

Impure Informatism and the Evil Demon Argument

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Abstract: The central thesis of this paper is that the modus ponens reductio argument does not clearly favour impure versions of informatism. The nub of the modus ponens reductio argument is as follows: an infinite series of justified reasons by itself is vulnerable to the modus ponens reductio in the sense that one can construct an infinite chain of reasons supporting both an affirmative and denial of proposition, say *p*. The problem here is that, as Aikin urges, pure versions of informatism do not possess the requisite resource to eliminate one of these chains of infinite reasons. The upshot is that pure versions of informatism are not able to differentiate between an infinite series that is truth conducive and the ones that are not. Accordingly, Aikin promotes an impure informatism over pure informatism because, as he opines, impure informatism has the requisite resources to eliminate one of the infinite chains of justified reasons and rids itself of the threat of the modus ponens reductio. In the following discussion, I submit that although Aikin seems quite successful in this venture, his version of impure informatism faces a similar setback, in the form of the new evil demon problem, which is equally fatal to it as that which the modus ponens reductio wrecks on pure versions of informatism.

Keywords: Impure informatism, justification, evil demon, foundationalism, coherentism.

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1 Introduction

Roughly speaking, the principal idea of all pure versions of infinitism² is the claim that an infinite series of reasons by itself is productive of justification. That is to say, proponents of pure versions of infinitism approve the idea that a subject, *S*, could be justified in believing a proposition, *p*, if and only if her reasons for believing *p* are infinite. However, Aikin contends that we reject the pure infinitist thesis on the assumption that an infinite series by itself is not able to mark out the difference between a series of reasons that is truth conducive and the ones that are not. For this reason, we may require additional resources which, in addition to the infinite series, will yield justification.

By granting Aikin's argument some initial credibility upon the concession that the modus ponens reductio argument yields some unpalatable consequences on pure versions of infinitism, I submit that the triumph of impure infinitism is short-lived because there is an argument of equal weight of devastation as that which the modus ponens reductio argument wrecks on pure version of infinitism. The point is not to make a case for pure versions infinitism, but rather to argue that the modus ponens reductio does not insulate impure infinitism from the fatal consequences of other objections such as the one that will be raised against it in the following discussion. It will follow from the arguments raised that on the basis of comparative merit in solving the epistemic problem, both pure and impure versions of infinitism suffer similar setback.

2 Pure infinitism and the Modus Ponens Reductio Argument³

As shown above, pure infinitists claim that you are justified in believing a proposition if and only if it is supported by an infinite array of reasons. The explanation is that your belief that *p*

² I should note that this tag is Aikin's. I have my own reservation concerning its veracity so I employ it the way Aikin uses it in his works. Aikin himself concedes in Aikin (2011) that the classification of Fantl's version of infinitism as pure is restrained by Fantl's willingness to approve other sources of justification but this clarification is missing in his earlier work, Aikin (2008), where he originally introduced this phraseology. Indeed, the cleavage between pure and impure infinitism appears to me too fuzzy if Klein's, Fantl's and Aikin's versions of infinitism are critically perused. But a completely fleshed out argument to demonstrate this claim is beyond the scope of this paper. Hence, I grant the plausibility of Aikin's criteria for this classification purely for the sake of argument.

