

EXPLANATIONISM, SUPER-EXPLANATIONISM, ECCLECTIC EXPLANATIONISM: PERSISTENT PROBLEMS ON BOTH SIDES

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ABSTRACT: We argue that explanationist views in epistemology continue to face persistent challenges to both their necessity and their sufficiency. This is so despite arguments offered by Kevin McCain in a paper recently published in this journal which attempt to show otherwise. We highlight ways in which McCain's attempted solutions to problems we had previously raised go awry, while also presenting a novel challenge for all contemporary explanationist views.

KEYWORDS: evidentialism, explanationism, explanatory circularity, logical entailment, probability, Kevin McCain

The conversation representing renewed interest in explanationist accounts of epistemic justification continues to grow.¹ In a previous contribution to this conversation,² we argued that explanationist views face problems on both sides: the conditions they offer for epistemic justification are neither necessary nor sufficient. Kevin McCain³ has recently responded to us in this journal, arguing that the problems we raise can be overcome. Here we explain why his responses fail. McCain's response to the problem we raise concerning the sufficiency of explanationism can be shown to fail by examining important components of our

¹ T. Ryan Byerly, "Explanationism and Justified Beliefs About the Future," *Erkenntnis* 78, 1 (2013): 229-243, T. Ryan Byerly and Kraig Martin, "Problems for Explanationism on Both Sides," *Erkenntnis* 80, 4 (2014): 773-791, doi:10.1007/s10670-014-9673-2, Earl Conee and Richard Feldman, "Evidence," *Epistemology: New Essays*, ed. Quentin Smith (New York: Oxford University Press, 2008), Kevin McCain, "Evidentialism, Explanationism, and Beliefs About the Future," *Erkenntnis* 79, 1 (2014): 99-109, Kevin McCain, *Evidentialism and Epistemic Justification* (London: Routledge, 2014), Kevin McCain, "Explanationism: Defended on All Sides," *Logos & Episteme: An International Journal of Epistemology* VI, 3 (2015): 333-349, Ted Poston, *Reason and Explanation: A Defense of Explanatory Coherentism* (London: Palgrave Macmillan, 2014).

² Byerly and Martin, "Problems for Explanationism."

³ McCain, "Explanationism: Defended."

previous work on the topic that he has overlooked. McCain's response to the problem we raise concerning the necessity of explanationism is more interesting, as it involves the articulation of a novel version of explanationism we call Super-Explanationism. We argue, however, that even if Super-Explanationism could defuse the problem we had initially raised concerning the necessity of explanationism, it faces a distinct problem concerning its necessity. Moreover, even a new explanationist view we propose here called Ecclectic Explanationism, which attempts to combine the strengths of Super-Explanationism with the strengths of previous explanationist theories, still faces an important objection to its necessity. Indeed, the objection we raise to the necessity of Ecclectic Explanationism threatens all versions of explanationism we know of. Given these results, we conclude that the explanationist family of views continues to face persistent problems on both sides.

1. Challenging the Sufficiency of Explanationism

While there are various versions of explanationism on offer today, one commitment shared in common between them is the following claim: if a proposition p is the best available explanation for a subject S 's evidence, and p is a good explanation for that evidence, then S is justified in believing p . This commitment is affirmed for example by both the version of explanationism defended by McCain in his recent book,⁴ as well as the revised Super-Explanationist view he defends in this journal (more on this view below). In our "Problems for Explanationism on Both Sides," we challenged this commitment, arguing that there are cases where a proposition p is the best available explanation for a subject S 's evidence, and p is a good explanation of this evidence, but S is not justified in believing p because S has reason to think there may well be relevant evidence concerning what explains his current evidence that is not currently available.

