

# DOES KLEIN'S INFINITISM OFFER A RESPONSE TO AGRIPPA'S TRILEMMA?

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**ABSTRACT.** The regress of reasons threatens an epistemic agent's right to claim that any beliefs are justified. In response, Peter Klein's infinitism argues that an infinite series of supporting reasons of the right type not only is not vicious but can make for epistemic justification. In order to resist the sceptic, infinitism needs to provide reason to think that there is at least one justified belief in the world. Under an infinitist conception this involves showing that at least one belief is supported by an infinite series of supporting reasons. This paper argues that showing this makes problems for the infinitist. The finite minds problem that prevents completion of an infinite series is well documented. This paper examines alternative attempts to provide evidence of infinity that the infinitist might take, whether by using a notion of justification without infinite reasons or by altering the notion of evidence. It concludes that both of these fail and consequently infinitism is unable to offer a solution to Agrippa's trilemma.

## 1. INTRODUCTION

The very idea of a workable *infinitist* solution to Agrippa's trilemma is a relatively recent development in epistemology. Traditionally, attempted solutions to the problem have focused on *foundationalist* and *coherentist* accounts.<sup>1</sup> Peter Klein drags infinitism into the spotlight and argues that the tacit rejection of infinitism is unwarranted.<sup>2</sup> This paper examines his defence of infinitism and claims that he is right that the reasonable epistemologist should not dismiss infinitism without argument. Despite this, the ultimate conclusion is that infinitism does not offer a viable solution to Agrippa's trilemma. Granting the infinitist's claim that a justified belief is supported by an infinite, non-repeating series of reasons does not, *contra* Klein, yield a response to the sceptical problem at the heart of the trilemma.

This paper proceeds as follows: In Sect. 2 I set out Klein's infinitism in terms of its claims and motivations. I also explain the *finite minds problem*—which I use later in my own argument—and outline how Klein defends infinitism against this.

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<sup>1</sup>Michael Williams points out that foundationalists and coherentists often attempt to simply argue against the opposite position in order to motivate their own—as though the choice is simply between foundationalism and coherentism (Williams, 2005, pp. 204-205).

<sup>2</sup>Though Klein is the most prominent contemporary defender of infinitism, it would be misleading to present him as the only infinitist. Other defences of infinitism are set out in Fantl (2003). Fantl discusses an infinitist account of *propositional* rather than *doxastic* justification. Scott Aikin also discusses various different accounts that might reasonably be considered species of infinitism (Aikin, 2008, 2005). This paper however is developed and presented as arguing against the version of infinitism offered by Klein, who thinks that arguments for infinitism can overcome the sceptical challenge.

In Sect. 3 I focus on a different problem—the *evidence of infinity problem*, which I take to be an alternative though related challenge to Klein’s position. Section 4 outlines a strategy that the infinitist might take in order to defend against the evidence of infinity problem. This employs both a modified version of what it is to have evidence for something and also a notion of being *provisionally* justified. In Sect. 5 however I argue that this fails. Lastly, in Sect. 6 I consider the possibility of arguing for infinitism by exclusion. I argue that this type of argument can be made to work only if the infinitist is also able to exclude the sceptical option. I claim that Klein needs an argument against scepticism in order to avoid violating the principle supporting his rejection of foundationalism.

## 2. INFINITISM STATED

The infinitist attempts to respond to the problem known either as the *regress of reasons* or as Agrippa’s trilemma.<sup>3</sup> It is a truism that some beliefs are inferred from others. In order to map out the inferential relations between beliefs, one might start with *b*—the belief that a certain shape has four right angles. When pressed with the question of ‘why do you believe that *b*?’ one might provide *r*<sub>1</sub>—the belief that the shape is a square as a reason. The question might then be asked ‘why believe *r*<sub>1</sub>?’ and so on. Ultimately one of three things must happen:

- (1): The process ends with a reason *r*<sub>n</sub> that is not supported by another reason.
- (2): The series of reasons becomes circular—a reason used earlier in the series is used again.
- (3): The series continues for ever with new reasons.

The foundationalist thinks beliefs of the right sort are members of a series of the type described in (1). The coherentist argues that beliefs of the right sort are members of a series that resembles the structure set out in (2). The infinitist argues that the right sort of belief is a member of an infinite set of the type outlined in (3). For the purposes of this paper I follow Klein (1971) in holding that beliefs ‘of the right type’ are *doxastically* justified.

The sceptical conclusion is that no agent is justified in believing one particular proposition rather than its negation. Since the three options are exhaustive and exclusive and each is problematic the sceptic concludes that no belief is justified. With this in mind, a response must do two things. Firstly, it must claim that members of a structure of a certain type are, at least sometimes, justified. Call this a *structural claim*.

Secondly it must also offer some reason to think that there are some beliefs that are members of this type of series. This I will call the *anti-sceptical claim*.<sup>4</sup> If the infinitist is able to show how its structural claim does not lead to scepticism, then infinitism offers a solution to Agrippa’s trilemma. Klein thinks that it can.

Distinguishing between these two claims supposes a distinction between *meta-epistemology* and *normative epistemology*. The structural claim, which I propose to grant to the infinitist, concerns meta-epistemology, whereas the anti-sceptical claim, which

<sup>3</sup>The more normal name is the regress of reasons. The problem is set out as Agrippa’s Trilemma in Williams (1996; 2001; 2005). For the problem set out as the regress of reasons see Cling (2008).

<sup>4</sup>This is certainly true of both coherentism and infinitism, which both hold that only a belief can provide a reason for a belief (Davidson, 1989). Later we will see that foundationalists are not as obviously committed to this.

I think is a problem given the infinitist's structural claim, is a claim about normative epistemology.

