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**Be Careful What You Grant**

**Lydia McGrew**

*Abstract*: I examine the concept of granting for the sake of the argument in the context of explanatory reasoning. I discuss a situation where S wishes to argue for H1 as a true explanation of evidence E and also decides to grant, for the sake of the argument, that H2 is an explanation of E. S must then argue that H1 and H2 jointly explain E. When H1 and H2 compete for the force of E, it is usually a bad idea for S to grant H2 for the sake of the argument. If H1 and H2 are not positively dependent otherwise, there is a key argumentative move that he will have to make anyway in order to retain a place at the table for H1 at all—namely, arguing that the probability of E given H2 alone is low. Some philosophers of religion have suggested that S can grant that science has successfully provided natural explanations for entities previously ascribed to God, while not admitting that theism has lost any probability. This move involves saying that the scientific explanations themselves are dependent on God. I argue that this “granting” move is not an obvious success and that the theist who grants these scientific successes may have to grant that theism has lost probability.

Keywords: Bayesianism; conditional probability; granting for the sake of the argument; explaining away; hypothesis competition; theism; Darwinism

1. Introduction

What do we mean when we say that an argument from an item of evidence for an hypothesis is strong even if we grant some other proposition “for the sake of the argument”? I aim to give a probabilistic explanation of granting for the sake of the argument and to discuss granting for the sake of the argument in the context of alternative explanations for evidence E.

 Suppose that H1 and H2 are neither mutually exclusive nor jointly exhaustive but are conceptually distinct hypotheses that could be invoked to explain evidence E. E might be explained by H1 alone, by H2 alone, by the conjunction of H1 and H2, or by a catchall—the true explanation, not specified otherwise, is neither H1 nor H2. My examples here will all concern cases of causal explanation, without discussion of whether there are other senses of “explanation” that are non-causal. Suppose that S intends to argue for H1 on the basis of E but wants, for some reason, to grant H2 for the sake of the argument. How could this weaken his own argument for H1, and what does he need to be prepared to argue in order to continue to maintain that E provides strong evidence for H1?

2. A simple model of granting H2 for the sake of the argument

In what follows I intend to restrict my discussion to cases where two hypothesis H1 and H2 are not mutually exclusive; they could both be true. To begin with I will simplify the probabilistic modeling by assuming that H1 and H2 are marginally independent—i.e., that aside from evidence E, they are probabilistically irrelevant to each other. I will also discuss proposals to argue for H1 while relaxing the marginal independence requirement and taking H2 to be true.

 With the assumption that two propositions are probabilistically compatible in place, how should we model making an argument for one of them while granting the other for the sake of the argument? I propose a fairly simply probabilistic model: If a proposition P is granted for the sake of the argument, then in S’s argument we should take it that he is placing P to the right of the solidus (much as one does with understood background information, usually designated as k) and is making all of his claims about evidence for some other proposition conditional on P. This of course need not mean that he actually believes P. But since he is granting P, his claims are to be understood in a context in which P is treated as true. Hence, for example, if S says that P(H1|E) is high even granting H2 for the sake of the argument, we should take this to mean that P(H1|E & H2) is high.

I take it, further, that talk of a strong argument is to be understood in confirmation-theoretic terms, so that saying that E provides a strong argument for H means that E provides a large amount of confirmation to H. This concept of confirmation is a version of what Richard Swinburne (2004) has referred to as a c-inductive argument; that is, regardless of what the posterior probability of H is, it is higher as a result of conditionalizing on E than it was in the prior distribution. This, of course, takes us to the fraught question of the “best” measure of confirmation. For my purposes in this paper in interacting with the phenomenon of “explaining away,” the simple Bayes factor ratio (Good, 1950) will be the most convenient measure, though I am well aware of other measures.[[1]](#footnote-1) The same points can be readily seen using the popular r measure (Keynes, 1921), which has also been used in the literature on explaining away. These measures (and the difference measure advocated by Earman [1992]) will agree in saying that some evidence E1 confirms H more than some evidence E2 does, as long as the prior probability of H is held constant. More to the point for purposes of this paper, these measures all agree as to whether E confirms H, disconfirms H, or is irrelevant to H. It is the absolute degree and ordinal rankings of confirmation on which they may disagree (Fitelson 1998, p. S367).

