



Explanationism and the awareness of logical truths

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Abstract

In *Appearance and Explanation*, McCain and Moretti propose a novel internalist account of epistemic justification called phenomenal explanationism, which combines phenomenal conservatism and explanationism. I argue that the current version of phenomenal explanationism faces a dilemma: either it omits the awareness requirement but implies an implausible form of logical-mathematical omniscience, or it preserves the requirement but leads to a vicious regress. I suggest how phenomenal explanationism might be revised to avoid this dilemma.

Keywords Explanationism · Phenomenal explanationism · Phenomenal conservatism · Foundationalism · Infinite regress

In *Appearance and Explanation*, McCain and Moretti present a novel internalist account of epistemic justification called phenomenal explanationism (PE). Building on phenomenal conservatism (PC) — which asserts that ‘seemings’ possess inherent *prima facie* justificatory value — PE further contends that seeming-based justifications are conditioned by explanations. Among the many issues that McCain and Moretti address to fulfil the ‘global ambition’ of PE, I focus specifically on the justification for a priori truths. I argue that PE encounters a dilemmic situation. On the one hand, it provides an overly permissive account of justifications for complex a priori truths. By comparing PE with earlier versions of explanationism proposed by McCain, I suggest that this issue arises due to the omission of the ‘awareness requirement’. On the other hand, the awareness requirement itself has implausible consequences, which might explain why McCain and Moretti chose to omit it from PE. Consequently, PE must either omit the awareness requirement and accept implausible accounts of justifications for complex a priori truths, or it must include the awareness requirement and contend with its problematic implications. I conclude by showing how PE might navigate this dilemma in light of the principles of PC.

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1. The first horn: easy justifications for complex logical truths

Explanationism, as formulated in *Appearance and Explanation*, is as follows:

Believing p is justified for S at t if and only if at t :

- (1) S has total evidence, E ;
- (2) Either
 - (i) p is the best explanation of e (where e is a subset of E), or
 - (ii) p is an explanatory consequence of the best explanation of e ;
- (3) It is not the case that p fails to satisfy (i) and (ii) with respect to e because of the additional evidence included in E .

PE builds on explanationism by interpreting ‘evidence’ in terms of seemings. While the role of condition (i) is relatively clear, the role of (ii) is less obvious. In the development of explanationist theories, condition (ii) was introduced to address objections like the one raised by Goldman (2011: pp. 277–278):

I think there are two squirrels on my deck, and I think there are two birds. So I infer that there are (at least) four animals. Presumably, this arithmetic inference is justified. Is it a case of explanatory inference? Surely not. How does there being four animals explain there being two squirrels and two birds? It doesn’t. Still, here is a justified belief that some epistemic principle must cover. But that principle, in turn, cannot be grounded in terms of best explanation.

In response, McCain (2014, 2015) suggested that a proposition p fits a subject S ’s evidence e not only when p is part of S ’s best explanation for e but also when it is a ‘logical consequence’ of S ’s best explanation for e . This amendment, according to McCain, addresses Goldman’s objection because ‘there are two squirrels and two birds on my deck’ is part of the best explanation for the purported visual experience and it entails ‘there are four animals on my deck’ as a logical consequence given the background information that squirrels and birds are animals. Appealing to logical consequences, however, did not seem to enable explanationism to account for justifications for beliefs about the future. Byerly (2013) presented the following challenge:

Suppose I’m on the golf course on a sunny, calm day. My putting stroke has been working for me most of the day, and I’m now on the sixteenth green. It’s not a long putt – just six feet. I’m fairly confident. I rotate my shoulders, pulling the putter back, and then accelerate through the ball. It rolls toward the cup. The speed looks good. The line looks on. Yes, I believe it’s going in!

While the protagonist is obviously justified in believing that golf ball will roll into the cup, this proposition does not seem to best explain the experience. The ball’s rolling into the cup is a future event, so it is not a cause of the visual experience. Nor is it logically entailed by the premises that ‘most golf balls rolling toward a cup in such circumstances go into the cup’ and that ‘the golf ball

is rolling toward a cup in such circumstances'. To address this issue, McCain revised the condition of 'logical consequence' to 'explanatory consequence', where a proposition p is an explanatory consequence of the best explanation of S 's evidence e if and only if the relevant explanation of e would provide an explanation of p 's truth that is significantly better than the explanation it would provide of $\sim p$'s truth. Notably, given the best explanation of 'most golf balls rolling toward a cup in such circumstances go into the cup' and 'the golf ball is rolling toward a cup in such circumstances', the golf ball's falling into the cup will be better explained than its landing somewhere outside of it. When first introducing the condition of logical consequence, McCain (2013: p. 302) was open to the idea that logical entailment might not be explanatory. However, revising 'logical consequence' to 'explanatory consequence' assumes that logical entailment is explanatory; otherwise, PE will no longer be able to address Goldman's objection. As McCain and Moretti (2021: p. 86) assert in *Appearance and Explanation*, logical consequences are explanatory consequences in a 'minimal sense'.