Here is the case we originally offered to support this contention:

Imagine that Sally is the lead detective on an investigation of a burglary. She typically uses an eight-step investigative procedure for crimes of this sort and this procedure involves gathering and analyzing multiple kinds of evidence – physical evidences, forensic evidences, testimonial evidences, psychological evidences, circumstantial evidences, and so on. Sally is now mid-way through her investigative procedure, having completed four of the eight steps. She has gathered and analyzed the appropriate evidence for these four steps, but has not yet gathered or analyzed evidence that may or may not arise during the final four

⁴ McCain, *Evidentialism and Epistemic Justification*, 117.

steps. The list of suspects with which Sally began has been narrowed, and there is one very promising suspect in particular named Jeremy. In fact, the claim <Jeremy committed the burglary> (call this the Jeremy hypothesis) is the best explanation available to Sally for all of the evidence she currently has obtained through the first four steps. There are multiple witnesses locating someone who fits Jeremy's description at the scene of the crime at the time at which it was committed. Some drug paraphernalia like that which Jeremy commonly uses to feed his drug habit was found at the scene of the crime. Jeremy seems to display a sense of satisfaction or gladness about the robbery. His bank account reflects a deposit shortly after the incident. Other current suspects, while not ruled out, do not fit the evidence Sally currently has anywhere nearly as well as Jeremy does. The Jeremy hypothesis is the best available explanation for the evidence Sally currently has and it is a very good explanation of that evidence.

But Sally isn't justified in believing the Jeremy hypothesis. For, she has good reason to think that there may very well be relevant evidence concerning the burglary that she does not currently have. After all, there have been many times in the past where, after completing step four of her investigation, things took a dramatic swing. It has not at all been uncommon that at these later stages in the process, an alternative suspect emerges who fits the data even better than previous suspects. Thus, while the Jeremy hypothesis is the best available explanation of the evidence Sally currently has, and while it is even a very good explanation of that evidence, Sally is not justified in believing this hypothesis. Believing the Jeremy hypothesis would be premature. The correct explanation for Sally's data may very well not be available at present, and she has good reason to think this.⁵

In his recent article, McCain responds to this objection by arguing that in this case the Jeremy hypothesis (<Jeremy committed the burglary>) is not the best explanation available to Sally for why she has the total evidence she has. The reason is that the Jeremy hypothesis is too specific; a more general hypothesis will be better. He writes, "the mistake [Byerly and Martin] are making here is to assume that the hypothesis that one is justified in believing must be a specific one rather than a general one."⁶ While he never proffers a general proposition that he takes to be a better explanation of Sally's evidence than the Jeremy hypothesis, it seems that he has in mind something like <Somebody committed the burglary>.

In support of this contention, McCain compares our example to a case in which you leave your home for an hour and distinctly remember locking your door prior to leaving. Upon returning, you find your door has been forced open and some of your belongings are missing. He says of this case, "the best explanation of your evidence is that someone or other robbed you. This is the best

⁵ Byerly and Martin, "Problems for Explanationism," 783.

⁶ McCain, "Explanationism: Defended," 347.

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explanation even though you don't have a particular suspect in mind."⁷ He continues:

To make this point even clearer add to the case that you notice your neighbor's five-year-old son has been playing in your yard, and still is. One hypothesis that is available to you is that your neighbor's five-year-old son robbed you. However, given your background evidence concerning what would be required to break open your door...the hypothesis that someone other than the five-year-old stole your belongings is a better explanation than the hypothesis that your neighbor's five-year-old robbed you.⁸

Likewise, he contends, a more general hypothesis will be superior to the Jeremy hypothesis in our example. And so explanationist views needn't have the problematic implication in our example that Sally is justified in believing the Jeremy hypothesis.

The problem with McCain's response is easy to spot. Indeed, in our previous work, we addressed this kind of objection explicitly, showing why the Jeremy hypothesis in fact is superior to more general hypotheses of the kind McCain seems to have in mind. McCain has simply overlooked what we said.