If we are using the Bayes factor measure, saying that E provides a strong argument for H1 even if we grant H2 means that P(E|H1 & H2)/P(E|~H1 & H2) > 1 or >> 1. If one were using the r measure, to say that E provides a strong argument for H1 even granting H2 would mean that P(H1|E & H2)/P(H1|H2) >> 1, though of course in that case the prior probability for H1, granting H2, will affect the magnitude of the ratio.

 Later I will also discuss granting something about the relationship between E and H2 (the granted explanation) by itself. One might not only grant that H2 is true but also grant further that P(E|H2 & ~H1) > k, where k is some cut-off that one considers necessary for treating something as a “good” explanation of the data.

3. Explaining away and competition

With the initial, relatively simple notion of granting for the sake of the argument in hand, the next concepts important for my project are explaining away and competition, as defined and explored in a series of papers by David Glass and Jonah Schupbach (Glass 2012, 2017, 2021, Schupbach and Glass 2017).

 Partial or complete explaining away, also called hypothesis competition, can be fairly simply illustrated in a causal context, using an example taken from Glass (2017, pp. 1147-1148). Suppose that one morning your car does not start. You don’t know much about cars, but you’ve heard that a complete failure to start may be the result either of a dead starter motor or a dead battery. Either one of these alone, you believe, could cause the failure to start. It is possible that your starter motor and your battery are both dead. These states of affairs are not incompatible. And it’s also possible that something else entirely is causing the car’s failure to start. So these two hypotheses are not jointly exhaustive, though we will assume that they are the two most plausible candidates. You call your knowledgeable and helpful neighbor who comes and checks the voltage on your battery and says, “Sure enough, battery’s dead.” At that point, you stop worrying about your starter motor.

 This scenario, of course, is oversimplified, since there are other aspects of *how* your car refused to start that would tend to point to one of these explanations over the other. But let us ignore those or pretend that they do not exist for the sake of the illustration. Diachronically speaking, the evidence of the car’s failure to start at first confirmed both hypotheses—dead battery and dead starter motor. But since either of these could be the explanation all by itself, the discovery that the battery is dead “took back away” the force of the evidence from the theory of a dead starter motor. There was no longer any need for it. The dead battery sufficiently explained the evidence.

 It is in this sense that the two hypotheses compete for the force of the evidence. In the presence of the evidence, the discovery that either hypothesis is true disconfirms the other—they disconfirm each other modulo E. This is what Glass (2021, 164-165) calls the indirect path of disconfirmation, as opposed to the direct path. The direct path involves positive or negative relevance between the hypotheses aside from the evidence at hand. If there were something about a dead battery in and of itself that made a dead starter motor less probable, aside from whether or not the car starts, that would be disconfirmation along the direct path.

 Glass (2017, p. 1148, 2021, p. 164) gives the following simple condition as a sufficient and necessary condition for H1 and H2 to compete for some evidence E:

P(H1|H2 & E) < P(H1|E)

Elsewhere (2012, p. 84) he gives a version of this condition for D and A when they are marginally independent—i.e., independent along the direct path. This condition for competition is as follows:

P(E|D & A) × P(E|~D & ~A) < P(E|~D & A) × P(E|D & ~A)

By simple algebraic manipulation and changing the notation to my own H1 and H2, this condition is equivalent to the following inequality between ratios:

P(E|H1 & H2)/P(E|~H1 & H2) < P(E|H1 & ~H2)/P(E|~H1 &~H2)