Klein's infinitism states that:

[I]n order for a person, S, to be justified in believing a proposition,  $p$ , there must be an infinite set of propositions available to S that can be arranged in a non-repeating series such that the first member  $r_1$  is a reason for  $p$ , and the second member,  $r_2$  is a reason for  $r_1$ , and  $r_3$  is a reason for  $r_2$ , etc., and no  $r_i$  repeats in the series (Klein, 2003, p. 718).

The use of the phrase 'available to S' here draws suspicion. If 'available to S' is supposed to mean that consciously holding all of the beliefs in the infinite series is necessary for justification, then this rapidly leads to the conclusion that no finite minded agent has any justified beliefs.

Assuming that all human beings have finite minds, this seems like the end of the infinitist's anti-scepticism. The reason for this is simple and pointed out by Richard Fumerton—no individual could ever complete an infinite series of reasoning since a finite mind cannot hold an infinite number of beliefs and as a result infinitism does not permit justified beliefs (Fumerton, 1995, p. 57). The problem of having an infinite series of beliefs contained within a finite mind is called the 'finite minds problem.'<sup>5</sup>

Klein's infinitism is not supposed to be a rapid argument toward scepticism however. This is the anti-sceptical claim that Klein makes. Rather, it is intended to avoid the conclusion that none of us has a justified belief whilst arguing that such a belief is a member of an infinite non-repeating series. With this in mind rather than take 'available to S' to mean 'contained within the mind of S' Klein holds that a reason might be available to an agent if the agent has a disposition to form the belief in the appropriate circumstances (Klein, 1998, p. 920).<sup>6</sup>

Klein also employs a notion of being provisionally justified. Whilst he acknowledges that the finite minds problem demonstrates that the question of whether or not a belief is justified cannot be settled easily, he holds that a belief can be doxastically justified for an agent if every time the agent has searched for a reason in support of a belief, there has been one available.

Naturally one is justified only if one has done 'enough' reasoning to license the claim that there will be an infinite series of reasons. How much is enough is taken to be 'a matter of the pragmatic features of the epistemic context' (Klein, 2007a, p. 10).<sup>7</sup> Klein points out the extant problems of foundationalism and coherentism to motivate his structural claim. Since these do not apply to infinitism, he claims it provides a defensible account of the structure of justified beliefs. Contemporary

<sup>5</sup>The finite minds problem is also discussed by John Williams, who states that '[o]nly God could entertain an infinite number of beliefs. But surely God is not the only justified believer' (Williams, 1981, p. 85). For a development on the traditional finite minds problem see Podlaskowski and Smith (2011).

<sup>6</sup>Of course if Klein was simply interested in the structural claim, the finite minds problem would not matter. If the claim was simply that justified beliefs (if there are any) form an infinite series, then there would be no problem with saying there are none—which is just the consequence of the finite minds argument. An infinitist of Aikin's (2005) stripe, who almost seems to endorse that infinitism leads to scepticism, does not need to worry about the sceptical consequence.

<sup>7</sup>It is worth noting that foundationalism and coherentism do not face similar problems—whilst there may be foundational chains of reasoning that have  $n + 1$  members, there may well be chains with  $n - 1$  members. This is not true of any infinite series.

critics of foundationalism argue that foundationalists struggle to articulate convincingly why foundational beliefs are justified yet basic.<sup>8</sup> The moral of this according to Klein is that arbitrariness (understood as a belief unsupported by another belief) ought to be avoided. He expresses this in the Principle of Avoiding Arbitrariness (PAA).<sup>9</sup>

Principle of Avoiding Arbitrariness: For all  $x$ , if a person, S, has a justification for  $x$ , then there is some reason,  $r_1$ , available to S for  $x$ ; and there is some reason,  $r_2$ , available to S for  $r_1$ ; etc (Klein, 1999, p. 299).

Klein's attack on coherentism targets two versions of coherentism. These disagree about the nature of justification (or 'warrant' as Klein calls it). One coherentist approach is to say that justification is *transmitted* from one belief to another as the foundationalist does. Such a position involves endorsing circular reasoning however.<sup>10</sup> Klein, like many, takes circular reasoning to be undesirable and offers the Principle of Avoiding Circularity (PAC) to avoid the problems faced by coherentist accounts of this type.<sup>11</sup>

Principle of Avoiding Circularity: For all  $x$ , if a person, S, has a justification for  $x$ , then for all  $y$ , if  $y$  is in the evidential ancestry of  $x$  for S, then  $x$  is not in the evidential ancestry of  $y$  for S.

These two principles provide a reason to adopt an infinitist position. PAA rules out foundationalism and the combination of PAA and PAC rules out coherentism.<sup>12</sup> Since infinitism is the only remaining structural claim, one might take this to be an argument by exclusion to an infinitist position. Klein also thinks however that infinitism has a number of attractive features independently of the arguments against foundationalism and coherentism.

One such reason is that, unlike foundationalism, infinitism can make sense of the idea that having more reasons in support of a belief leaves an individual with more

<sup>8</sup>For a statement of some of the problems see Bonjour (1985), Davidson (1989) and Sellars (1963). In defence of the idea that properly basic beliefs can be articulated see Chisholm (1982), Goldman (1979), and Pryor (2005).

<sup>9</sup>Of course if Klein was simply interested in the structural claim, the finite minds problem would not matter. If the claim was simply that justified beliefs (if there are any) form an infinite series, then there would be no problem with saying there are none—which is just the consequence of the finite minds argument. An infinitist of Aikin (2005) stripe, who almost seems to endorse that infinitism leads to scepticism, does not need to worry about the sceptical consequence.

<sup>10</sup>Another version of coherentism is what Klein describes as 'warrant emergent' coherentism. According to this view, the more members there are in a coherent set, the greater the justification of the set as a whole. Klein rejects this position however since he regards it as a one-step version of foundationalism (Klein, 2006, p. 134).