³ Note that the type of modus ponens reductio invoked by Aikin is designed to handle what he calls the "epistemic objection" against pure versions of infinitism. There is another one deployed by John Post and James Cornman to expose, what I call after Cling, a "logical objection" against pure infinitism (See Cornman 1977, pp. 290-291; Post 1980, pp. 32-37 & Cling 2004, p. 108). Both reductio have different implications on pure infinitism as the former is designed to show that mere logical relations among beliefs cannot show why an infinite series of beliefs is true or false and the latter designed to show that mere logical relation will yield a vicious regress. To circumvent this problem, Klein argues that an infinite chain of reasons alone is necessary but insufficient for justification and added a sufficient condition according to which the beliefs in the chain must also be subjectively and objectively available to the subject. Whatever these terminologies connote in detail is beyond the scope of this paper. However, it is needs to be pointed out that Klein's response that infinite and non-repeating series of reasons must be available to the subject is a constraint to avoid the regress being vicious but not to introduce an additional structure to the infinite and non-repeating structure to cater for the truth conduciveness of justification. By this argument, the available reasons, whatever they might be, are constitutive of the same infinite regress structure. The upshot is that once the sufficient condition of availability is satisfied, the regress though infinite and non-repeating, becomes virtuous. Hence, Klein advocates an infinite and non-repeating structure of justificatory reasons as the sole source of justification and by this criterion, following Aikin, I endorse the view that Klein is a pure infinitist.

is justified upon the basis of only the infinite structure of the series of reasons supporting p (Klein 1999, p. 297). This assumption rides heavily on the notion that your belief that p is justified on the basis of one standard structure of justification, namely the infinite structure. In other words, what is crucial with regards to pure theories of justification is that they are committed exclusively to one source or one formal structure of justification (See Klein 1999; 2003; Fantl 2003). For instance, pure foundationalism is committed exclusively to the foundational belief as the sole source of justification and pure coherentism is committed solely to the assumption that coherence of the appropriate kind is the sole source of justification. Accordingly, pure infinitists account for the source of justification on the basis of an infinite series and opine that one is justified in believing a proposition if her reasons for the belief are infinite and non-repeating.

As the reader might have discerned, this claim immediately invites some objections. In the first place, our finite capacity as human beings makes the pure infinitist assumption incoherent. For how are we supposed to adduce infinite reasons for the justification of a belief when it is obvious that we can't live infinitely long enough to accomplish this task? This objection has come to be known as the finite mind objection against infinitism. It simply emphasises our finite capacity as human beings to alert us to the fact that the pure infinitist criteria of justification is untenable (see Bonjour 1985, p. 24; 1996, p. 100; Audi 1996, p. 152).

Secondly, on the infinitist construal of justification, we are not able to comprehensively or completely justify a given belief in the sense that if justification is infinite then we cannot traverse this infinite series to complete justification. This is the nub of the no-starting point objection. The objection, in other words, rests on the supposition that if there is an infinite regress of reasons justifying a belief, as the infinitist urges, then there is no-starting point to the chain of reasons that justifies one's belief. It flows from this idea that if there is no starting point to the chain of justified reasons, then the chain cannot actually or comprehensively justify a given belief because inference does not explain the origin of justification, it only transfers justification from one proposition to another (see Aristotle's *Metaphysics*, 1011a; Ginet 2005, p. 148 and Dancy 1985, p. 55). And thirdly, there is the epistemic objection that relates to the issue of justification and truth. The basic premise of the epistemic objection argument is the claim that an infinite series of reasons alone is not able to indicate whether the series is truth conducive or not (see Aikin 2008, pp. 198-199; 2008, pp. 182-183; 2011, pp. 103; Cling 2004, pp. 110-111).

Among the objections explicated above, one that is of crucial interest to the present discussion is the epistemic objection argument. Aikin is recognised here as one of the few scholars who has employed the epistemic objection argument to motivate impure infinitism and to reject pure infinitism. His argument is that the real objections to infinitism are not the finite mind or the no-starting point objections but rather the epistemic objection. In Aikin (2005), he mounted a sustained rebuttal against the finite mind objection. His argument was that the finite mind objection is too demanding for any theory of justification because of its claim that for a subject to meet the demand of the objection, she must be able to occurrently cite all her beliefs infinitely in a single episode. He argues that it is wrong for any epistemology to suggest that an epistemic agent should occurrently produce all her reasons for every belief she intends to justify in a single episode and describes such a demand as "unnecessary baggage for a theory of justification" (Aikin 2005, p. 203). The truth is that, as he urges, a subject can have an infinite

set of beliefs but saying them aloud occurrently or in a single moment is a separate business too demanding for any stripe of epistemology.⁴

