justifying conditions must be available to the knowing subject *as reasons* (1999, p. 312). Klein's subjective availability allows for a non-occurrent sense of belief, where if a subject believes *p*, that subject would affirm or endorse *p* (including *sotto voce* endorsements) in some restricted circumstances. Klein's example is that *S* may believe that a snowstorm's immanent without the belief that she's in Montana in mid-winter looking at storm clouds gathering (p. 300). But when asked why she believes the former, she may give the latter as an answer. My difference here is not with Klein's notion of belief, but with what supports those beliefs and in what way they may be dispositionally available to a subject – some beliefs are dispositionally available to us because things seem a certain way to us. The subject in question, when producing the inferential story for her questioner presumably does consult with how things seem to her and fits her story properly with what those non-doxastic states non-inferentially support.

A sketch of non-inferential support is necessary here. Modest foundationalisms are usually built around the slogan that beliefs based on (some acceptable set of) non-doxastic states are innocent until proven guilty. I think this thought is right, but it needs qualification. The conditions for such asymmetry between those beliefs and ones without non-doxastic support are supplied by a subject's justified doxastic states. Take cases like Müller–Lyer lines. Subjects would be weakly justified in taking the lines to be unequal only in cases where

they believe on the basis of their being appeared to equal-line-ly and the tacit belief that this is provides a good reason to believe that the lines are equal. What defeats this weak justification is the subject being told and shown that the sharp lines on the ends of the parallel lines distort how the lines look. In this case, the appearance has been shown to be an inaccurate condition for believing, and beliefs to that effect or to the contrary create a doxastic web wherein beliefs caused by the appearances can have justificatory weight.<sup>14</sup>

The important feature of such a modest foundationalism is that these beliefs with defeasible non-doxastic support have probabilities less than one for the subjects that consider them. If the subject considers the beliefs defeasible, the subject is not certain. A classic argument for strong (as opposed to modest) foundationalism is that the assignment of probability between 0 and 1 requires a doxastic backdrop. For any subject, no proposition can have a probability in isolation – all judgments of indeterminate or uncertain probability implicitly are consequences of weighing some evidence. If moderate foundationalism is true, then these beliefs have the probability they do because of their relation to other beliefs. For those beliefs to have probabilities, they must stand in some relation to others, and so on. Eventually, they must ground out in certain beliefs (i.e., beliefs with the probability of one). Lewis's famous use of the argument ended with the slogan, "If anything is to be probable, then something must be certain" (1946, p. 186).<sup>15</sup> Moderate foundationalism, then, on the argument, cannot provide regress-enders. However, the moderate foundationalist position need not be posited on finding regress-enders, but it may rather be that of capturing the role that non-doxastic states play in a subject's formed and available justificatory support. Strong foundationalism follows only if the tacit rejection of infinitism on the basis of the incompleteness argument here is right. But incompleteness arguments are not right, as shown earlier. As a consequence, if modest foundationalism, as a theory of defeasible non-doxastic justificatory support, is right, then infinitism has the resources to solve the problem of arbitrary regresses. Insofar as modest foundation-

alism is the thesis that a subject's non-doxastic states can play a *sui generis* but defeasible role in justifying a subject's beliefs, then the infinitist has the means of holding arbitrariness at bay.

So finitist arguments in SR and MPR are not sufficient, since they saddle infinitism with unnecessary commitments and derive their reductios from those commitments. Given that infinitism is capable of accommodating the good thoughts behind foundationalism, such arguments have no weight.<sup>16</sup> Ernest Sosa had remarked that SR and MPR fail to distinguish between actual and potential regresses of justification (1980, pp. 12–13). My conclusion bears a strong resemblance to his claim, but given that non-inferential features of the regresses distinguish them, I have provided a criterion by which knowers may pick out the actual instantiations.<sup>17</sup>

[C.] Ought-implies-can arguments from the *quantity* of beliefs necessary to run the regress exploit a crucial feature about humans: we are finite beings with finite minds.<sup>18</sup> From this important feature about us, we find important conclusions follow. Here are two versions of the argument.

*The finite lives argument:* To run the regress of justification, some S would need infinite time (because the inferences take time to make). S won't live much longer than 100 years ... tops! Ought implies can. *Therefore*, the regress is an absurd epistemic requirement.