The central reason that the Jeremy hypothesis is superior to a more general hypothesis like <Somebody committed the burglary> is that the latter hypothesis does not predict all of the relevant data in the example, while the Jeremy hypothesis does. In particular, the more general hypothesis does not predict Jeremy's attitude, the facts about his bank account, the reports of eyewitnesses of someone fitting Jeremy's description, or the presence of drug paraphernalia of the same kind known to be employed by Jeremy. Obviously, this is one important way in which our example differs dramatically from the case discussed by McCain. There is not comparable data that is well-explained in his example by the hypothesis that the five-year-old is the culprit.

Now, as we observed in our original article, general hypotheses of the kind McCain seems to have in mind can be modified so as to address this problem. Rather than <Somebody committed the burglary> one might propose a hypothesis along the following lines: <Somebody who looked like Jeremy committed the burglary *and* Jeremy didn't like the victims and he received the deposit in some other way>. We argued, however, that while such hypotheses manage to predict the relevant data, they still are not as good as the Jeremy hypothesis. This is because the Jeremy hypothesis offers something that these rival explanations do not: it provides a *simple* and *unified* explanation of the relevant data. Since such

⁷ McCain, "Explanationism: Defended," 348.

⁸ McCain, "Explanationism: Defended," 348.

simplicity and unification are important explanatory virtues, the Jeremy hypothesis is better than these rivals.

McCain has said nothing to address these important contentions from our original article, and because of this his challenge to the problem we raise for the sufficiency of explanationist views fails. Explanationist views, whether Super-Explanationist or not, remain threatened by this important problem concerning their sufficiency.

2. Challenging the Necessity of Explanationism

In addition to challenging the sufficiency of explanationist views, our “Problems for Explanationism on Both Sides” also defended a challenge to the necessity of explanationist views first introduced by Byerly.⁹ The challenge Byerly presented aimed to identify a case in which a person is justified in believing a proposition *p*, but *p* is *not* part of the best available explanation for the person’s evidence. Byerly’s challenge focused on contingent propositions concerning future events. He offered the following example:

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!¹⁰

In such cases, there is a belief about the future (<the ball is going to go in the cup>) that intuitively should be judged justified, and yet its truth is not part of the best explanation for why the subject has the evidence he currently has. The explanation for why the subject has the evidence he currently does consists in a body of present and past facts, not future facts.

McCain originally responded to this example by arguing that it could be adequately handled by a version of explanationism that allows available logical entailments of the best available explanation of one’s evidence to be justified. This version of explanationism, also defended in McCain’s book, says:

(Ex-EJ) A person, S, with evidence *e* at *t* is justified in believing *p* at *t* iff at *t* S has considered *p* and 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 a logical consequence of the best explanation available to S at *t* for why S has *e*.^{11,12}

⁹ Byerly, “Explanationism and Justified Beliefs.”

¹⁰ Byerly, “Explanationism and Justified Beliefs,” 235.

¹¹ McCain, “Evidentialism, Explanationism,” 80.

McCain argued that even though <the ball is going to go in the cup> is not part of the best explanation for the golfer's evidence, it is nonetheless a logical entailment of the best explanation for the golfer's evidence. Moreover, appealing to logical consequences in the way that Ex-EJ does, McCain argued, is also motivated by other alleged counterexamples to explanationism already known in the literature. One such example is Lehrer's example involving the Pythagorean Theorem. Lehrer describes it this way:

Imagine that I am standing with my toe next to a mouse that is three feet from a four-foot-high flagpole with an owl sitting on top. From this information concerning boundary conditions and the Pythagorean Theorem, which we here construe as an empirical law, we can deduce the mouse is five feet from the owl.¹³

McCain proposed that the logical consequence relations employed in his Ex-EJ could adequately account for not only cases like Byerly's golf case, but also cases like Lehrer's Pythagorean Theorem case. The claim <the mouse is five feet from the owl> is a logical consequence of the best available explanation for Lehrer's evidence, just as <the ball is going to go in the cup> is a logical consequence of the best available explanation for Byerly's evidence.