 Partial explaining away without complete explaining away occurs when the probability of H1 is less, given E and H2, than given E alone but is still greater than P(H1). In other words, mere partial explaining away occurs when H2 “takes away” some but not all of the power of E to confirm H1:

P(H1) < P(H1|E & H2) < P(H1|E)

Complete explaining away occurs when H1 is literally no better off (or is even worse off) given E and H2 than it was conditional on E. That is, in the presence of E, H2 is negatively relevant to H1 to the point that H2 removes *all* of the force of E to confirm H1 or even makes the probability of H1 less than its prior. This condition is captured by

P(H1) ≥ P(H1|E & H2) < P(H1|E)

 The concept of granting for the sake of the argument interacts in interesting ways with the concept of explaining away. S may grant an hypothesis H2 for the sake of the argument when H2 competes with a hypothesis H1 for which S wants to argue using evidence E. My purpose in this paper will be to draw attention to various ways in which an alternative may be granted for the sake of the argument without a full realization of how much one has weakened one’s own case by doing so. Granting H2 means that the only way in which H1 could be true would be if the conjunction of both explanations were true.

 A major reason for H2’s disconfirmation of H1 arises from the fact that, if H2 is taken to be true, any force that H1 had relative to the catchall—(~H1 & ~H2)—has been lost. In terms of the car starting example, once we know (or grant to be true) that the battery is dead, the hypothesis that the starter motor is dead no longer gains traction from the low probability of the evidence if neither of these is the case.

 Once you have granted H2, what must you be prepared to do in order to argue that E still provides evidence for H1? If H1 and H2 are not positively relevant to one another along the direct path, you should be prepared at least to argue that the ratio

P(E|H1 & H2)/P(E|~H1 & H2)

is top-heavy. And if you are trying to argue that E provides significant evidence for H1 by the likelihood measure, you will need to argue that it is significantly top-heavy. You can do this either by arguing that the numerator is high or that the denominator is low, or both, or by arguing in some gestalt way that the ratio is quite top-heavy. Even when doing the last of these, it is plausible that the intuition you will be accessing will rely more on one or the other term of the ratio, often on the lowness of the denominator and the alleged ease with which the numerator can far exceed it. In general, in order for this Bayes factor ratio to be n/1 or greater, if the numerator is r, the denominator must be less than or equal to r/n.[[2]](#footnote-2)

 Sometimes one grants H2 for the sake of the argument because one wants to avoid arguing about something that one’s opponent is unlikely to let go of—in other words, for a social reason. Another reason for granting H2 is because some consensus of experts insists that H2 is true and because one prefers not to delve into the empirical issues or considers oneself not competent to delve into such issues. But whatever one’s reason for granting H2, one should remember this: An opponent who thinks that H2 is the real explanation of E is unlikely to think that P(E|~H1 & H2) is so low that H1 is needed as an explanation for E. In other words, you will often have just as much of a dispute on your hands in order to convince your opponent that E confirms H1 to any significant extent once H2 is granted.

 Merely arguing that P(E|H1 & H2) is high is of limited value if one is attempting to argue that H1 is more than a fifth wheel. Suppose that the probability of E given the conjunction is high because of the contribution of H2 rather than H1. If H1 is a tag-along partner that is doing very little to help matters and H2 is doing the heavy lifting, that will emerge when one compares the numerator and the denominator of the Bayes factor given above. So once again, if you grant H2, it is difficult to get away from addressing that question: How much explanatory work, modeled probabilistically, can H2 do all by itself?