*The finite minds argument:* To run the regress of justification, some S would need an infinite number of beliefs (since those beliefs can't just get recycled). S has only a limited number of beliefs (even the most opinionated person does not have *that* many). Ought implies can. *Therefore*, the regress is an absurd epistemic requirement.

The problem with both arguments is that they require that we must occurrently think our way through the regresses. The finite lives argument, from this requirement, then runs that we do not have time to have all those occurrent thoughts. The finite minds argument, from this requirement, then runs that we do not have the capacity to have all those different thoughts. But the requirement is unnecessary baggage for a theory of justification. There is a difference between having the ability to produce reasons and actually producing them, and it seems excessive for

an epistemology to require of a knower that she occurrently think out all her reasons for every belief she considers to be justified.<sup>19</sup> It seems more likely that *having* those reasons, no matter how many there are (ten, ten thousand, or an infinite number), seems enough. *Giving* those reasons by thinking them occurrently or speaking them out loud is a separate issue. So the finitude of our lives is not relevant consideration.

The finite minds argument depends on the thought that a finite mind cannot have infinite beliefs. But that simply is not true, or at least is not obviously true. Take beliefs about the successor relation in its instantiations in mathematics. If the successor relation is right about defining numbers, I can believe, say, about counting numbers that 2 succeeds 1, 3 succeeds 2, 4 succeeds 3, and so on to infinity. If we had a tool for understanding our *empirical beliefs* in this way, we can apply this point more broadly than to just mathematical beliefs.<sup>20</sup> Perhaps this model may do the trick: Take the simple belief that there is a football in a specific position on a field. If the space between it and the goal line is infinitely divisible, we have a potentially infinite number of beliefs as to how close the football is to the goal line. It is *this* close, but it is capable of being closer than *that*, namely *this* close... John Williams's objection to the successor relation algorithm for belief-production is that though we may be able to continue adding, there are numbers so large that they "defeat human understanding" (1981, pp. 85–86; See also Audi, 1993, p. 127, 1998, p. 189). But since we do not need such numbers, but only need indexicals to pick out the successors here, such a problem does not arise.<sup>21</sup> So long as we can understand that there is a difference between each iteration of the moves, nothing defeats human understanding here.

[D.] The final ought-implies-can argument is that from the *kind* of beliefs we must have to complete the regress. The argument proceeds from the thought that for us to be responsible reasoners, we must not only have our reasons properly arranged but we must have beliefs about that arrangement. So, let some S believe that p on the basis of S's belief that q and q on the basis of r. S must not only have beliefs that p, q, and r but also S must justifiably believe that q justifies p, r justifies q,

and that  $p$  is justified by  $r$  through  $q$ . It is in this last belief that the objection finds its roots – because when the chain is of an infinite length, that belief about the chain would be infinitely complex. And we just cannot have thoughts like that (Foley, 1978, p. 314).

On the one hand, it seems right to require that knowers not only have reasons for their beliefs in question but also have justified beliefs about the arrangement of those reasons. To borrow a distinction from earlier, knowers should not only have a mediate perspective on their reasons, but also a global perspective on them. Reasoners must not only be capable of traversing the space of reasons but also be capable of surveying it. It also seems right to say that we can not have beliefs so complex as to take in the whole chain. I would not challenge that thought.

But on the other hand, the requirement, in the form that produces this problem for knowers having to survey a regress, is too stringent. There are two ways to loosen up the requirement. The first way to weaken the requirement is to allow groupings of beliefs to be seen as wholes. So instead of requiring that the global perspective on chains of reasons take all the reasons as particulars, we can simply allow that some reasons can be surveyed as groups. So, say, when I reflect on my reasons for believing that the publication of Descartes's *Meditations* was a momentous event in the history of philosophy, I do not have to look at every one of my beliefs that support this belief individually. I can take them in as my knowledge of epistemology, my knowledge of French and European intellectual culture, my knowledge about the history of philosophy, and so on. So the complexity of my beliefs about my reasons is mitigated. Will this weakened requirement help with the problem of infinitely complex beliefs? I do not think so, since if I have got an infinite series of beliefs and if I group those individual beliefs into groups (even very large groups), I will still end up with an infinity of groups. Hence, it won't solve the problem of complexity.