<sup>11</sup>Klein describes PAC as 'an obvious presupposition of good reasoning' (Klein, 1999, p. 298). Why a coherentist should not regard the avoidance of an infinite series as a presupposition of good reasoning is another matter.

<sup>12</sup>It might be a good thing that Klein challenges coherentism using the circularity problem rather than the problem of a truth connection as discussed in Olsson (2005). One might think that there is no clear connection between an infinite series and truth—my belief that it is wet seems no more likely to be true given my belief that it is very wet than without this belief. This means that infinitism still has work to do in responding to Chisholm's 'Problem of the Criterion' (Chisholm, 1982). In response to the problem of the truth connection see Peijnenburg (2007). Klein's account argues for the necessity, but not sufficiency of an infinite series of supporting reasons. The question of what it is that makes an infinite series sufficient is taken up in Cling (2004).

justification. The reason for this is because a foundationalist (unlike an infinitist) is committed to the view that justification involves a finite number of reasons. This is important since Klein thinks that once an individual reaches a certain point in the reasoning, the belief qualifies as knowledge.

Based on this, Klein thinks that the infinitist is better positioned than the foundationalist to account for the relationship between justification and knowledge. In response to this, John Turri suggests that a foundationalist can also have an infinity of reasons—my belief that the time is 11:43 is supported by my belief that it is later than 11:42 and also by my belief that it is earlier than 11:41 and so on (Turri, 2009, pp. 162-163). The emergent nature of justification in Klein's account makes the difference here though. Klein borrows this notion of emergent justification from coherentism.

Since the justification of the set is greater the more members it has, the infinitist can make sense of an agent having increasing justification as he/she uncovers more reasons. Ultimately of course, infinite structures are of the same length and as a result the agent's justification rather than the objective justification of the belief changes.

The foundationalist on the other hand takes the individual's justification to be no stronger than the justification he/she has for the basic beliefs since it is from these that the other beliefs are inferred. The idea of increased justification is also set out by Klein elsewhere.<sup>13</sup> He states that 'I am making progress in increasing the doxastic justification of the original belief when I locate more and more reasons for it' (Klein, 2007b, p. 28). The reason that this claim is important to this paper is because it shows further that Klein's infinitism is supposed to have an anti-sceptical component to it. Klein thinks that the merit of infinitism is not just as the best of three accounts of justification—it is also to show that there can be such justified beliefs.

### 3. THE 'EVIDENCE OF INFINITY PROBLEM' AND A DILEMMA FOR THE INFINITIST

The infinitist therefore holds that a justified belief is one that is supported by an infinite number of non-repeating reasons. In this section I argue that, unlike foundationalism and coherentism, there is no distinctive 'mark' or *sui generis* characteristic of a member of an infinite series that can be identified. Later on, I argue that this gives the infinitist a problem.

Suppose we undertake the Agrippan project and examine our beliefs to ascertain the structure of the supporting reasons. In support of our belief *b*, which we take to be justified, we discover that we have a reason  $r_1$  which is in turn supported by  $r_2$  and this is supported by  $r_3$ . Suppose also that we continue going through more and more non-repeating reasons until we arrive at reason  $r_n$  at which point we stop. If the infinitist account of the structure of doxastic justification is correct and we are correct in thinking that *b* is a justified belief, then it must be the case that  $r_n$  has neither:

(1): Been used in the series of reasons before.

Nor

(2): Is one that is not supported by other reasons.

<sup>13</sup>Michael Bergmann argues that Klein's position is not an infinitist one (Bergmann, 2007). In response to this Klein points out the idea of increased justification in an infinitist account (Klein, 2007b).

Of course Klein does not claim that we need to have done the reasoning to uncover a conclusive reason for the truth of (2)—a second-order disposition will suffice, but there must be another reason to be discovered should we look for it.

This means that if the infinitist has the right structural claim about justification and we are right in taking  $b$  to be justified,  $r_n$  will have no distinctive character that marks it out as a member of the type of series corresponding to the structural claim of either the foundationalist or the coherentist. The question then that we should ask the infinitist is *why is it reasonable for us to believe that the series is in fact infinite?* If it is not, then infinitism leads to scepticism. It needs to be the case that beliefs are objectively justified, since an objectively unjustified belief being justified for the agent does not offer a solution to Agrippa's trilemma.

Foundationalists would certainly expect the supporting reasons for some justified beliefs to be long. They are not committed to saying that for any justified belief, tracing the reasons in support of it will quickly and easily yield a foundational belief. It seems likely that they would admit that  $r_n$  is not a basic belief, but if  $b$  is justified the series of support will end with a basic belief. The circularity endorsing coherentist has a similar move available. Whilst foundationalists and coherentists each commit to a particular structure of justified beliefs, neither commit to a claim regarding the maximum size of the structure. This means one cannot exclude the possibility of foundationalism based on the presence of many non-basic reasons.

Call this the evidence of infinity problem. The problem works against the claim that an agent has a reason to take one particular belief to be justified rather than the claim that there are any beliefs that are in fact justified. Unlike the infinitist, the foundationalist and the coherentist can provide conclusive reasons—the foundationalist by arriving at a belief with a certain property that makes it appropriately basic and the coherentist by arriving at a belief that has already been used in the series. The only way in which the infinity of a series might be shown conclusively is by completion. There is no 'shortcut' to establishing the infinite nature of a series in the way that basic beliefs establish that a series is of the foundationalist type. Whilst it is not even clear that the completion of an infinite series of beliefs is possible let us leave this aside and simply say that only completion could show conclusively the infinite nature of a series. In advance of completion, we certainly cannot know a belief is a member of an infinite series.