 Note too that minimizing the initial competition in the distribution between H2 and H1 can pull *against* arguing for H1. Consider the inequality that expresses the condition under which H1 and H2 compete for evidence E given marginal independence:

(E|H1 & H2)/P(E|~H1 & H2) < P(E|H1 & ~H2)/P(E|~H1 &~H2)

*Ceteris paribus*, it would bring the two sides of the inequality closer to each other to argue that P(E|~H1 & ~H2), the probability of E on the catchall, is not all that low. But if you are arguing for either H1 or H2, this is hardly helpful! Raising the probability of E on the catchall lowers the confirmation of either specific hypothesis by E. To exaggerate, if the probability of E on the catchall is equal to or greater than the probability of E on H1 by itself, this eliminates competition (assuming marginal independence), but at that point, for all we know, the true explanation might well be something in the catchall. Similarly, arguing that P(E|H1 & ~H2) is low will, all else being equal, lower the overall confirmation of H1, even though, *ceteris paribus*, it decreases competition. When H1 and H2 are marginally independent, the only way to minimize competition without significantly undermining the confirmation of H1 is to argue that the ratio on the left is top-heavy, which is also an argument that H1 is significantly confirmed after H2 is granted. Since this will often involve minimizing the explanatory power of H2 by itself *vis a vis* E, it is likely to be unpopular with those to whom the concession was made in the first place.

4. Be careful what you grant even when the conjunction is clearly better

A point emphasized by Glass (2021, p. 169) is that as defined, competition between two explanations comes about fairly easily. Even if neither H1 nor H2 alone gives a very high probability to E, and even if P(E|H1 & H2) is quite a bit higher than the probability of E given either conjunct alone, there can still be competition between the hypotheses. This means that if H1 and H2 are two potential explanations of E, we should not be too quick to assume that they are not in competition, perhaps to a significant extent.

 It could be tempting to argue that, if the conjunction of H1 and H2 is intuitively better at explaining E than either of them alone, we don’t need to worry much about explaining away when H2 is granted. But this would be a hasty, and incorrect, assumption, as we can see in the following case:

 John is talking with two acquaintances, Jim and Phil, and mentions that he recently won a 5k race. Later, Jim suggests to Phil that John just said that to show off and that it is not true. Phil grants for the sake of the argument that John was showing off but argues that John’s statement is significant evidence that he did win a 5k, even if one grants that he said it to show off.

 It is quite easy to understand what is meant by saying that John’s utterance is explained by both the desire to show off and the fact that his claim is true. People often do have multiple motives for saying things, and they often brag about things that have really happened. So granting that John wanted to show off is not, on the face of it, fatal to the use of his claim (E) as evidence that he really did win a 5k. It is also intuitive in this case that P(E|H1 & H2) is higher than the probability of E given either motive alone. People have to select what to say in conversation. They can’t possibly tell everything that has happened to them. So the truth of John’s claim alone does not *predict* his mentioning it. And even if John is a show-off, it might be easier for him to get flattering attention without risk by telling something true than by telling something false.

At the same time, showing off does provide John with a motive to invent if he is open to lying. If the statement that he won a 5k is false, we will be looking for some motive for him to say that he did, and self-aggrandizement fills the bill. It seems like the desire to show off all by itself has more power to account for E than the catchall—the proposition is false, but John didn’t want to show off either. Options in the catchall are unpromising: e.g., John tells falsehoods as part of a system of private symbolism for his own entertainment, John is subject to hallucinations, John makes true and false comments at random, or something else as yet unspecified. And if his statement is true, that is certainly a better explanation of his making it than the catchall. So the conditions seem to be fulfilled for saying that his having won a 5k (H1) and his wanting to show off (H2) are in competition to some extent for the evidence of John’s utterance, even though they are compatible with one another and even though neither gives this particular utterance a very high probability.

 The Appendix gives a model in which John’s winning a 5k and John’s being motivated by vanity have equal priors, are marginally independent, and are each alone significantly better at explaining E than the catchall. In that model, they do disconfirm one another, despite the fact that the conjunction makes E more probable than does either hypothesis alone. This is because, by granting the other hypothesis, one loses all the advantage that one would otherwise get by comparing the probability of E given H1 (or H2) alone to the very low probability given the catchall. So even though neither hypothesis alone gives E a very high probability (in the Appendix I model it as .4), it is still disadvantageous to grant the other.