The second way to weaken the requirement is to say that though reason-giving can never leave off, it may be right to allow reason-surveying to leave off at a certain point (or that

the survey to be one where we only need to have a feel for where the reasons are going). I only need a strategy of responding, one that does not have to be worked out down to any rigorous level of detail. Here, Klein (1999, p. 309) has argued that requiring more than this not only requires that knowers have detailed beliefs about their reasons but also developed epistemological theories about how those beliefs hang together. And though this is a noble pursuit for us as knowers, it is above and beyond the call of duty. It requires that knowers be epistemologists (and good ones, at that), and that is simply not a requirement for being a knower. Foley, himself, concedes that this requirement would entail that epistemologists with competing theories of justification may have to hold each other unjustified in all of their beliefs (1978, p. 314). Surely, if Chisholm was right about foundationalism, it would not follow that Sellars was never justified in believing that the cat's on the mat or that it's time for lunch.

The difference of these requirements is one of *degree*. Surely if knowledge is the culmination of our responsible believing, then we must have some sort of synoptic view of how we've come to and sustain that knowledge. This is different from having an epistemology or a belief about every supporting belief, but only *by degree* in that the project of epistemic reflection arises out of (and is only an amplification of the considerations giving rise to) self-aware and responsible believing. Insofar as this difference is heeded, the qualitative argument need not refute infinitism.

Up to now, I have attended to specific versions of the ought-implies-can arguments without questioning the ought-can premise. I intend to show how it is the real problem behind these arguments. There are four reasons to reject it. First, it is not right to have such a constraint on our epistemologies. At bottom, the principle insulates us from seriously engaging skeptical and other deep challenges, and I think this is disingenuous philosophical procedure.<sup>22</sup> Skeptics not only say intelligible things, but also things that are real challenges to the way we take ourselves in position to the world. And they may be right. And insofar as *that* is right, we're obliged to answer.

Second, even if any of the arguments from our qualitative or quantitative incapacities are right, it does not follow that infinite regresses are vicious. Instead, it may just be that our cognitive duties do not extend to full-blown epistemic justification. As a consequence, *justification* does not have to be otherwise, but rather we should pursue some more modest and attainable end.<sup>23</sup>

And third, I am unsure *ought really* implies *can*. I ought to pay both my gas bill and my telephone bill, but when I cannot, it certainly does not follow that I do not still need to pay those bills. I ought to refrain from stealing, and my kleptomania makes it impossible to resist, but it does not follow that the rules should be suspended. Punishment and blame may be mitigated in such circumstances, but our incapacities do not necessarily change our obligations. In the cognitive realm, *modus tollens* is a valid inference rule, and it ought to constrain the way I think in the relevant circumstances. But there is compelling psychological evidence that humans are incapable of such constraint consistently – e.g., the selection tasks in Wason and Johnson-Laird (1972). It certainly does not follow that such a rule of reason be abjured in the face of the fact that our minds are recalcitrant to constraint. In fact, I would say that such incapacities of mind should spur us to strive to be better than we are than make due with the cold comfort that everybody makes the same mistakes. When we reason, we do so to do it right.

When we take up the project of knowing, we are engaged in an activity that makes certain claims upon us. Analogously, cyclists should move in certain ways, teachers ought to explain things clearly, parents should take care of their children. The fact that there may be incompetent cyclists, negligent parents, and obscurantist teachers does not change those requirements one jot. Knowing, too. When we pursue it, we do so to get it right. Given that the rules outlined for these roles are in terms of successful performance, *ought-implies-can* is a premise that severs the normative relation between the goals of these practices and the requirements placed upon the practitioners.<sup>24</sup>

Perhaps something more probative is necessary here. Let me offer a supplemental argument in order ensure that my reasons

for rejecting ought-implies-can that do not run the risk of being taken to be a mere hortatory reason, but one rooted in the principle itself. It is a *reductio* from two premisses. (1) That determinism is a conceptual possibility. That, I think, is not in need of argument here. An implication of determinism is that there are cases where some S does not do something because S cannot. So it is possible that there are cases where if some S fails to do something, it is because S cannot. (2) Here might be the contentious premise. I will call it *conceptual pessimism*: the realm of relevant consideration for normative inquiry (be it ethics, epistemology, or aesthetics), must extend only to worlds where failure to do what you ought is real. That is, normative inquiry is relevant only to worlds where there are mistakes. Worlds without mistakes, be they heaven, the kingdom of ends, or the null set, may be relevant to normative inquiry negatively (in that they are regulative ideals), but they cannot be worlds that give us discrete information about normative judgment. So, (2) reads: it is conceptually necessary that some S doesn't do something but S ought to. I will introduce the ought-can premise (3) for *reductio*: it is conceptually necessary that if S ought to do something, S can do it.