His rebuttal of the no-starting point objection is not explicit in his earlier works but implied in his subsequent postulation of an impure version of infinitism in his later works. Earlier on, Klein has revealed that a pure infinitist can respond to the no-starting point objection by subscribing to a kind of coherentism that considers justification as an emergent property rather than a transmissive property. Klein maintains that, with infinitism, justification is an emergent property because it arises in a proposition when it is a member of an infinite and non-repeating set of reasons beginning with the proposition in question (see Klein, 1999, p. 298). Thus, the no-starting point objection is not lethal to infinitism because justification, within the infinitist perspective, is not a property that is transferred from one proposition to another. Rather justification emerges when a certain condition is met, that is, when a belief has an infinite and a non-repeating series of reasons supporting it (Klein, 2007a, p. 16). Later, though not well articulated in detail, Aikin subscribes to an emergentist thesis of justification. Following Klein, he claims that his theory accepts that justification is an emergent property rather than a transferable or a transmissive property on the assumption that transmissive theories of infinitism solve the regress problem more effectively (Aikin 2011, p. 72).

Having shown that both the finite mind and the no-starting point objections are untenable assaults on pure infinitism, Aikin unleashes another objection, the epistemic objection, which he argues, is fatal to the plausibility of pure infinitist theories. The objection precisely is as follows. An infinite chain of reasons is arbitrary when considered as a mere relation between beliefs. This is because there is no clear-cut manner to tell between a chain of justified reasons that is true and one that is false.

To elucidate this point further, suppose that a subject, *S*, is investigating whether *p*. On the pure infinitist model of justification, a chain of infinite series of reasons affirming *p* and denying *p* could be constructed using a valid modus ponens inference like the following:

An Affirmative Chain

$q \ \& \ (q \rightarrow p)$
 $r \ \& \ (r \rightarrow (q \ \& \ (q \rightarrow p)))$
 $s \ \& \ (s \rightarrow (r \ \& \ (r \rightarrow (q \ \& \ (q \rightarrow p))))$

.....

A Denial Chain

$q \ \& \ (q \rightarrow \sim p)$
 $r \ \& \ (r \rightarrow (q \ \& \ (q \rightarrow \sim p)))$
 $s \ \& \ (s \rightarrow (r \ \& \ (r \rightarrow (r \ \& \ (q \rightarrow \sim p))))$

⁴This rebuttal is reminiscent of Klein's earlier reply to the finite mind objection against pure infinitism. Klein solves this problem by distinguishing between occurrent beliefs and non-occurrent beliefs and suggesting that it is in the non-occurrent sphere that it makes sense to speak of a knower as possessing an infinite set of beliefs (Klein 1999, p. 308).

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Each of these set of infinite and non-repeating series of reasons supporting whether p , is not able to indicate whether p or $\sim p$, if we only have to focus on their content and the logical relation between them. The problem Aikin identifies here is that infinitism, specifically Klein's and Fantl's versions, lack the resources to eliminate one of these series. To solve this problem, Aikin suggests that, an additional resource in addition to the infinite chain, in this case basic beliefs, are needed to distinguish between justified series of beliefs that are true and those that are false. Here, basic beliefs don't serve as regress enders but only play an epistemic role of marking out an infinite chain of reasons that are true from the ones that are false (Aikin 2008, p. 201). Aikin's main point is captured in the following remarks:

The problem is that on the infinitist theory, we have no rational way of telling the difference between one justifying set of beliefs that is conducive of truth and one that is not. Infinitist justification, precisely because it is defined exclusively in terms of relations between beliefs, loses its moorings with truth. Epistemic justification that does so loses the name (Aikin 2011, p. 103).