In the case we are envisaging here, the advocate of bragging (Jim) denies that John won the 5k at all. He is not saying merely that bragging is one motive among others. Jim is therefore unlikely to agree without argument that P(E|H2 & ~H1) is so low that truth-telling is needed as an additional motive.

 Here, if it is available, the most promising type of evidence for arguing that H1 is needed would be evidence about John’s character. How probable is it that he will claim that something is true if he knows that it is false, even given a motive to show off? If John is known to be scrupulously truthful, that will help to argue that P(E|~H1 and H2) is very low and hence that P(E|H1 & H2) is much higher. One could also argue that P(E|~H1 and H2) is low on simplicity grounds by claiming that the mental state involved in telling what one knows to be false in an attempt to induce others to believe it is more complex than telling the truth. This, however, is unlikely to go far without some more specific evidence, since liars motivated by vanity are not all *that* uncommon.

So Phil should argue that E is unlikely if the statement is false. The Appendix shows how doing so successfully increases the confirmation of H1. Arguing for John’s general truthfulness is helpful for arguing for H1 *regardless of whether or not H2 is granted*; it takes on additional urgency when H2 is granted.

 The question then arises: Unless you really think it probable that John is motivated by vanity, why grant it? It may be that neither Phil nor Jim knows John well and that they agree that most people would feel vain about winning a 5k. But if Phil is granting John’s vanity just to avoid argument, he should probably admit that he has an argument on his hands anyway.

5. Does anyone need this warning? Philosophy of Religion and SEAGA

 In the case of the non-starting car, it is fairly obvious (as Glass 2017, pp. 1147-1148 notes) that very significant, perhaps complete, explaining away has taken place and that there is no further point in arguing that E provides evidence for the dead starter motor once we find that the battery is dead. It is doubtful that anyone would grant for the sake of the argument that the battery was dead while still trying to argue for a dead starter motor from E. It may fairly be asked, then: Who needs the injunction to be careful what you grant?

 It is, in fact, not all that difficult to find non-philosophical epistemic failures that are at least in the neighborhood of unwary granting. Unwary granting has some commonalities with ad hoc reasoning, when an ad hoc auxiliary is used to try to avoid admitting disconfirmation. For example, someone touting an untested, alternative medical treatment could try simultaneously to grant that a patient’s symptoms were alleviated by mainstream medical treatment (say, antibiotics) while claiming that the herbal remedy he is advocating was helpful as well. To this end, it would be useful to add some auxiliary such as the theory that the patient’s symptoms were caused both by bacteria and by unspecified toxins and that the latter were cleansed from the system by the herbal remedy. Unwary granting coupled with a refusal to admit disconfirmation is related to ad hoc reasoning, because both involve a failure to recognize disconfirmation (see L. McGrew, 2014). But not all cases of unwary granting involve unsupported auxiliaries.[[3]](#footnote-3)

 In philosophy, the area where unwary granting arguably poses a problem is philosophy of religion, specifically with regard to scientific evidence for and against theism. As Glass (2017) discusses, atheists have often pressed an explaining away argument against theism from the alleged success of entirely natural explanations for various physical structures and entities previously attributed to the creative action of God. The idea is that these features, such as the existence of complex life, the first cell, or particular complex structures within biological systems, may have provided some reason (or at least an excuse) for theism prior to the rise of modern science, but that the success of theories like Darwinian natural selection has “taken back away” this evidence from theism (Dawkins 1996, pp. 5-6).

 A deference to scientific consensus perhaps understandably makes philosophers of religion reluctant to delve into the empirical details and evaluate for themselves the claim that the natural theories in question constitute good explanations for the phenomena in question. The rise of intelligent design theory (ID) in more recent decades through books like biochemist Michael Behe’s *Darwin’s Black Box* (1996) does not seem to have induced many philosophers to step out of their own specialty and weigh the pros and cons of the most recent manifestation of biological design arguments (BDAs). But does this mean that philosophers who are also theists must concede that modern science has explained away evidence for God from biology, thus disconfirming theism?