It is easy to see that (1), (2), and (3) form an inconsistent set.<sup>25</sup> But perhaps the move should be to reject (2). Here are some further reasons not. First, it is a weak version of the original sin commitment, so if you are a theist of certain stripes, you are already committed to it. Second, it is a central commitment to any theory of education that requires that training must involve mistakes and their correction. So, if there is education, there must be mistakes. Third, if inquiry is itself a developmental or self-correctional notion, then it analytically entails a requirement that we learn from our mistakes. As a consequence, it is conceptually necessary that for any world with inquiry, there are mistakes. Fourth, for any valuational pluralism, any world relevant to our deliberation about goods and the epistemology of their proper order is a world where deliberation is needed. Worlds where deliberation does not exist may be conceivable to us, but they themselves are not parts of our deliberations. In the same way that total depravity is

logically possible but irrelevant to the concept of moral or epistemic normativity (see Descartes on madness in Meditation 1 and Kant on *ad populum* appeals for moral justification), total perfection is irrelevant, too. It is something that may impel our judgments to have a certain categorical *form*, but these worlds cannot have any purchase on the *content* of our judgments. Fifth, conceptual pessimism is related to fallibilism. It seems to be a reasonable thought that any knower with limited evidential resources will have the attitude that any one of its beliefs could be false, and some knowers may be of the attitude that they are quite sure that at least one is false. If we think that fallibilism of some strength is an appropriate (and perhaps prerequisite) attitude for knowers, then conceptual pessimism is not so objectionable. If it is reasonable for all possible knowers (relevantly similar to us) to believe of themselves that they have false beliefs, then it is reasonable for us to believe that of them. Though this may not be as probative as I had like it to be, I think this proof shows clearly that the conceptual possibility of determinism, conceptual pessimism, and the ought-can principle are inconsistent. I do not think we can reject (1) as easily as (2) or (3). I have marshaled a few reasons to keep (2), and that is the best I can do for my purposes here.

So far, I have criticized the standing arguments against regresses of inferential justification. I have not given an argument for their plausibility or necessity. To close, I will outline some positive possibilities for such an infinitist theory of justification.

First, a developed infinitism is minimally mutilative of our intuitive (internalist) commitments about justification. We retain the thoughts that inferential justification is *serial*, and that its iterations are *not reflexive* or *symmetric* but are *transitive*. We retain the importance of inferential justification while making the right kinds of concessions to the good thoughts driving foundationalism – namely, that our non-doxastic states play a role in justification. In this respect, infinitism is a catholic epistemology – one that is woven from the best thoughts driving other meta-epistemologies. Ironically enough, infinitism may be a common ground for a plurality of epistemic theories.

Second, a developed infinitism also provides a groundwork for a coherent fallibalist model for inquiry. As inquirers traverse and map the terrain of reasons, they test those reasons not only for proper support between claims, but also for their acceptability in terms of their non-doxastic components. Because all beliefs are supported by these chains and given that these chains are open to inquiry and testing, it follows that the justification for any belief is open to challenge and revision.<sup>26</sup> Fallibalism is not a matter of principle, but it is a rule of thumb (a rule of proper method) that ensues from proper consideration of the structural aspects of justification. This is a step toward coherent fallibalism, because its instantiations are about the justificatory status of beliefs, not truth. As a consequence, the justification-fallibalist avoids one paradox that plagues the truth-fallibalist – the paradox of the preface. The justification-fallibalist believes that any one (and perhaps a good number) of his beliefs could be unjustified, but that belief does not contradict his commitment to their truth. There is still a tension between the two commitments, certainly, but that tension is precisely what drives inquiry, not what (if fallibalism is put simply in terms of truth) marks something self-defeating about fallibalism.<sup>27</sup>