In our article, we disputed this contention of McCain's, arguing that appealing to logical consequence relations in the way Ex-EJ does cannot account for the golfer being justified in believing that the ball will go in. In his response to us in this journal, McCain appears prepared to concede that we are correct. Our argument, he says, "provides grounds for thinking that Ex-EJ is in need of revision." Thus, McCain has offered an interesting proposal for the kind of revision needed. His proposal, which has important historical antecedents,¹⁴ appeals to explanatory relations rather than logical relations. Because the resulting view appeals more thoroughly to explanatory relations (something McCain touts in its favor), we call the resulting view "Super-Explanationism." It says the following:

(Super-Explanationism) A person, S, with evidence *e* at *t* is justified in believing *p* at *t* iff at *t* S has considered *p* and: 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*.¹⁵

¹² McCain, "Explanationism: Defended," 334.

¹³ Keith Lehrer, *Knowledge* (Oxford: Clarendon Press, 1974), 166.

¹⁴ Gilbert Harman, *Thought* (Princeton: Princeton University Press, 1973).

¹⁵ McCain, "Explanationism: Defended," 339.

In the following section, we will explain why McCain thinks Super-Explanationism can handle both the objection from justified beliefs about the future (the golf case) and the objection from justified beliefs about mathematical entailment (Lehrer's Pythagorean Theorem case). We argue, however, that Super-Explanationism cannot in fact handle the objection from justified beliefs about mathematical entailment.

3. Super-Explanationism

McCain sees the justified belief in the golf case (<the ball is going to go in the cup>) as an inductive belief.¹⁶ He thinks that Super-Explanationism returns the verdict that such a belief is justified for just the same reason it returns the verdict that any belief justified on the basis of inductive evidence is justified. When a subject *S* has observed a good many *F*s, and most of them have been *G*, then <most *F*s are *G*> is a part of the best available explanation of *S*'s evidence. When the percentage of observed *F*'s that have been *G* is high enough, and when there have been a sufficient number of observed *F*s, it is plausible to think that *S* is justified in believing that the next observed *F* will be a *G*. McCain thinks Super-Explanationism yields this result via clause (ii), because <the next observed *F* will be a *G*> is an explanatory consequence of the best explanation available to *S* as to why she has her evidence. The proposition <most *F*s are *G*> is included in the best explanation for her evidence, and <most *F*s are *G*> better explains <the next observed *F* will be a *G*> than it explains its denial.¹⁷ Applied to the golf case, McCain's proposal is that the best explanation available to the golfer for his current evidence is that most balls in circumstances relevantly like those the present ball is in go into the cup, and that it is an explanatory consequence of this claim that the present ball is going to go in the cup. Thus, clause (ii) of Super-Explanationism implies that the golfer is justified in believing the ball will go in.

It is important for McCain that Super-Explanationism handles not only justified beliefs about the future, but also beliefs justified from mathematical entailment. He argues that Super-Explanationism does yield the correct verdict in cases like the one discussed by Lehrer, though in a way that differs from the way he had previously attempted to account for this case. Recall that Lehrer argues that he is justified in believing <the mouse of five feet from the owl> even though

¹⁶ McCain, "Explanationism: Defended," 340.

¹⁷ Importantly, McCain writes, "...by saying that *p* is an 'explanatory consequence of the best explanation available to *S* at *t*' I mean that *p* would better be explained by the best explanation of *S*'s evidence available to *S* at *t* than $\sim p$ would (McCain, "Explanationism: Defended," 339)."

“he has no explanation of why the mouse is five feet from the owl.”¹⁸ McCain, while admitting that “initially one might be inclined to agree with Lehrer,”¹⁹ argues that <the mouse is five feet from the owl> *is* part of the best explanation available to Lehrer for why he has the evidence he does. This is because part of Lehrer’s evidence, McCain thinks, is a seeming state in which it seems to Lehrer that <the mouse is five feet from the owl> follows from <the mouse is three feet from base of the flagpole> and <the base of the flagpole is four feet from the owl>.²⁰ “Plausibly,” McCain writes, “part of the best explanation available to Lehrer for why it seems that <the mouse is five feet from the owl> follows from his evidence is that <the mouse is five feet from the owl> is in fact true.”²¹ Because the proposition <the mouse is five feet from the owl> provides the best available explanation for this why it seems to Lehrer that <the mouse is five feet from the owl> follows from these other propositions, clause (i) in Super-Explanationism yields the result that Lehrer is justified in believing this proposition.