 Glass (2017) and Jonah Schupbach (2016) have argued that *even if* these scientific theories are the true explanations for these biological structures, theists have a good epistemic strategy available that holds out promise for denying that the success of these biological theories has significantly disconfirmed theism, or even has disconfirmed it at all. (Glass calls these attempted anti-theistic arguments SEAGA—science explains away God arguments—and I will adopt this acronym.)

 In the previous section (explored further in the Appendix) we have seen how difficult it is to deny that significant explaining away has occurred when there is marginal independence between the hypotheses. This problem is exacerbated if one acknowledges that the probability of the outcome on the granted hypothesis alone is not low. Even if the conjunction of the two hypotheses is a better explanation than either one alone, each of them still disconfirms the other in the presence of E. Glass and Schupbach therefore suggest that theists should press the idea that theism and these scientific processes are not marginally independent and, in fact, that theism is *positively* relevant to these processes. In this way, the theist who wishes to deny that explaining away has taken place does not have to argue that the probability of these biological structures given natural processes alone is low. The idea is that confirmation for theism from modern science coming from other types of arguments such as the fine-tuning argument and the cosmological argument (which I will dub pre-condition arguments, or PCAs) raises the probability of theism along the direct path so that these scientific theories do not disconfirm theism by the indirect path (by taking away confirmation from complex biological structures).

 Suppose that E is something like “Complex living structures exist,” H1 is something like “God exists,” and H2 is something like “Darwinian processes of natural selection occur.” The idea, especially in Glass (2017), apparently is that the theist can grant H2, at least for the sake of the argument, and even grant that P(E|H2 & ~H1), is either high or at least not very low, without granting that H2 explains away the force of E in favor of H1. Note that the idea here is not merely that H1 and H2 are *compatible*. That is fairly obvious. The attempted response to SEAGA is far more interesting but also far less obvious.[[4]](#footnote-4)

 I will argue that theistic philosophers of religion need to be careful what they grant and that, without more empirical investigation of the scientific matters in question, they cannot be at all sure that science has not provided an explaining away argument against theism.

6. Mr. Smith, sunny weather, and SEAGA

The issues involved in unwary granting and SEAGA may be seen more easily in a hypothetical case. Suppose that Mr. Smith prays for sunny weather on a given day in his location, and the weather on that day is indeed sunny in his town. Smith claims that the sunny weather coinciding with his prayer constitutes evidence that God exists and answers prayer. His friend Mr. Jones points out that sunshine was predicted ahead of time in the weather report and has a perfectly good meteorological explanation, namely, a high-pressure system that moved into the area. He gives Smith access to the relevant meteorological data. Nor, let us stipulate, was there anything unusual about this particular sunny day. There is no special shape to the clouds or sun. It looks just like sunny days that Smith has not prayed for. (See below.) Mr. Smith decides not to contest the point about natural causes. Instead, he counters that even if natural causes brought about the sunny weather, the high pressure system itself was part of the providential working of God, because God created the natural order itself that produces things like high pressure systems, and he continues to claim that the sunshine is significant evidence for God’s existence that has not been explained away.

Mr. Smith’s confidence that the sunny weather provides evidence for theism despite the full sufficiency of natural causes is an example of hasty granting followed by a refusal to admit explaining away. A question that immediately springs to mind is this: How would God’s “using” the natural causes to bring about the sunshine in response to prayer be evidentially different from the situation where natural causes alone are at work and God does not exist?