The acceptance of the claim made in the finite minds problem that a finite mind cannot contain an infinite series means the infinitist cannot demonstrate the existence of justified beliefs in the same way as a foundationalist or coherentist. Klein circumvents this by arguing that we do not need completion since a second-order disposition to adopt the next belief will suffice. Without completion however, one might wonder what sort of evidence of infinity there could be. The finite minds problem is therefore particularly forceful alongside the evidence of infinity problem. Coupling the two problems creates a difficult dilemma for the infinitist.<sup>14</sup> This is because the two problems pull in different directions. The finite minds problem forces the infinitist to accept that completion of an infinite series is not necessary for justification. On the other hand, the evidence of infinity problem presses for the claim that we do need to complete an infinite series of reasoning to yield a reason

<sup>14</sup>The claim that infinitism faces a troubling dilemma is also the strategy set out in Bergmann (2007) argument against infinitism. The dilemma that Bergmann thinks the infinitist faces however is different to the one that is presented here.

to think that any belief is part of a (truth conducive) infinite set and reason to think infinitism does not lead to scepticism.<sup>15</sup>

Of course an analogous point might be made about the reliabilist foundationalist. I show later however that the problem is a more pressing one for the infinitist since the reliabilist has a line of response available that the infinitist does not due to the infinitist subscribing to PAA where the foundationalist does not.

If the infinitist accepts that there is no evidence of infinity, the claim that a belief is justified will be at best evidentially underdetermined. This is because of the lack of a distinctive character to individual beliefs in an infinite series. The series may however be conclusively shown to be finite by turning out to be either a foundationalist one or a coherentist one and therefore unjustified according to the infinitist's structural claim. This is the point of the evidence of infinity problem. The fact that an agent has no evidence of infinity does not change whether or not the belief is actually infinitely supported. In order to justifiably claim that there are justified beliefs in response to the Agrippan sceptic however, the infinitist does need evidence of infinity. Otherwise the infinitist is left with the possibility of objectively unjustified beliefs that are justified for the agent or vice-versa neither of which amounts to a response to the trilemma.<sup>16</sup> Specifically, the evidence of infinity problem aims to show that an infinitist structural claim is unable to support an anti-sceptical claim. Like the finite minds problem, the evidence of infinity problem allows a critic to grant the infinitist the structural claim and allow that 'some infinite regresses of reasons are not vicious' (Klein, 2004, p. 116). The problem is that even if not all infinite regresses of reasons are vicious, giving evidence for the claim that a belief is part of a virtuous infinite series is beyond the infinitist.

Assuming possibility is to be understood as quantification over possible worlds and an infinite series of reasons is possible, showing that any beliefs are actually justified involves showing that in the actual world, the supporting reasons form an infinite series. Showing that it is merely *possible* for beliefs to form an infinite non-repeating series is not sufficient to show that anyone's beliefs *actually* form such a set. The sceptical conclusion cannot be avoided by the mere possibility of an infinite series since it says nothing about actuality. What is needed is evidence for an infinite series of reasons in the actual world.

The evidence of infinity problem has another modal component. It also claims that it is impossible for an agent with a finite mind to have evidence of the infinite nature of a series of beliefs. The claim is not that there is no possible world in which there is an infinite series of beliefs reasons available (in the dispositional way) in support of a belief—it is to do with the agent having evidence of this. In short, the modal claim made by the evidence of infinity problem is that even if we permit the infinitist's structural claim and that an infinite series of beliefs is possible, there is no possibility of an agent with a finite mind ever establishing conclusively that a belief is justified.<sup>17</sup>

<sup>15</sup>Another argument with the consequence that if infinitism is the correct account of the structure of justified beliefs, then there is reason to think any belief justified is set out in Cling (2009).

<sup>16</sup>This is set out in more detail in Sect. 5.

<sup>17</sup>One might think that the infinitist need not actually show that a series of beliefs is infinite. I take it however that believing a series of supporting reasons to be infinite (a justified belief) in this way to violate PAA—used by Klein in his rejection of foundationalism. This argument is made later.

This is the evidence of infinity problem. When coupled to the finite minds problem to create the dilemma it represents a genuine challenge that the infinitist does not have a ready response to. In the next section I set out how the infinitist might seek to avoid the evidence of infinity problem by making two counter claims. The response covers possible infinitist rejections of both the premises supporting the evidence of infinity problem.

#### 4. A POSSIBLE INFINITIST RESPONSE TO THE EVIDENCE OF INFINITY PROBLEM

The way that the evidence of infinity problem is constructed against the infinitist is in an argument of the following structure:

(P1): For an infinitist to think that a belief is doxastically justified, he must think that it is supported by an infinite number of reasons.

(P2): There could be no evidence to support the claim that the reasons available to support a belief are infinite as opposed to numerous but finite.

Therefore

(Conclusion): The infinitist has no reason to think that any belief that someone holds is doxastically justified.

This amounts to a failure of the anti-sceptical claim. In this section I consider ways in which the infinitist might seek to deny the problematic result articulated in Conclusion by denying either (P1), (P2) or both.

Let us begin with (P2). The argumentation given above in the motivation of the evidence of infinity problem appears sound. After all, the reasoning behind the evidence of infinity problem is supposed to use premises that the infinitist accepts and, from these, show that there is no evidence of infinity that could be available to an agent with a finite mind. Klein's response to the finite minds problem shows that completion is out of the question. Furthermore, the infinitist rejection of foundationalism uses the claim that immediate justification is problematic, which means that the members of the infinite set bear no distinctive features in their own right.