Recognising logical consequence as a form of explanatory consequence implies that, according to PE, we have justifications for believing a priori truths for which we lack evidential support. As McCain and Moretti propose, the a priori truth that 'everything is identical to itself' might not have an associated phenomenal-intellectual seeming, yet we are justified to believe it:

This is a logical truth. As such, [everything is identical to itself] will be an explanatory consequence of the best explanation of any bit of evidence that S has. After all, [everything is identical to itself] is entailed by any explanation whatsoever...In fact, [everything is identical to itself] will be justified even if S has no appearance about it whatsoever, since it is an explanatory consequence of the best explanation of her evidence regardless of what her evidence is. (McCain & Moretti, 2021: pp. 132–133)

However, as Huemer also notes in his contribution to the symposium, while this account delivers the correct verdict for basic a priori truths, it unduly implies that we have justifications for believing complex logical truths that we have not heard of, let alone understood or proved. For any logical theorem, or any logically reducible mathematical theorem, PE implies that everyone already has some justification for its truth regardless of the complexity of its proof. This omniscience is implausible. Even if PE does not predict knowledge-level justification in such circumstances, it nonetheless implies that everyone has justifications to a certain degree for believing complex logical truths of which they are fully ignorant.

An immediately available solution for McCain and Moretti is to appeal to defeaters. These include the notions that we are generally not justified in holding beliefs without evidence, that we are unreliable in guessing logical truths, that we often make mistakes in proofs for logical theorems, and specifically that most of us cannot even grasp established proofs for complex logical truths. These defeaters explain why we lack *ultima facie* justifications — not even to a minimal degree — for believing the truths of logical theorems for which we do not grasp solid proofs. They might also elucidate why this is not the case for simple a priori

truths, such as ‘everything is identical to itself’, for which we consider ourselves reliable cognizers.

Unfortunately, this solution is implausible for at least two reasons. First, it still mistakenly suggests that we have *some* level of initial *prima facie* justifications for all logical truths. Second, it unduly explains the difference in our *ultima facie* justifications for believing simple and complex logical truths in terms of defeaters, rather than the evidential strength of our *prima facie* justifications. After all, we have more justifications for believing simpler logical truths primarily because they enjoy stronger evidential support, not because they face fewer defeaters. Here, McCain and Moretti might suggest that we do have stronger *prima facie* evidence for simpler logical truths according to PE: it suffices to appeal to their presentational appearances. For instance, we might have the intellectual seeming that everything is identical to itself, while lacking such a seeming for unfamiliar logical truths. This explains why the former enjoys stronger evidential support. The problem, however, is that PE does not seem adequately equipped to explain the differences in degrees of a priori justifications. Presumably, although McCain and Moretti do not interpret explanatory relations in terms of probabilities, it is often the case that when p is better explained than p^* , p is more likely to be true given the explanation. Logical propositions, being necessary, do not exhibit such probabilistic differences. Of course, there are ways to explain our varying degrees of a priori justifications for believing logical and mathematical truths, but these typically refer to how plausible the relevant proposition phenomenally appears to the given agent (e.g., BonJour, 1997: p. 119; Zhang, 2021). PE, unfortunately, construes explanation independently of the agent’s subjective phenomenal-cognitive state. According to McCain and Moretti (2021: pp. 104, 172), we can justifiably believe a proposition based on our evidence insofar as there is *in fact* a good explanation. The explanation plays its intended role even if we fail to comprehend it (as in McCain and Moretti’s discussion of the ordinary believer’s response to skepticism) and even if we misunderstand it (as in the case of *Unfortunate Mathematician*). Thus, it is unclear how McCain and Moretti can incorporate a subject-relative phenomenal or cognitive condition in (i) or (ii) to explain the gradation of a priori justifications for logical and mathematical truths.

2. The second horn: vicious regress

McCain and Moretti seem to be aware of this issue. In earlier versions of explanationism, McCain (2013, 2015, 2017) proposed stronger theories that included an awareness requirement. A notable version is as follows:

Ex-Ej 2.0: A person S , with evidence e at t , is justified in believing p at t if and only if either

- (i) p is part of the best explanation available to S at t for why S has e , or
- (ii) p is available to S as an explanatory consequence of the best explanation available to S at t for why S has e .

The key difference with PE, as McCain and Moretti (2021: p. 86) acknowledge, is that Ex-Ej 2.0 features an availability requirement, whereas PE does not.

An explanation or its explanatory consequence is available to a subject, according to McCain, if the subject is disposed to be *aware* of this explanation and its competence to answer the question of why the subject has the evidence (see McCain, 2018: p. 3044).