I am not arguing that every argument for a miracle needs to include a specific *mechanism*. Indeed, if miracles occur at all, presumably there is a point fairly early in the causal story at which all talk of mechanism is inappropriate. God just works on nature in what we might call a direct causal connection between the non-physical and physical world. But there is a crucial difference in the case of the sunny weather under discussion. When one argues for a miracle one should not, and one normally does not, grant that the event was probable given only natural causes. By granting Jones’s claims about natural causes, Mr. Smith apparently admits that he is not attributing the event to a miracle. He is conceding that the sunny weather is the result of the high pressure front in the area, which was in turn the result of other natural causes, and so forth. Talk of the providential guidance of particular results *without* any miracle is much more difficult to get an evidential handle on than talk of miracles. Such guidance “behind the scenes” may be metaphysically meaningful, but it is a pressing question whether it is detectable.

If the natural causal nexus by itself, without divine involvement, provides a high probability for the sunny weather, e.g., if P(E|N & ~G) >> .5, then it seems reasonable at least on the face of it to say that Providence is out of a job as regards *that particular bit of weather*. Smith’s comments suggest that he wants to adopt the strategy of arguing that God is necessary to explain certain necessary-but-nowhere-near-sufficient pre-conditions for the sunny weather, such as the existence of a natural order, natural laws, planets that orbit stars in such a way that the concept of weather is meaningful, and the like. Thus, allegedly, the sunny weather confirms theism “by way of” confirming the occurrence of its own necessary pre-conditions (Glass 2017, pp. 1155-1158). Explaining away can be avoided when marginal independence fails, if the two hypotheses in question are sufficiently positively relevant to one another otherwise (Glass and Schupbach 2017, pp. 811-815).

But there is a fatal problem with this type of response in this instance—it is a classic bait and switch. Smith’s claim was that sunshine in particular on that day confirms God’s involvement, not that some weather or other that occurred according to orderly processes confirms God’s involvement. The existence of natural laws, natural order, and star-orbiting planets would be necessary conditions just as much for a rainy day as for a sunny day. Smith would presumably not have pointed to a rainy day (after praying for a sunny day) as being evidence for God. But in fact, if his new version of the argument worked, it would mean that both a sunny day and a snowy, rainy, or glowering day confirm theism, because they are both instances of “orderly weather on a planet” that require certain pre-conditions.

Smith’s shift to a pre-condition argument ignores the fairly obvious conversational implicature in his initial claim that the sunny weather, as opposed to non-sunny weather, after his prayer was evidence for God’s existence. (That is why I emphasized above that Providence appears to be out of a job as regards *that particular bit of weather*, whatever might be said concerning the pre-conditions.) To put it another way, Smith’s initial claim gave the impression that his argument was already putting things like “the natural order exists,” “weather is possible,” “our planet orbits the sun” and the like in background evidence, so that whatever impact they have upon theism was already taken into account, then arguing that there was *further* evidence for theism from the sunny day for which he had prayed. To shift to pre-conditions ignores these implicatures and hence is illicit.

Smith does not, let us stipulate, have an independent argument in hand that God’s involvement was needed to produce a high-pressure region, producing sunny weather, *as opposed to* a low-pressure front, producing a storm. If he could do that, he would be arguing directly that natural causes are unlikely to have brought about the sunny weather on that particular day. We can imagine an argument from sunshine that *would* seem to confirm divine involvement much more. Suppose that a rain storm was heading directly toward Smith’s town and then abruptly veered off at the last minute, just before the time came for which he was praying for sun. That would at least be interesting evidence that might indicate a divine hand at work. More dramatically, suppose that Mr. Smith prays for sunshine for, say, his daughter’s wedding, despite the fact that rain is forecast. Suppose that it rains precisely around a circular perimeter of the wedding area while a beam of sun shines directly down on the outdoor ceremony, which does not receive a drop. That would be a different matter. But in that case, Smith should not concede that the result in question was probable given ordinary natural causes. He should go all-out and argue for a miracle.