The infinitist might seek to argue for an amended conception of what it is for something to be evidence for a particular hypothesis. The evidence of infinity problem trades on the idea that something is evidence for a hypothesis if that hypothesis is the only one that is compatible with the evidence. For instance the discovery of an epistemically basic belief qualifies as evidence for the hypothesis that the belief structure is built on basic beliefs. This is because only the hypothesis in question is compatible with the evidence. Undoubtedly this kind of conclusive reason, which is discussed by Dretske, is one way that something can be evidence in support of a hypothesis (Dretske, 1971). The infinitist might hold however that there is more than one way in which something can be evidence.

The infinitist might argue that something is evidence for a hypothesis if the hypothesis is the best explanation of the evidence.<sup>18</sup> This contrasts with the account of evidence above whereby the hypothesis is the only explanation of the evidence. Using this idea of what it is for something to be evidence, one could still claim evidence for a hypothesis even though there is more than one hypothesis that the evidence is logically compatible with. Applied to the evidence of infinity problem this means that the presence of many non-foundational beliefs in a series could be evidence of

<sup>18</sup>I am grateful here to Peter Klein for suggesting this line of defence to me.

the infinity of the series.<sup>19</sup> Of course the idea of a ‘best explanation’ has something of a pragmatic character. What makes an explanation the best is not always clear, but one thought is that an explanation is the best if it involves the best combination of simplicity and covering the data. For this reason there needs to be some account of why inference to best explanation directs one towards the epistemic goal of truth. Assuming two hypotheses explain the data equally well, the question is why a simpler one should be more likely to be true. In this paper I propose to grant to the infinitist that there is some reason to think simplicity truth conducive in order to advance the discussion.

The idea of evidence despite logical underdetermination seems reasonable enough. Certainly the initial account of evidence seems very strong and means we rarely have evidence for anything. Ordinarily we take ourselves to have evidence for certain evidentially underdetermined hypotheses. What this means for the infinitist is that the argumentation in support of (P2) might fall short of supporting the strong modal conclusion that there could never be any evidence of infinity. This is because the premise and the supporting argumentation invoke a false assumption—that the only way for something to be evidence for a hypothesis is if the hypothesis is the only one compatible with it. One might also accuse the infinitist’s critic of artificially aligning the notions of ‘evidence’ and ‘conclusive reason.’ The critic might seem to base (P2) on the claim that something is evidence for a hypothesis if and only if it is also a conclusive reason in support of the hypothesis.

This represents a problem since the notions of evidence and conclusive reason can be wedged apart and there can be evidence that is not a conclusive reason. Taking the idea of a conclusive reason to be either some sort of deductive argument from either a priori or posteriori premises or alternatively an existential proof means that it seems there ought to be a possibility of evidence that is not a conclusive reason.

If it is correct that there can be evidence that is not a conclusive reason then the infinitist can hold that the argument supporting (P2) is sufficient to show that there is no possibility of a conclusive reason in support of an infinite series, but insufficient to refute the claim that there is a possibility of evidence of infinity. The infinitist might therefore develop an argument against the second premise grounded on the implausibility of the notion of evidence that it uses. Furthermore, this rejection squares with our everyday understanding about evidence.

It is possible however that the infinitist may not be satisfied with simply rejecting the second premise of the attack. Rejecting the second premise is sufficient to resist the anti-infinitist conclusion, or at any rate make the argument logically invalid. As well as this though there is a possibility that the infinitist might also argue against (P1). Whilst the infinitist does claim that a justified belief is one that is supported by an infinite number of reasons, he may still suggest that (P1) as it has been set out is far too strong.

How could the infinitist claim there something problematic about the wording in (P1)? One way uses the claim that an individual is provisionally justified if it is the case that, whenever he/she has sought supporting reasons, they have been found. Indeed the infinitist might hold that this kind of provisional justification is the best

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<sup>19</sup>Exactly how infinity is going to be shown to be the best explanation we shall see. I take it in this paper that applying simple induction to extrapolate from the evidence that ‘all supporting reasons have been supported by reasons’ to the claim that ‘all supporting reasons will be supported by reasons’ is only as well justified as induction in general. On the justification of induction see Skyrms (2000).

a finite mind could ever have access to (Podlaskowski and Smith forthcoming, p. 1). On this subject Klein says:

The *infinetist* will take the belief that  $p$  to be doxastically justified for  $S$  just in case  $S$  has engaged in providing ‘enough’ reasons along an endless path of reasons.  $S$  would be completely doxastically justified if every reason in the path were provided. But assuming it takes some time to provide reasons, even though a *proposition* might be completely justified (if there is a suitable path of reasons), no *belief* could ever be completely doxastically justified. Nothing is ever completely settled, but as  $S$  engages in the process of providing reasons for her beliefs they become better justified—not because  $S$  is getting closer to completing the task, but rather because  $S$  has provided more reasons for her belief. How far forward in providing reasons  $S$  need go seems to me to be a matter of the pragmatic features of the epistemic context—just as which beliefs are being questioned or which can be taken as reasons is contextually determined (Klein, 2007b, p. 10).

The claim that a belief is doxastically justified for an individual if the individual has found reasons in support up to a certain point works against the finite minds problem. If all the evidence needed is that all the beliefs up to a certain point are supported by reasons (or have reasons available to support them) then the set might be contained within a finite mind. At any rate the infinitist is no worse off than the foundationalist. This idea of a stopping point might appear foundationalist. Indeed it might even violate PAA—wielded by the infinitist against foundationalism. This need not be though, since the infinitist takes the supporting reasons to be infinite and as a result accepts that whether or not the belief is objectively justified is not clear if reasons have only been found up to a finite point.

Adding this to the ‘best explanation’ conception of evidence creates a response to both evidence of infinity problem and finite minds problems. The infinitist can hold that we are justified in believing that there is an infinite number of supporting reasons since the best explanation for the fact that every time a reason has been sought in support of a belief there has been one. Using the weakened sense of evidence this might provide evidence of infinity. The modified version of (P1) also claims that this is enough for a belief to be doxastically justified for an agent. As a result of this, we can see that provided an infinite series of supporting reasons is a possibility, the infinitist can claim justification for the claim that there is at least one justified belief since all the available reasons are as one would expect of an infinite series.