Third, and finally, if the denial of the ought-can principle is the heart of infinitism, then infinitism is a unique theory of evidentialist cognitive striving. A standing problem for evidentialism as an ethics of belief is that it founders on the regress problem. If the regress is absurd, then evidentialists must embrace one of the classical alternatives – foundationalism or coherentism. Coherentism runs afoul of the intuitive rule against circularity, and foundationalism may seem inconsistent with evidentialism, since the essence of foundationalism is that some beliefs are exempt from reason-backing. From the skeptic's perspective, it always looks like foot-stomping.<sup>28</sup> Moreover, foundationalism has seemed to many philosophers a hopeless philosophical task – that of not only finding sufficiently *stable* but also sufficiently *robust* foundations for knowledge, where the two objectives seem positively at odds.<sup>29</sup> Given this argument from elimination, non-evidentialism

follows.<sup>30</sup> But since (modest-foundationalist) infinitism is still a working option for evidentialist theories, and if the criticisms of the standing alternatives are right, then infinitism is a natural home for evidentialism. But note that infinitist evidentialism may require more of us than we may be able to provide, and though that often suffices as an objection to evidentialism independently, given our arguments against ought-can, such objections are facile. As a consequence, from the perspective of a developed infinitism, evidentialism is a theory of cognitive striving that may be quixotic, but nevertheless captures our real obligations as thinking, rational beings.<sup>31</sup>

#### NOTES

<sup>1</sup> Aristotle rejects regresses across the board. Most are simply rejected on the basis of his principle that “Nature flees from the infinite” (*Generation of Animals* 715b.16). Other cases of Aristotle’s rejection of various sorts of regress occur in *Nichomachean Ethics* 1094a.18, *De Caelo* 300b.1–2, *Physics* 256a.15–16, and *Metaphysics* 1074a.29. Plato, too, seems implicitly committed to the viciousness of at least some regresses with the third man argument in *Parmenides* 84c–85b.

<sup>2</sup> For an account of the shared premisses of Stoic and Skeptic exchanges on logic see Frede (1983) and Barnes (1990).

<sup>3</sup> The term “infinitism” came into use with Moser (1984, 1985) and Post (1987) and has been used by McGrew (1995), Klein (1999, 2000) and Fumerton (1995).

<sup>4</sup> The first use of the term “finitism” in epistemology is Johnstone (1996), but it has regular use in metaphysics and mathematics (e.g., for any theory posited on the denial of the axiom of infinity.)

<sup>5</sup> The divisions in this taxonomy have been widely (but sometimes tacitly) drawn in the literature on the possibility of epistemic recursion. Oakley (1976), Foley (1978), Williams (1981), Harker (1984), Klein (1999 and 2000) make many of the same distinctions between standing arguments, but there has been no systematic view of the arguments, and they are generally handled piecemeal. A synthetic or synoptic response to the arguments requires that they be handled as classes. Much of the work parsing the arguments has been done notably by finitists offering new arguments and working to show the relevant difference the new argument has from previous ones. See Oakley (1976, pp. 226–227) for the first discussion of the difference between “arguments against held beliefs” and “arguments against infinite series,” which becomes here the distinction between ought-implies-can arguments and conceptual arguments.

<sup>6</sup> In the standing literature, this objection has also been termed “the no starting point objection” (Klein, 2000, p. 204) and “the structural objection” (Gillett, 2003).

<sup>7</sup> Klein (2003, p. 720) has recently criticized these arguments on the basis of conflating explanatory and logical relations.

<sup>8</sup> Daniel Nolan (2001, pp. 533–534) describes the use of regress arguments as tools of theory-elimination as a return of “Aristotelian prejudice.” The thought is simply that regresses are absurd simply because of their lack of economy. But it is far from clear that quantificational extravagance is independent evidence of impossibility.

<sup>9</sup> See Harker (1984, p. 258) for a similar argument that such a move begs the question against the possibility of a non-vicious regress.

<sup>10</sup> In a similar spirit, Klein (2000) has called these “Anything Goes Arguments.” A fine early version of the argument is Deutscher’s, where he proposes:

Could it be one vast delusion system? Is a man reasonable in holding one belief merely because he holds another whose propositional content is suitably related to the first, even if he holds the second on account of a third which is suitably related to the second, and so on? Might not a man just dream up a system and be ingenious enough to always extend his story in logical fashion? How can the mere continuous extension of a belief system guarantee the rationality of the members of the system? (1973, p. 6)

I take the SR and MPR to be articulations of that “logical fashion” of extension. The arbitrariness argument bears a strong family resemblance to arbitrariness arguments against contextualism, as noted by Oakley (1976, pp. 226–227).

<sup>11</sup> Foley himself anticipates and concedes this objection (1978, p. 313).

<sup>12</sup> Barnes (1990) has proposed this difference as a possibility, but does not pursue it.

<sup>13</sup> This point was first noted by Harker (1984, p. 263).