He remarks further:

But here the issue can be resolved by a question as to whether the sets of beliefs [the affirmation and the denial sets], if they are unadjudicable between their claims on the truth of p and $\sim p$, are the only necessary components for a justificatory story. If they cannot be rationally adjudicated by their own contents and inferential relations, then, *ex hypothesi*, there must be some other feature that is necessary. Insofar as any series of reasons will be subject to the same structural issue, only supporting reasons not in need of further reasons can play the role of rationally adjudicating the two sets' claims on truth. There, if there are infinitely iterating chains of reasons, must also be *basic or independent reasons* supplementing them, too (Aikin 2011, p. 103).

From the above showing, we realize that Aikin's strategy hinges on the assumption that basic beliefs are founded on perceptual experience⁵ and they are invoked here not as a way of ending the regress of justification, but rather for the singular purpose of adjudicating between infinite series of reasons that are conducive of truth and those that are not. On this interpretation, therefore, the reason why basic beliefs do not end the regress is because they only play the role of perceptual experience to indicate whether a series of justified reasons is true or false, that is,

⁵Notice that Aikin does not restrict basic beliefs to only empirical propositions though he alludes largely to empirical propositions serving as basic beliefs in his 2011. Later, he considers rational and moral intuitions as doing this job. See Aikin (2014). Thanks to Aikin for drawing my attention to this.

they indicate why a series of justified reasons reflects the facts out there in the external world. This is because experience provides our only acquaintance with the empirical world, so it is by perceptual experience that our beliefs are said to match or mismatch external reality. Hence beliefs grounded in perceptual experience are more likely to be true because they map empirical reality out there in the external world.

In effect, Aikin's preference for impure infinitism is quite lucid in the above exposition and the purpose as clearly set out is to promote an impure version of infinitism in place of pure versions on the assumption that pure versions of infinitism are unable to respond to the modus ponens reductio. Because the modus ponens inference is truth preservative, it is possible to construct a valid modus ponens inference of the affirmation and the denial of an infinite series of reasons supporting a given proposition as shown above. Since, the inferential relation or the content of the infinite series alone cannot be invoked to eliminate one of the infinite series of reasons, the only option is to appeal to an external resource to eliminate one of the series; hence, the appeal to a foundational structure of justification. Aikin thus endorses two formal structure or two sources of justification *viz.* the foundational structure and infinitist structure.

The roles of these sources of justifications are not farfetched. While the infinitist structure of justification is meant to play the role of sustaining what seems to be the sole objective of any infinitist thesis of justification namely, the avoidance of dogmatism, the foundational structure plays the role of adjudicating between infinite series of reasons that are truth conducive and the ones that are not. So the attraction of being an impure infinitist is that, as discernable from Aikin's perspective, one stands in a good position to offer appropriate answer to the epistemic objection without eviscerating the core thesis of infinitism.⁶ It is an attraction, so to speak, because Aikin's strategy allows him to overcome the apparent pessimism inherent in Cling's claim that introducing an additional resource to cater for the epistemic objection will undermine the very thesis of infinitism itself. The thrust of Cling's claim resonates with the idea that once we are compelled to introduce a foundational or additional structure into infinitism, we undermine the very nature of the regress the infinitist tries to preserve (Cling 2004, p. 110). Aikin thinks he navigates clear off this criticism by urging that on the impure infinitist criteria basic beliefs are not regress enders, but plays the role of arbitration and of marking out which infinite set of beliefs are truth conducive and which ones are not.