McCain anticipated the first horn of the dilemma. The awareness condition was introduced into Ex-Ej 2.0 precisely to address this concern. As he argued:

...without this sort of requirement, accounts of epistemic justification would seem to imply that S has epistemic support for propositions that she cannot even understand. (McCain, 2013: p. 313)

Why, then, abandon this requirement when combining explanationism with phenomenal conservatism? The main motivation is likely that keeping the awareness requirement within PE leads to vicious regress. Being aware of an explanation is a mental state with propositional content. It accordingly fits the minimal description of seeming. Indeed, McCain (2013: p. 303) explained the availability condition precisely in terms of seeming: an explanation is available just in case the subject is disposed to have a 'seeming' that it properly answers the question of why she has her evidence. Awareness, therefore, is within the category of phenomenal experience that explanations are supposed to 'explain' according to PE. However, PE takes both phenomenal experience and its explanation as indispensable for justification. Unlike phenomenal conservatism, it contends that phenomenal experiences do not by themselves provide justifications; it is only by virtue of their best explanations that these experiences fulfil their epistemic roles. Insofar as explanations are distinct from the subject's phenomenal experiences, PE should not impose an awareness requirement on explanations themselves; otherwise, when a subject becomes aware of an explanation of her evidence and thereby receives the phenomenal seeming that her evidence is thus explained, *this* seeming will also be in need of further explanations according to PE, and so forth.

Such regress has been raised as a challenge to explanationism (e.g., Appley & Stoutenburg, 2017). It is due to this issue, among others, that PE should drop the awareness requirement. Consequently, PE finds itself in a dilemma. Either it omits the awareness requirement, thereby unduly implying a form of logical omniscience, or it preserves the awareness requirement, leading to an infinite regress.

3. PC, and a possible solution for PE

PC is not troubled by this dilemma. On the one hand, PC does not imply any form of logical-mathematical omniscience because it does not explain justifications in terms of logical consequences independent of the agent's availability condition. Proponents of PC can argue that one has a priori justification for simple logical truths if one has a basic intellectual seeming of these truths, and that one has a priori justification for complex logical truths if one has an intellectual seeming that these truths inferentially follow from more basic logical truths. Thus, PC

does not grant logical omniscience. On the other hand, a prominent virtue of PC is its alleged ability to stop epistemic regress. By treating phenomenal experiences as inherently capable of conferring justifications, PC does not appeal to further justificatory factors that would bring about the regress. Of course, it might be suggested that PC has a built-in awareness requirement: one must be aware of the seeming for it to confer justification. Yet, this requirement simply involves qualifying seeming as a conscious mental state. It does not refer to some further evidential link between this mental state and the justified proposition.

Can PE be improved in light of PC? While I do not defend phenomenal explanationism, it seems that PE can be modified as follows to avoid the dilemma:

PE*: Believing p is justified for S at t if and only if at t : S has total evidence E (where evidence is understood as ‘seeming’), p is the best explanation of e (where e is a subset of E), and it is not the case that p fails to explain e because of the additional evidence included in E .

PE* differs from PE by omitting condition (ii). The fact that a proposition is a logical or explanatory consequence of the best explanation of the agent’s total evidence no longer justifies the agent to believe this proposition. As such, PE* avoids the first horn of the dilemma. It also avoids the second horn because it does not impose the awareness requirement: to justifiably believe p based on evidence e , the subject does not have to be aware of how p explains her evidence.

How, one might ask, can PE* deal with the objections from Goldman and Byerly that motivated (ii)? The answer is straightforward: the agents in these scenarios are justified because the relevant propositions *seem* to be true. In Goldman’s case, the agent sees two squirrels and two birds and concludes that there are four animals. This is an inference. According to PC, inferences should be adequately based on inferential appearances (e.g., Huemer, 2016). When an agent grasps the truths of certain premises and sees how a proposition follows from them, it appears to her that the proposition is accordingly true. This inferential seeming thereby provides justification for believing the consequent proposition. Hence, advocates of PC can say that, in Goldman’s case, the agent knows that there are two squirrels and two birds, knows that squirrels and birds are animals, and thereby acquires an inferential seeming that there are four animals. It is based on this inferential seeming that she acquires justification for this conclusion. Regarding Byerly’s case, it might be suggested that either the appearance is direct and conveys the information ‘it seems that the ball will roll into the cup’, or it is inferentially based on inductive evidence from the past. In the former case, PC can directly regard the agent as justified, based on her current seeming, to believe that this future event will occur. In the latter case, her belief is justified by her inferential seeming.

Provided that PE* is capable of treating the cases raised by Goldman and Byerly, it seems that the earlier versions of explanationism were in need of condition (ii) because they adopted a restrictive notion of evidence. Although McCain (2013: p. 306) recognised intellectual-conceptual seemings that offer justification for a priori truths, he did not endorse inferential seemings. This restrictive conception of evidence might have been what motivated introducing condition (ii) to reinforce explanationism against Goldman’s and Byerly’s objections. PE, which purports to

combine phenomenal conservatism and explanationism, has inherited this extended explanationist framework. Admittedly, the philosophical role of inferential seeming can be discussed on independent ground, and there might be other reasons for preferring PE over PE*. McCain and Moretti (2021: p. 14) specifically reject the need for inferential seeming for justifiably making inferences: presumably, a subject who is justified to believe that p and that p entails q is propositionally justified to believe q regardless of the inferential seeming that q follows from these premises. Nevertheless, in light of PE*, we see that when combining phenomenal conservatism with explanationism, there is a general question of how much each of these theories should be preserved in the resultant theory. It remains an open possibility that PE, as currently formulated, is still not the optimal version of phenomenal explanationism.

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