The infinitist appears to have a response to the dilemma that rejects both premises used in the evidence of infinity problem. Modifying the premises as the infinitist does means the sceptical conclusion no longer follows. In the next section I evaluate this response and argue that it faces significant problems.

##### 5. AGAINST THE INFINITIST RESPONSE TO THE EVIDENCE OF INFINITY PROBLEM

There is a degree of plausibility to the idea that  $H$  being the best explanation of  $x$  means  $x$  is evidence for  $H$ . We might be able to accept that evidence need not provide conclusive reasons in support of a hypothesis. The response to (P2) is therefore

acceptable. Despite this, I argue that the overall response to the evidence of infinity problem is inadequate.

Klein claims that being supported by an infinite series of reasons is a necessary, if not sufficient condition of a belief being justified. Resisting the sceptical claim that no individual has any good reason to regard a belief as justified requires some idea of what might support the claim that the supporting reasons are infinite. Avoiding the problem in the way above opens the possibility of objectively unjustified beliefs being justified for an agent. This involves an agent having available reasons that are not actually of the right structure.<sup>20</sup> This is no response to scepticism. If Klein employs the idea of contextually appropriate stopping points, this requires some sort of evidence of infinity. I argue that evidence of infinity is no easier to come by even with the weakened conception of evidence.

Regarding the modified account of Premise 1, the infinitist might claim that a belief is doxastically justified for an individual if there has always been a reason when the individual has sought one and the stopping place is one that is appropriate given the epistemic context. This in itself however is not sufficient as an expression of infinitism. Klein rightly points out that the infinitist needs to take it that if an individual stops tracking reasons at a contextually appropriate point, whilst this is permissible, the infinitist must regard it as short of completion. This leaves open the question of whether the belief is objectively justified.<sup>21</sup> The infinitist must also hold that the belief, if justified, is supported by infinite non-repeating reasons. Consequently even if Klein can claim that a belief can be doxastically justified for an agent if there has always been a reason up to an appropriate stopping point, he is still clearly committed to the claim that a justified belief is one that is supported by an infinite series of reasons. Furthermore an agent must regard it as such and this is something that the evidence of infinity problem can fasten onto since a response to the trilemma needs our beliefs to be objectively justified.

Even if something can count as evidence for a hypothesis when the hypothesis is the best explanation of the evidence, this leaves a problem that is similar to the evidence of infinity problem. One might wonder whether or not an infinite series of reasons is the 'best' explanation of the fact that whenever a reason has been sought there has been one available. If it is the best, in virtue of what is it better than any other? If a hypothesis is the best explanation of some evidence it must be a better explanation of the evidence than any other hypothesis—at least any other hypothesis that we are taking seriously. The thought is that infinitism cannot give an adequate account of why infinity is the best explanation of a long series.

We therefore need either a reason to show why foundationalism and coherentism are previously excluded or a reason to show why infinitism is a better explanation of the availability of reasons whenever one has been searched for.<sup>22</sup> Any attempt at

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<sup>20</sup>This is not to say being justified for the agent would be worthless. One possible value the infinitist might wish to claim for this idea of a belief being justified at a contextually appropriate stopping point is that it might help with the normative questions asked of the infinitist in Podlaskowski and Smith (forthcoming). I take it that if the possibility of being justified in this incomplete sense but not in the stronger sense of being supported by infinite reasons constitutes a genuine problem for the infinitist, then the incomplete notion of justification is unable to do any work in response to the normative questions.

<sup>21</sup>The foundationalist need not admit this.

<sup>22</sup>In the next section I will assess the possibility of arguing for infinitism as the best explanation by excluding all other competing hypotheses.

this latter problem will be limited in what it can achieve—if the evidence of infinity problem cannot be solved without infinitist amendments there can be nothing within the finite completed reasoning that guarantees infinity. Why a long series is best explained by an infinite, rather than long foundational chain, is similarly unclear.

Certainly an infinitist might say that the infinitist structural claim coupled with the presence of a justified belief leads to the claim that the supporting reasons are justified. It seems though that something analogous should be available to the foundationalist. As we will see later in this paper, it is not clear why the infinitist should be able to claim that there clearly is such a thing as a justified belief. Why a long chain of supporting reasons should be best explained by infinity should still be mysterious. It seems that a reason certainly is needed—otherwise the infinitist would hold an unsupported belief, which according to PAA is not justified.

Granting the claim that a hypothesis can be supported enough by evidence that drops short of a conclusive reason does not yield evidence of infinity. Consequently it gives no response to the evidence of infinity problem. Whilst the infinitist can argue that evidence need not involve a conclusive reason, a weaker conception of evidence does not help. The infinitist response outlined intends to show that the infinitist can have evidence of infinity by modifying the premises. Whilst the modified understanding of evidence is acceptable, this does not help the infinitist. The claim is still underdetermined even if being the best explanation is a type of evidence. Modifying the notion of what it is to have a justified belief so that it involves a contextually appropriate stopping point and reasons provided up to this point does not get the infinitist away from the claim that beliefs must be part of an infinite series of reasons to be justified objectively. Consequently the infinitist still needs evidence of infinity and it is no clearer how this can be achieved. The moves outlined above only shift the pressure on the infinitist account creating another evidence of infinity problem. The problem becomes why an infinite series is the best explanation of a long series. Simply appealing to the fact that apparently justified beliefs have a lot of supporting reasons is the best explanation saddles the foundationalist with the claim that foundational chains of reasoning are either always or mainly short. The foundationalist is certainly not committed to this claim and doubtless would not want to make it. The infinitist still needs to show how the modified account of evidence enables evidence of infinity. In the next section I examine one final response that the infinitist might take. Arguing to infinitism by exclusion, as Klein does, might offer reasons to exclude competing hypotheses and provide a reason for an infinite series as the best explanation of the availability of reasons.