We think it is implausible, however, that <the mouse is five feet from the owl> is part of the best explanation for why it seems to Lehrer that <the mouse is five feet from the owl> follows from <the mouse is three feet from base of the flagpole> and <the base of the flagpole is four feet from the owl>. A much more plausible explanation for why it seems to Lehrer that the one proposition follows from the other propositions is because Lehrer has internalized the Pythagorean Theorem, so-to-speak. Thinking in accordance with the relevant mathematical entailment has become second nature to him. The superiority of this explanation to the one offered by McCain can be seen by observing the following important fact: even if Lehrer believed there were no mice or owls in the world, it would still seem to him that <the mouse is five feet from the owl> *follows from* <the mouse is three feet from base of the flagpole> and <the base of the flagpole is four feet from the owl>. Neither the existence of the mouse, let alone its distance from the owl, explains why it seems to Lehrer that the one proposition follows from the others. This is because his seeming is just about what follows from what, not about

¹⁸ Lehrer, *Knowledge*, 178.

¹⁹ McCain, “Explanationism: Defended,” 342.

²⁰ McCain never says explicitly from which propositions he thinks it seems to Lehrer that <the mouse is five feet from the owl> follows. Here we provide what we think is a charitable interpretation. The reader should note that, strictly speaking, it is problematic for McCain to claim that <the mouse is five feet from the owl> follows from Lehrer’s *evidence* as he does in the cited sentence. This is because McCain advocates a psychological conception of evidence according to which evidence consists in certain mental states. Nothing, of course, follows from mental states.

²¹ McCain, “Explanationism: Defended,” 343.

what there is in the world. Thus, McCain's attempt to account for Lehrer's Pythagorean Theorem case by appealing to clause (i) of Super-Explanationism does not succeed.

McCain might attempt to salvage Super-Explanationism by appealing not to (i), but to (ii). This would, after all, follow his earlier pattern for explaining the case where he had appealed to clause (ii) rather than clause (i) of Ex-EJ. Taking this route would involve McCain in arguing that <the mouse is five feet from the owl> is explained better by the best explanation for Lehrer's evidence than is its denial. In particular, McCain might suggest that included in the best explanation for Lehrer's evidence are the propositions <the mouse is three feet from base of the flagpole>, <the base of the flagpole is four feet from the owl>, and <the Pythagorean Theorem is true>. Since these propositions explain <the mouse is five feet from the owl> better than they would explain its denial, Lehrer is justified in believing this claim.

Unfortunately for McCain, this approach also faces intractable difficulties. In particular, its consistent application will require McCain to affirm the problematic claim that some propositions partially explain themselves. To see why this is the case notice first that its application to the case as Lehrer originally described it yields the conclusion that <the mouse is three feet from the base of the flag pole> partially explains <the mouse is five feet from the owl>. Now, suppose that we tweak Lehrer's original example in the following way. Instead of having <the mouse is three feet from base of the flagpole>, <the base of the flagpole is four feet from the owl>, and <the Pythagorean Theorem is true> as parts of the best explanation for his evidence, Lehrer has <the mouse is five feet from the owl>, <the base of the flagpole is four feet from the owl>, and <the Pythagorean Theorem is true> as parts of the best explanation for his evidence. Here McCain will want to maintain that Lehrer is justified in believing <the mouse is three feet from base of the flagpole>. Yet, if he does so consistently, by appealing to clause (ii) of Super-Explanationism in the way proposed in the previous paragraph, this will require claiming that <the mouse is five feet from the owl> partially explains <the mouse is three feet from base of the flagpole>. And this, by the transitivity of partial explanation, yields the problematic result that <the mouse is five feet from the owl> partially explains itself.