However plausible Aikin's strategy might seem, it immediately throws out a salient concern. The idea that his impure infinitism relies on two formal structures of justification is brought into disrepute with the role apportioned to basic beliefs within an infinite series of reasons. While it can be argued that basic beliefs are a source or a structure of justification, because on the foundationalist model of justification they are construed as such, within the perspective of impure infinitism they are accorded a fresh role, the role of determining the truth conducive property within an infinite series of reasons. On the basis of the role basic beliefs play in impure infinitism, one can raise the objection that Aikin's impure infinitism does not rely on two formal structures of justification but only one. On this understanding, impure infinitism is after all pure infinitism in disguise. The basic intuition motivating impure theories of justification is usually to sustain a hybrid nature of justification in lieu of one structure of justification. These sources of justification when invoked to explain a theory of justification are both construed to have justificatory relevance to the series of justified reasons. But Aikin's invocation of basic

⁶Note that the main objective for all stripes of infinitist theories is to avoid dogmatism and Aikin thinks that his theory is a best bet for that since it is a form of anti-dogmatism. See Aikin (2011, p. 6).

beliefs is bereft of their justificatory role since they are made to play mainly an epistemic role.⁷ Together with his earlier assumption that infinitism in general does not suffer a justificatory problem, it makes sense to assume that Aikin's impure infinitism, in relation to the issue of justification, strictly relies on one source or structure of justification *viz.* the infinitist source or structure of justification.⁸

Aikin might object to this claim stating that though the regress is infinite and non-repeating there are actually two regress structures. One regress structure (the foundational regress) is truncated and a fresh regress (the infinitist regress) is reborn in a manner that the new regress “does not begin the original regress anew” (Aikin 2008, p. 180; 2011, p. 97). Evidently, granting Aikin's explanation, one can locate two regress structures in Aikin's impure infinitism, one that truncates with basic non-doxastic perceptual belief and one that Aikin avers demonstrate the cognitive capability of a subject to show that she is “a responsive and capable reasoner” who can answer questions about her basic belief (Aikin 2008, p. 180). But the truth is that this strategy rather commits Aikin to meta-foundationalism not infinitism. Meta-foundationalism⁹ is version of foundationalism according to which basic beliefs are justified because they have some truth conducive property or feature, say F, which shows why basic beliefs possess the epistemic credibility of being justificatory autonomous. However, showing this “why” is not constitutive of the continuous reasons for why the basic beliefs are justified (see Bergmann 2004, p. 164). This is exactly the position Aikin articulates when he cautions that the introduction of meta-foundational reasons should not be construed for “a continuation of reasons supporting the experiences that support the belief” (Aikin 2011, p. 100). This assumption is consistent with Bergmann's idea that meta-foundational reasons are indications of a subject's ability to show why basic beliefs are not arbitrary and should not be countenanced as a continuation of reasons justifying basic beliefs.¹⁰

Nonetheless, it can be objected that Aikin's impure infinitism is not supposed to be repulsive to foundationalism since it advocates the inclusion of foundational structure. Put differently, it can be argued that impure infinitism does not maintain opposition to foundationalism since it imbibes the foundationalist commitment to basic beliefs. After all didn't Aikin already admit that the difference between hybrid theories is more “a matter of emphasis than a real theoretical difference (Aikin 2008, p. 176)?

But there is actually a glaring theoretical difference here. What pure infinitists do is to take the meta-challenge that ensues from showing why basic belief possess justificatory autonomy to be constitutive of the reasons why basic beliefs are justified so that there are no beliefs in the

⁷ By this I am claiming for the sake of argument that since Aikin rejects the basic role of foundational basic beliefs as possessing self-support and capable of ending the regress, then basic beliefs on the impure infinitist construal is bereft of its justificatory role.

⁸ Susan Haack's foundherentism is a good case of referent for a hybrid theory of justification. See her *Evidence and Inquiry*.

⁹ To the best of my knowledge, this idea was first introduced by BonJour as an objection to the foundationalist idea of basic belief and non-inferential justification. BonJour's claim, as I understand it, is that meta-foundational challenge is constitutive of the reasons why basic beliefs are justified. This way, the idea that basic beliefs are justificatory autonomous is seen to be false since they are supposed to derive their justificatory status from meta-reasons (See BonJour 1978, p.6). Later Klein takes it that any stripe of foundationalism that subscribes to this idea of meta-justification is tacit infinitism (see Klein 2007, p. 15). But Bergmann counters Klein's claim that what he calls tacit infinitism is meta-foundationalism (see Bergmann 2004).