<sup>14</sup> This thought is behind the Cartesian method to open the *Meditations* – in order for our non-doxastic states to have proper justificatory power, we have to prepare an appropriate doxastic context for them. It is also behind the theory-ladenness of perception literature: if a layperson and a physicist look into a particle accelerator’s gas chamber, both would be justified in saying they see a certain kind of squiggle, but only the physicist is justified in saying she sees a proton, neutron... or whatever.

<sup>15</sup> McGrew (1995, p. 64) has a recent version of Lewis’s argument formulated explicitly as a response to the varieties of modest foundationalism. Reichenbach (1952) offered what could be seen as an infinitist response to the argument.

<sup>16</sup> A further way to mitigate this difficulty with justified contradictions is to introduce a paraconsistent (or positive-plus) conception of negation (found

in Priest and Routley 1989, pp. 162–168). Such a marriage between infinite series of inferences and explanations with paraconsistent logics is suggested by Jacquette (1996, 112–114) – though not as a solution to this problem. I will not pursue this thought here, since I think that the epistemic solution above is sufficient. However, it is important to acknowledge that both SR and MPR require a classical interpretation of negation for the *reductio* and that such conceptions have been challenged. If the epistemic argument above does not work, the infinitist does have a further fallback position.

<sup>17</sup> Paul Moser’s criticism of Sosa’s argument is that since there must be information external to the regresses to distinguish them, infinitism must fail (1985, p. 69). But this is off the mark. Infinitism does not have to require that justification be an exclusively inferential affair. A similar confusion is behind Nathan’s argument that the regress, in the end, must be self-supporting (1977, p. 124). That would be so if the series were entirely (in Nathan’s words) “autonomous” inferential relations. But they needn’t be. Non-doxastic support is possible within the series.

<sup>18</sup> In the standing literature, Klein calls these arguments “Finite Minds Arguments” (2000, p. 203). Oakley had earlier parsed this qualitative argument off from the logical arguments as “against infinite series of held beliefs” (1976, p. 226). Foley’s qualitative argument explicitly evokes the distinction between the form of these arguments from the conceptual arguments (1977).

<sup>19</sup> Aune (1972, p. 329), Deutschser (1973, p. 6), and Alston (1986a, p. 24) have formulated this distinction in other relevant epistemological contexts. Klein (1999, p. 300, pp. 308–309) is clear that the requirement of occurrent beliefs for the regress is excessive, and his account of subjective belief-availability explicitly answers this requirement.

<sup>20</sup> The successor relation may provide an algorithm for producing beliefs in a formal context, but it is often worried that such an algorithm cannot serve that kind of role in a more robust empirical context. My model is designed to show that the successor relation can still serve such a role, so long as there are indexicals capable of distinguishing truth conditions. Klein suggests that indexicals could play that role (1999, pp. 307–308). His example is that we allow that there be an infinite set of a-shaped things, and that a subject could go through the set successively and say, “This is a-shaped.” Another possible example could be that if space is infinitely extended, let some subject successively believe that some object is to the left of where it was previously. Or, if we allow an infinite stretch of time, let some subject think successively, “Now I’m older than I was before... namely, *this old*.” The point of these examples (from infinite spatial, temporal, and set extension) is that a subject need not have infinitely complex beliefs (or ones that merely defeat human understanding) to traverse the infinite series intelligibly.

<sup>21</sup> In this refinement of the qualitative argument, we can see that it leads us to a consideration of the qualitative argument – namely that the Williams

argument moves from the issue of having a *number* of beliefs to having beliefs of a certain kind of *complexity*.

<sup>22</sup> Klein's defense of infinitism against the finite minds arguments (2000, p. 205) also reflects this close connection between the ought-can premise and skepticism. Klein points out that, "The claim that we do not have an infinite number of adequate, non-repeating reasons available for our beliefs is compatible with the infinitist's view that the appropriate normative requirement for our beliefs is depicted by infinitism. That type of infinitist would be a skeptical infinitist with regard to conditional knowledge." Importantly, the failure of our beliefs to actually live up to the infinitist requirement does not undo the requirement.

<sup>23</sup> Foley makes this concession – that his ought-can argument does not *refute* the skeptic (or infinitist), but shows that we should construct a more modest theory of knowledge. Such theories are ones of "degenerate justification" (1978, p. 316). Margolis makes a similar concession, but argues that pragmatism is the alternative (1977, p. 127).