One way to summarize the problem with this second approach is to say that on this approach McCain would be trying to get explanatory relations to do the work of entailment relations. But, entailment relations can be symmetric while explanatory relations cannot. There's no problem with propositions p , q , and r entailing proposition s , while propositions s , r , and q entail proposition p . Indeed,

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propositions entail themselves, and this is unproblematic. Yet, it *is* problematic for propositions to explain themselves. And for this reason it is also problematic to maintain what the consistent application of this second approach demands in cases like Lehrer's Pythagorean Theorem case.

It appears then that there is not an attractive way for McCain to maintain that his Super-Explanationism can account for mathematical entailment cases such as Lehrer's. His own proposal about how to accommodate these cases requires an implausible view about how seemings regarding what follows from what are best explained, and an alternative approach we have here canvassed yields the unattractive result that propositions can partially explain themselves. Thus, even if Super-Explanationism can handle adequately the kinds of cases we had originally urged against other versions of explanationism such as Ex-EJ, it faces a distinct challenge to its necessity. It cannot handle adequately cases of mathematical entailment that Ex-EJ could.

4. Ecclectic Explanationism

The last observation of the previous section reveals a potential way forward for explanationists. Suppose (ii) in Super-Explanationism handles cases like Byerly's golf case and (ii) in Ex-EJ handles cases like Lehrer's Pythagorean Theorem case. Perhaps the best approach for the explanationist is to combine (ii) in Ex-EJ and (ii) Super-Explanationism to form a third modified explanationist view we'll call Ecclectic Explanationism:

(Ecclectic Explanationism) A person, S, with evidence e at t is justified in believing p at t iff at t S has considered p and: 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 , or (iii) p is available to S as a logical consequence of the best explanation available to S at t for why S has e .

The Ecclectic Explanationist could rely on (ii) to handle Byerly's golf case and (iii) to handle Lehrer's Pythagorean Theorem case. At least the challenges we've raised concerning the necessity of explanationism can be met, even if the challenge we've raised to its sufficiency cannot.

Not so fast, we say. For, once one notices that probabilistic relations, like entailment relations and unlike explanatory relations, can be symmetric, one should begin to worry that an objection sharing much of the form of Lehrer's objection can be revived. The revived objection simply needs to substitute probabilistic relations where Lehrer's example employs mathematical entailment relations.

Cases involving surprising correlations illustrate the possibility of this kind of objection well. For example, consider the following surprising fact: most years between 1999 and 2009 where Nicholas Cage appeared in at least 2 films were years between 1999 and 2009 where there were at least 98 drownings, *and* most years between 1999 and 2009 where there were at least 98 drownings were years between 1999 and 2009 where Cage appeared in at least 2 films.²² Now, imagine that someone, Joe, comes to know this fact, but does so without coming to know the number of Cage films and drownings for any particular year. Suppose next that Joe learns that in some particular year in the interval, say 2006, Cage was in at least 2 movies. Depending upon exactly the strength of the correlation and the appropriate threshold for justification, it is plausible that Joe would be justified in believing that in 2006 there were at least 98 drownings.²³

Cases like this one pose a significant challenge to the necessity of all explanationist views examined in this paper, including Ecclectic Explanationism. The explanationist cannot appeal to clause (i) of Ecclectic Explanationism to defend the justification of Joe's belief for reasons paralleling those offered in the previous section against McCain's use of clause (i) in response to Lehrer's case. It might seem to Joe that the claim that there were at least 2 Cage films in 2006 and the claim that Cage films and drownings are appropriately correlated makes it likely that there were at least 98 drownings in 2006. But, this seeming isn't explained by there being 98 drownings in 2006. Indeed, the seeming would persist even if there were no Cage films or drownings. It is just a seeming about what makes what probable, not about what there is in the world.²⁴

²² See <http://www.tylervigen.com/spurious-correlations>.