## 6. INFINITISM BY EXCLUSION

In the previous section I stated that if the infinitist is able to provide reason to exclude competing hypotheses this could answer the evidence of infinity problem. Showing that all we are able to ‘properly ignore’, in Lewis’ words all competing hypotheses provide reason to regard infinity as the best explanation of the availability of reasons.<sup>23</sup> An argument for infinitism by exclusion might motivate infinitism regardless of the evidence of infinity problem. Indeed using the shortcomings of

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<sup>23</sup>See Lewis (1996) for an account of the circumstances in which one may ‘properly ignore’ a possibility.

foundationalism and coherentism to motivate infinitism is Klein's strategy in his explanation of infinitism. Whilst he does not think infinitism is motivated only by the problems of foundationalism and coherentism—he takes it that infinitism offers a response to Agrippa's trilemma in its own right he does think that the problems associated with foundationalism and coherentism support infinitism.

Here is an argument toward infinitism by exclusion:

- (1): There are justified beliefs.
- (2): Justified beliefs must be members of a foundationalist, coherentist or infinitist structure.
- (3): Foundationalism fails as an account of the structure of justified beliefs.
- (4): Coherentism fails as an account of the structure of justified beliefs.

Therefore

- (5): Infinitism gives the correct account of the structure of justified beliefs.

Some of the premises involved in the argument are obviously plausible and for those that are not, Klein offers supporting argumentation. I think that (2) as stated is uncontroversial. The exclusions of foundationalism and coherentism (3) and (4) is discussed above and is encapsulated in Klein's PAA and PAC. As it stands, the argument is valid and thus a refutation involves showing that at least one premise is false.

Otherwise, Klein's use of his PAA and PAC appear to do the work that he needs them to in eliminating foundationalism and coherentism. Even if they do not eliminate the other options, they support the claim that the best (if not only) explanation of the availability of reasons is an infinite series. This leaves (1), which one might question the infinitist's right to believe, even if one is charitable about (2), (3) and (4).

We might infinitist if (1) is true. A natural response that anyone, infinitist or not, might give is that there are obviously justified beliefs. This response seems unacceptable from an infinitist. Claiming it is obvious that there are justified beliefs does not take the scepticism that infinitism opposes seriously enough. Part of the challenge the infinitist faces is showing that his structural claim does not lead to a sceptical conclusion that there are no justified beliefs, or that believing that there are justified beliefs is itself unjustified. If such a belief is to be objectively justified however, then by the infinitist's own lights it must be supported by an infinite series of reasons that are available at least to a second-order disposition. Since one can complete any other the infinite series of reasoning in support of this belief any more than one can complete any other infinite series of reasoning, the evidence of infinity problem appears again. Why this should be thought of as justified given the underdetermination problems is unclear.

The natural thing to say is that (1) is obvious.<sup>24</sup> The idea of something being obvious is not accommodated as easily by the infinitist as the foundationalist. One understanding of obviousness might be that if a belief has the property of being obvious, it can be rationally held without another supporting reason. The foundationalist might use this to articulate why epistemically basic beliefs are justified. He

<sup>24</sup>A related, though different claim that an infinitist might make is the claim that there is no reason to take the sceptical conclusion as seriously as the rejection of the argument by exclusion that I have given does. If the infinitist is allowed to simply not take the sceptical conclusion seriously however, it is hard to see why a foundationalist (for example) should not be permitted to not take the possibility of infinitism seriously.

might say that to be obvious is to be in some way self evident and a candidate for a foundational belief. The infinitist rejects the idea that beliefs that are justified by being self evident. Whilst an infinitist can define obviousness in terms of contextually appropriate stopping points, he must simultaneously hold that there are infinite supporting reasons of the right type. What supporting reason there could be here is not clear. The infinitist might seek to show that there are justified beliefs by ostension. If this supports (1), then combined with PAA, PAC and (2), this motivates infinitism. Providing paradigm cases of justified beliefs might offer evidence of justified beliefs, but why should the sceptic accept these as evidence? The sceptic thinks that even paradigm cases of justified beliefs are in fact not justified. In support of this, the sceptic can use the same examples and claim they are actually unjustified.

An infinitist understanding of 'obvious' might be context-sensitive. The infinitist claim that an appropriate stopping point is governed by context leads to obviousness being governed by context. Using the idea of a belief being obvious if it is an appropriate stopping point is appealing, but it also leads to a context-sensitive account of what it is to be obvious. This might be as it should be—what is obvious to the professor is not obvious to the student.

According to Klein however even obvious beliefs need to be supported by reasons that are at least available to a second order disposition. Exactly what dispositional belief might support (1) rather than its negation in the right way is unclear. Of course, a candidate to support there being at least one justified belief is the belief that there are at least two justified beliefs etc. This is an infinite series of the wrong type however since it is not truth conducive in the way that justified beliefs are putatively taken to be. Whatever criterion the infinitist wishes to use to demarcate infinitely supported justified beliefs from infinitely supported unjustified ones needs to prevent this type of belief from qualifying as a justified one.

Earlier in this paper I asserted that externalist foundationalism and infinitism are faced with a similar problem, but the problem is harder for the infinitist. The problem is that if either gives a correct account of what a justified belief is, then by their own lights, they are unable to recognise that there are any justified beliefs. Klein's PAA, which he uses to reject foundationalism states that no belief may be justified unsupported by another justified belief. Consequently the infinitist needs a reason to be available to support the claim that there are infinitely supported beliefs. PAA is indispensable to the infinitist rejection of foundationalism. The motivation for infinitism thus rests partly on something fulfilling the role of PAA. The foundationalist on the other hand actively rejects PAA.