¹⁰ See Bergmann 2004, p. 164)

infinite chain that retain self support (see Klein 1999, p. 304; 2005, p. 154 & Fantl 2003, p.). In contrast, what meta-foundationalists do is to construe meta-foundational challenge as an indicative of demonstrating why basic beliefs possess the justificatory autonomy they are accorded without countenancing that they be regarded as reasons why basic belief are non-inferentially justified. Interpreted this way, a dilemma looms for the impure infinitist. Either impure infinitism is a version of pure infinitism in which case meta-foundational challenge are constitutive of the reasons justifying basic non-inferential beliefs or it is meta-foundationalism according to which meta-foundational challenge is not constitutive of the reasons justifying why basic belief are justified

On the one hand, subscribing to the first horn of the dilemma will reveal that the modus ponens reductio argument afflicts impure versions of infinitism as well because it presupposes that there is only one regress structure, the infinite regress structure, and as such is itself pure. This difficulty reveals a picturesque of someone cutting a branch of tree on which he himself is seated. Moreover, leaning on the first horn of the dilemma will automatically collapse the distinction between pure and impure infinitism and impure infinitism will be a failed attempt to the modus ponens reductio. On the other hand, endorsing the second horn of the dilemma takes us back to where it all begun; to Cling's challenge that one cannot introduce an additional necessary structure into infinitism without undermining the purpose of the infinite regress structure itself.

But that is not my present preoccupation in this discussion. My major focus is to articulate the view that the epistemic objection still haunts impure infinitism despite the purported rescue effort it received from foundational basic beliefs. But before that a cursory remark of the argument I intend to advance here needs to be explained. As I have shown, the main concern for Aikin's preference for foundational basic belief is to insert, so to speak, a truth conducive resource that is able to mark out whether an infinite series is truth conducive or not. This strategy is to ensure that we have a brand of infinitism that is both inferentially relational, in the sense that it endorses the idea that inferential relations between beliefs is productive of justification, and factive, in the sense that it reflects the truth of one's justified series of infinite reasons. On this assumption I take Aikin's epistemic argument to possess, in a loose sense, both an internalist and externalist ingredients of justification where the internalist part concerns the inferential relation between beliefs which are in a way construed to be internal to the perspective of the agents and the externalist aspect which appears to embrace an external resource meant to ensure that an infinite series is justified in a way that makes it objectively likely to be true.¹¹ The upshot is that this type of infinitist theory of justification is able to retain its mooring with truth since for Aikin "justification, and an analysis of it, should entail a connection between it and truth" (2011, p. 106). But as we have seen, the internalist aspect of impure infinitism is the core victim of the modus ponens reductio argument. The externalist aspect is only there to salvage infinitism from the grip of the modus ponens reductio but at a cost of eviscerating the core thesis of infinitism, the idea that inferential relation among beliefs is productive of justification.¹² Since the externalist aspect of impure infinitism is unaffected by the modus

¹¹*This is what Aikin himself had to say about my suspicion, "But Justification seems to require not just that our beliefs be arranged in the right formal pattern, but also that we be properly linked up with the world, or at least with data not dependent on our beliefs" (Aikin 2011, 105).*

¹²*Here, I share Cling's intuition that once an additional structure is introduced into the type of regress the infinitist sanctions, the rationale for the regress is undermined. What this means is that we cannot be said to be advancing the main objective of infinitism, which is avoiding dogmatism.*

ponens reductio, I will subject it to another argument which is expected to have the same devastating effect the modus ponens reductio argument wreck on pure infinitism.