<sup>24</sup> Feldman (2000) has the most explicit defense of epistemic requirements as "role oughts," where insofar as a subject is engaged in some goal-oriented practice, the subject ought to follow the rules of the practice that tie to that goal (p. 278). Importantly, the examples in the analogy above are his. For arguments against ought-can on similar grounds, see Feldman (1988, pp. 240–242) for an argument from "contractual obligation", Wolterstorff for an argument from "paradigm-obligations" (1997, p. 233), and Sinnott-Armstrong (1984) that ought only *conversationally* implies can (as opposed to *analytically*).

<sup>25</sup> The proof should run in *reductio* fashion:

- (1)  $\diamond (\sim D \rightarrow \sim C)$  Derived from the conceptual possibility of determinism: if determinism is true, then it follows that there are cases where if someone doesn't do something, it's because that person cannot.
- (2)  $\square (O \ \& \ \sim D)$  Conceptual Pessimism
- (3)  $\square (O \rightarrow C)$  Ought Implies Can
- (4)  $\square (C \rightarrow D)$  (1 contraposed)
- (5)  $\diamond (O \rightarrow D)$  (3,4 modal hypothetical syllogism)
- (6)  $\square \sim (\sim O \vee D)$  (2 DeMorgan's)
- (7)  $\square \sim (O \rightarrow D)$  (6 Df. Conditional)
- (8)  $\sim \diamond (O \rightarrow D)$  (8 Df.  $\square \sim$ )
- (9)  $\diamond (O \rightarrow D) \ \& \ \sim \diamond (O \rightarrow D)$  (5,8 conjunction)
- (10)  $\sim \square (O \rightarrow C)$  (4-9 *Reductio*). QED

The formal features of this proof are from Saka (2000, pp. 94–95). The strength of Saka's operators are those of *epistemic possibility*. My argument here is about the *conceptual* relations between failures and obligations. As a consequence, though my argument bears a strong resemblance to Saka's formally (precisely because it was inspired by his), my premisses and conclusion are of a different order. One consequence of this argument, if the strength of the operators is at the level of conceptual possibility, is that there

may be duties which are conceptually impossible to actually perform. (Thanks to the reviewer for this point.) But such possibilities I think abound. It may be conceptually impossible to refute the skeptic, but if we claim to know (and if knowledge entails being justified and right), we *ought to*. Or take theists with philosophical inclinations – they seem to me duty-bound, insofar as they’re committed to a God that has the relevant omnibeneficence to refute the argument from evil. They’ve still got the requirement, given their commitments, regardless (for the sake of my example) of the argument being impossible to refute.

<sup>26</sup> Klein also outlines the consequences of infinitist fallibilism (1999, p. 313).

<sup>27</sup> Though the move to justification can mitigate the problems with fallibilism’s paradox of the preface, it does not solve the self-referential paradox, which is a more serious problem for the fallibilist. Again, the problem may be solved with the marriage of infinitism and paraconsistency, suggested by Jacquette (1996, pp. 113–114).

<sup>28</sup> See Sextus Empiricus on this problem for the foundationalist (PH 1. pp. 164–177). The problem has been given new life by Bonjour’s meta-justification requirement for internal justification (1985, pp. 30–32). A similar thought drives the Sellars–Davidson argument against non-doxastic support – that such states cannot provide justification for propositions unless they stand in some inferential (and hence, logical) relation to beliefs (Sellars, 1963; Davidson, 1983, p. 428). If the states do not have propositional content, then they cannot. Some doxastic background is necessary for epistemic support at all. For the modest foundationalist – infinitist, the regress of meta-justification need be no more vicious than the series on the first-order justification.

<sup>29</sup> See Rescher (1974) for this argument.

<sup>30</sup> See Adler (2002, pp. 173–179) for an overview of this argument. Adler, instead of embracing non-evidentialism, introduces his theory of “tacit confirmation”, which bears a strong resemblance to coherentism (with both “bottom-up” and “top-down” justification). The point here is that we needn’t devise new alternatives or embrace non-evidentialist ethics of belief in the face of the regress argument, but accept infinitism as a real home for evidentialism.

<sup>31</sup> Thanks to Peter Klein, John Post, Jeffrey Tlumak, Lenn Goodman, Allen Coates, James Bednar, Robert B. Talisse, Derek Turner, Toni Nicolletti, Jason Carroll and Brian Ribeiro for comments on earlier drafts of this paper.

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