²³ If the reader demands a higher threshold for justification, a structurally parallel case can be found where the correlation is stronger.

²⁴ It is perhaps worth observing here that a potentially distinct approach to responding to Lehrer's original example which one might think would lend some support to the present strategy is unlikely to yield such support. The approach we have in mind is that suggested in Ted Poston, *Reason and Explanation: A Defense of Explanatory Coherentism* (New York: Palgrave Macmillan, 2014). Poston appears to think that in Lehrer's example, <the mouse is five feet from the owl> is *part of* the best explanation for Lehrer's evidence, and not simply entailed by that explanation. He writes that if Lehrer's example is to provide a counterexample to explanationism, "it must be false that [Lehrer's] justification consists in the fact that the proposition that 'the mouse is five feet from the owl' is part of a virtuous explanatory system which beats its competitors. Yet this claim is dubious. [Lehrer's] belief follows from the boundary conditions and the Pythagorean theorem which are parts of a virtuous explanatory system which beats competitors." (Poston, *Reason and Explanation*, 96-7) More generally, it seems that on Poston's view *p*'s being entailed by the best explanatory system implies that *p* is part of that system. Yet, we would propose that this strategy, even if successful in responding to

Nor can clause (ii) of Ecclectic Explanationism come to the rescue in such cases in the way it can for cases like Lehrer's. For, the correlation between Cage films and drownings, while strong, is imperfect. It does not follow as a *logical consequence* from the fact that in most years between 1999 and 2009 Cage films and drownings are appropriately correlated and in 2006 there were at least two Cage films that in 2006 there were at least 98 drownings.²⁵

Finally, and most importantly in the present context, clause (iii) of Ecclectic Explanationism is also impotent, for the same reason it is impotent to explain Lehrer's justification in his example. In order to employ clause (iii) consistently to account for cases like the present one, the Ecclectic Explanationist must affirm that some propositions partially explain themselves. For example, in the present case, if the explanationist is to employ clause (iii) she will have to maintain that Cage's appearing in at least 2 movies in 2006 partially explains there being at least 98 drownings in 2006. But, if we altered the case so that Joe had come to learn that there were at least 98 drownings in 2006 rather than that there were at least 2 Cage films, a consistent application of this strategy would yield the result that there being at least 98 drownings in 2006 partially explains there being at least 2 Cage films in 2006. By transitivity of partial explanation, it follows that there being at least 2 Cage films in 2006 partially explains itself. And that's no good for anyone.

5. Conclusion

The proximate aim of this paper has been to respond to Kevin McCain's recent arguments aiming to show that objections we had raised to the necessity and sufficiency of explanationist views can be overcome. We showed that McCain's response to our objection to the sufficiency of explanationist views overlooks important components of our previous work, and as a result is unsuccessful. We

cases like Lehrer's mathematical entailment case, should not be expanded in the way necessary to handle the present case. For, even if one grants the claim that p being entailed by the best explanatory system makes p a part of the best explanatory system, one should not hold that p 's being made probable by the best explanatory system entails that p is part of that system. This would conflict with the explanatory virtues of simplicity and conservatism Poston emphasizes. Therefore, the view suggested in Poston's work does not appear to offer the explanationist an attractive alternative for handling the present example.

²⁵ Indeed, insofar as explanationist views cannot appeal to clause (ii) of Ecclectic Explanationism to account for Byerly's golf case [something McCain seems willing to grant], they cannot do so here either. For, the cases are parallel in that those parts of the subject's best explanation which seem to justify the relevant belief in each case are not sufficient to logically guarantee the truth of this belief, but are only sufficient to make it very likely.

then showed that novel versions of explanationism to which the explanationist might appeal in order to respond to our objection to the necessity of explanationism face distinct objections to their necessity. Indeed, we identified a novel kind of case which poses a significant challenge to the necessity of all version of explanationism. As a result, explanationist theories – however developed – face persistent problems on both sides.