It must be noted that my deployment of the use of factivity is likely to pose some difficulty since Aikin is an internalist and what is required for his argument is sensitivity not factivity. But Aikin's view is far more externalist to my taste since the real issue is being able to show and understand why the belief is connected to truth, not just that it is. In fact, Aikin's conditional infallible justification is just such a requirement – when we are acquainted with a fact (often a psychological state), we know the truth of the matter and we are also aware of the connection between our belief and the truth. This requirement reveals some hidden externalist commitment in Aikin's impure infinitism and makes it susceptible to the new evil demon argument.

3 Impure Infinitism and the New Evil Demon Argument¹³

Suppose that you are looking at an ordinary orange in good light and your visual faculty is working perfectly so you see the orange and it is yellow and ovoid. Here your perception is veridical because it is constituted by a fact in the external world and provides an epistemic support for your belief that there is an orange in front of you. In the words of McDowell, such veridical perception is “openness to the world” in such a way that it guarantees our cognitive access to the events or objects in the external world (McDowell 1998, p. 393). Now consider also your epistemic twin who has exactly the same experience as you do. But unfortunately, your epistemic twin is the victim of a malicious evil demon who has been bombarding her sensory faculties with misleading or deceptive perceptual inputs in such a way that she also sees an orange, a yellow and ovoid object in front of her when in truth this object does not exist. Thus, your epistemic twin's belief-forming mechanisms are misleading because they almost always yield false beliefs about the external world. This is an indication that your twin's belief about the external world, that she perceives a yellow and ovoid object, is false and yet intuitively it provides exactly the same rational and epistemic support as your belief that there is an orange in front of you. In essence, because what is given in both experiences is qualitatively indistinguishable, they both play the same epistemic role of establishing our acquaintance or contact with the external world. However, one is a false and misleading and another is true and a real representation of the fact in the external world.

With this counter-example in mind, now consider the affirmative chain of the modus ponens inference below:

An Affirmative Chain

$q \ \& \ (q \rightarrow p)$

$r \ \& \ (r \rightarrow (q \ \& \ (q \rightarrow p)))$

$s \ \& \ (s \rightarrow (r \ \& \ (r \rightarrow (q \ \& \ (q \rightarrow p))))$

Suppose that the series terminate in a basic belief, s , whose support is non-doxastic and its source in perceptual experience. On the account of the new evil demon counter-example, we can construct an identical pair of series of reasons of which one will be an affirmative chain

¹³This argument is most often credited to Cohen. See Cohen (1984, p. 281).

and the other will be a denial chain just like the one considered with the modus ponens reductio argument against pure versions of infinitism. For instance, if we are to consider whether a subject is justified in believing p , we can construct, just like in the modus ponens reductio case, a valid series of reasons affirming p and denying p at the same time; where the affirmative chain is a genuine series terminating in s which has a source of support in veridical experience and the denial chain being a false series which has a source in bad or misleading perceptual cases such as the evil demon counter example.

The Affirmative Case (The Good Case)

$s \ \& \ (s \rightarrow (r \ \& \ (r \rightarrow (q \ \& \ (q \rightarrow p))))$

The Denial Case (The Bad Case)

$s \ \& \ (s \rightarrow (r \ \& \ (r \rightarrow (q \ \& \ (q \rightarrow \sim p))))$

The lesson drawn here is that perceptual experience cannot play the adjudicatory role of marking out which of these series is true and which one is false. This is the reductio argument against impure versions of epistemic infinitism.