This means the foundationalist at least has the possibility of finding a way of justifying (1) that does not require him to find available reasons in support of it.<sup>25</sup> Any foundationalist must say why beliefs are justified without another supporting belief. The foundationalist might be able to use this in support of (1). For example if beliefs can be justified in virtue of the process(es) by which they are formed, if there are any appropriate processes, this might permit justified beliefs in support of

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<sup>25</sup>For example the reliabilist foundationalist can say that a belief is doxastically justified for an agent if it is a member of a structure whose foundational members are formed by reliable cognitive processes. As is pointed out by Goldman however reliabilism does not require evidence of reliability in the way the infinitist requires evidence of infinity (Goldman, 1979). Denying the need for evidence seems it would violate the infinitist's PAA.

(1). Whether or not this has actually been done is another matter, but certainly the foundationalist has a possibility of doing this that the infinitist does not.

The infinitist is unlikely to be convinced that this extra way in which the foundationalist might be able to classify (1) as justified amounts to much. As a result, the infinitist may respond by saying that neither foundationalism nor coherentism deals with the problem of providing an account of why (1) is justified. Consequently they lead to sceptical conclusions in the way infinitism does. The infinitist might then claim that an inability to show that (1) is justified is no more a problem for the infinitist than the foundationalist or the coherentist and disregard the problem based on this.

This would be deeply unsatisfactory. A response of this type offers no real response to the problem of showing why (1) is justified. The challenge is seeking a positive reason from the infinitist in support of the claim that (1) is justified. The response given offers reasons to think that neither foundationalism nor coherentism fare any better at the task of explaining (1). This lends more support to (3) and (4) but does not help with (1). In terms of the project of showing why infinitism best explains the availability of reasons, the challenge is to eliminate the sceptical conclusion. The response given simply does a defensive job, showing that the apparent problem of showing why there are any justified beliefs also applies to foundationalism and coherentism. The problem for the infinitist remains unchanged.

## 7. CONCLUSION

All of this shows that the infinitist is unable to offer a reason in support of the belief that there are any objectively justified beliefs in the actual world. By infinitism's own lights, this belief is therefore unjustified. Infinitism is able to show that there are justified beliefs in other possible worlds if modality is to be understood from within a possible worlds framework, but there is no reason to take it that the actual world is one in which there exists a belief that is supported by an infinite series of reasons that is non-repeating. There is still less reason to take it that a particular individual has a belief supported in this way. As a result of this, the infinitist is not able to resist the sceptical conclusion of the regress of reasons. It offers no reason for an individual to prefer one belief rather than the negation since there is no reason to think it objectively justified. Whether or not it is a member of an infinite series is not accessible to the agent and without violating or amending PAA the infinitist cannot take this as basic. This means the infinitist is unable to offer any solution to Agrippa's Trilemma.

Providing some resistance to the sceptical conclusion involves offering some reason to think that there are justified beliefs in the actual world. Put another way, it needs some fact about the actual world that shows us that not all of our beliefs are unjustified.

To achieve this goal, an infinitist needs some support for the claim that there exists at least one belief that is supported by an infinite series of reasons. This might come about in one of two ways. It can come about by the completion of the series of reasoning or alternatively a shortcut feature about the series could provide evidence of infinity, whether conclusive evidence or showing that the availability of reasons is best explained by an infinitist structure of beliefs. Here the infinitist faces a troubling dilemma. If he denies the need for the completion of an infinite series, he must find some way of providing evidence of infinity. If on the other hand he denies that

evidence of infinity is impossible or unnecessary, he must accept that an infinite series of reasoning must be completed by a finite mind. That this is impossible seems to be accepted by Klein. It is no clearer however how the infinitist can show that there is some *sui generis* mark of infinity or that infinitism is a better explanation of the availability of reasons than any rival account without presupposing a rejection of these positions. Either option of the dilemma makes trouble for the infinitist.

The problem is a far reaching one. Only relatively recently has infinitism been taken seriously as a live option in responding to the regress problem. Added to this, as Aikin shows there are various forms of infinitism available in logical space to be discussed further. Despite this the aspect of infinitism that the evidence of infinity problem fastens onto however is one that seems common to all forms of infinitism—the claim that an infinite series of supporting reasons is a necessary condition of a justified belief. Without this it is not clear how we could have a distinctively infinitist account. However an infinitist sets out his account he must at some stage confront at least one of the problems. Avoiding one results only in facing the other. A critic can permit a number of infinitist claims whilst still holding that infinitism does not provide an adequate response to the regress problem. These include the infinitist claim that a belief is objectively justified only if it is supported by an infinite series of reasoning, the claim that an infinite series of supporting reasons is at least possible and that it is possible to have a belief that is doxastically justified for the individual whilst denying the need for the completion of an infinite series of reasoning. All of these claims might be questioned, but the problem set out here does not require this.

Klein is therefore right that infinitism, the neglected third response to the regress problem, cannot be immediately discounted. This is partly a consequence of Klein's own attempts to show that there are unproblematic infinite regresses and partly because of the nature of infinitism, which Klein himself draws out. Infinitism as a response is worthy of discussion and ought to be taken seriously. Despite this I do not see how it is able to respond to the regress problem and avoid the sceptical conclusion. It might even be the case that infinitism offers a more promising line of response to the sceptic than either foundationalism or coherentism. Being the best of three failing options seems scant consolation to an infinitist position in so far as infinitism is supposed to provide a response to the sceptical concern of why it is justified to think  $p$  rather than  $\neg p$ .

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