The new evil demon reductio argument against impure versions of infinitism seems to drive home the point that there is no way to mark out an infinite series of reasons that is true from a false one since it is impossible to identify just on the basis of perceptual experience alone a series that is true and the one that is false. Given that one's experience and epistemic support obtained from the good case, that is the case constituted by the fact in the external world, and the bad case, the case of deceptive or misleading rational and epistemic support, impure infinitism suffers a similar set back as pure versions of infinitism. The former is vulnerable to the new evil demon reductio argument and the latter is vulnerable to the modus ponens reductio argument. Both reductio exert the similar force of destruction against both the impure and pure versions of infinitism. Since, the main thrust of the argument motivating impure versions of infinitism trades hugely on the modus ponens reductio argument, it is cumbersome for it to still enjoy the attraction it enjoyed because it suffers a similar set back as pure versions of infinitism. This is not to say that the modus ponens reductio argument is an untenable assault on pure versions of infinitism, but rather to argue that the external resource brought in to solve the modus ponens challenge suffers a similar set back as that which it was designed to salvage.

May be there is a way out for proponents of impure infinitists to rescue their theory. They could become foundational reliabilists regarding basic beliefs while retaining a commitment to epistemic impure infinitism. By granting that basic beliefs can originate from a reliable belief-forming mechanism, they can deny the intuition that the beliefs held by the person in the demon world are justified while granting that the beliefs in the non-demon world are justified. On this strategy, an impure infinitist will argue that the new evil demon is not vicious to impure infinitism because once the basic belief is formed via a reliable belief forming process; it will do the work necessarily.

But this strategy is unable to salvage impure infinitism because it generates an unpalatable consequence for the theory. Consider, for instance, Aikin's idea that meta-regress challenge yields epistemic infinitism. This meta-regress question is to ask why one believes that her foundational reasons that are reliably formed are good or to ask why her reliably formed experiences supporting a propositional content p are truth conducive. And this begins a new regress that leads to Aikin's infinitist upshot. But as it has been explained above such a

commitment is a meta-foundationalist commitment and does not share any theoretical affinity to what is central to the heart of infinitism because infinitists construe meta-regress reasons as constitutive of the reasons why basic beliefs are justified while impure infinitists do not. Hence, adopting this strategy will mean that impure infinitism is foundationalism in disguise and the corollary is a palpable concession to Cling's challenge; the claim that infinitist theories cannot invoke an additional structure to cater for the connection between justification and truth without disturbing the infinite regress structure itself.

In fact, impure infinitists could demur that the new evil demon argument is no more vicious against some stripes of foundationalism and coherentism than infinitism. After all, if it is about switch-world scepticism then non-doxastic foundationalism and holistic coherentism are equally guilty. Indeed, one cannot neglect the fact that the new evil demon argument afflicts other theories of justification the same way it afflicts impure infinitism. However, the new evil demon argument has a serious consequence on impure infinitism than these other theories for revealing that impure infinitism is a failed attempt to the modus ponens reductio argument because it unleashes a similar setback which is equally fatal to what the modus ponens reductio argument foments against pure infinitism. It exposes other weakness in the theory as well since it forces impure infinitism to accept two unpalatable outcomes: either it endorses a single structure of justification in which case it is pure infinitism and a failed solution to the modus ponens reductio or it retains two structures of justification in which case the new evil demon argument afflicts it and it is a meta-foundationalism. As it seems from the exposition above, the reason why the new evil demon argument afflicts impure infinitism is that there appears to be palpable reasons that it is a foundationalist thesis.

4. Conclusion

One conclusion that we can draw from the impure infinitist modus ponens reductio argument against pure versions of infinitism is that the account fails to exonerate impure infinitism from a similar reductio argument that wrecks a similar assault on it. This failure, as we have seen in the foregoing, crumbles the hopes of the impure infinitist in her attempt to salvage infinitism from the epistemic objection. As I have indicated, the intention was not to make a case for pure versions of infinitism but to attempt to unravel certain difficulties that renders impure versions of infinitism equally culpable of the same accusation that proponents of the theory make against pure versions of infinitism. Since the argument motivating impure infinitism rides hugely on the modus ponens reductio argument, the realisation that it suffers a similar reductio could diminish its attraction. If the argument advanced so far is correct then either impure infinitism is a failed solution to the modus ponens reductio or it is foundationalism in disguise.

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