What if Smith tries to stick with the original argument from sunny weather, specifically, while leaning on the fact that it coincided with his prayer? He might try to argue that God caused the natural processes that brought about the sunny weather, specifically, and that this is indeed evidence for theism, due to other evidence he has for the effectiveness of his prayers or prayers in general.[[5]](#footnote-5) But this suggestion confuses an *instance* of divine activity with independent *evidence* for divine activity. Smith’s claim was that the sunny weather coinciding with his prayers constituted evidence in and of itself for the action of God in response to prayer. If he has other evidence for the effectiveness of prayer, together with some other evidence for a theological view that at times God acts “behind the scenes,” he may conclude from his other evidence that this was an *instance* of such divine activity. This conclusion may even be reasonable, given that other evidence. For that matter, if he prayed for sunshine and got rain instead, he might be justified on the basis of other evidence in thinking that God took his prayer into account and *refused* it, allowing rain, for some unknown beneficent purpose. But none of that means that the apparently wholly natural, ordinary sunshine coinciding with prayer constitutes a new piece of *evidence* for divine activity.

Presumably Smith could have told ahead of time by looking at the weather forecast that it was probably going to be sunny on the day in question anyway, due to natural causes. If the sunshine in this instance constitutes evidence for theism, despite its high probability on natural processes alone, it would seem that Smith could look ahead at the weather forecast for tomorrow, see what the weather is probably going to be like, pray for that weather, and then claim when it comes that here is yet another instance of evidence for theism and the effectiveness of prayer. This thought experiment illustrates why Smith is not justified in taking the apparently natural sunshine to be additional evidence in itself for theism. He should instead admit that the natural causes explain away the evidential force that the sunny weather seemed to have for theism.

7. God, Pre-conditions, and Biological Design Arguments

A similar set of problems besets the attempt to concede that there is an evolutionary or other natural mechanism (N) that is sufficient to cause the arising of a given biological structure or entity, such as the complexity of living organisms, while still arguing that that biological structure provides significant evidence for the activity of God. If this is granted, and if marginal independence holds, there should be some reason to think that N can at most account for the biological structure partially, not wholly, and that G is needed. In other words, if S wishes to concede N for the sake of the argument, then he should be prepared to argue that P(E|N & G) > P(E|N & ~G) to some extent worth mentioning, or else God becomes a fifth wheel. Matters are rendered even more difficult if the theist concedes that P(E|N & ~G) is high. Obviously the advocate of N is highly unlikely to acknowledge that P(E|N & G) > P(E|N & ~G). And as in the weather example, the more seamless the nexus of natural causes appears to be, the more difficult it is to argue that there is anything left for God to explain.

Glass examines the logic of SEAGA claims arising from the alleged successes of science, and he characterizes the first premise of this anti-theistic argument as follows:

Science S explains various features of the natural world E for which theism T might also be thought to provide explanations (Glass 2017, p. 1151).

It is important to stress that at no point in this paper does Glass consider any strategy that involves rejecting this premise for of the features in E. That is to say, all strategies are to be considered with the assumption in place that these scientific processes do in fact explain the features of the universe found in E. He even suggests at one point that the theist as he is envisaging the argument cannot easily argue for a joint explanation consisting of both T and S due to the fact that the theist has already conceded that the natural processes themselves are necessary in addition to any action by God and that S is not a causal fifth wheel:

[I]f God has reason to bring E about and so it is theism that makes the difference, it is

 not clear what the justification for P(E|T, S) being greater than P(E| T, ~S) would be (Glass 2017, p. 1154).

Glass also thinks that the strategy of responding to SEAGA by arguing that P(E|N & G) > P(E|N & ~G) is not advisable, partly because it could still allow for some explaining away to occur, which might be considerable. So whatever else the theist tries, apparently he’s not supposed to question that the natural processes are real explanations of E (hence in some sense sufficient) nor even suggest that the natural processes in question are unnecessary to explain the features in question.[[6]](#footnote-6) Apparently the idea is that the theist grants that a full scientific (and at first blush purely natural) explanation has been given and does succeed for such features—granting this either just for the sake of the argument or because some theists actually believe it. (Some theists presumably don’t actually believe this.) The question with that grant in place is whether and how the theist can avoid admitting SEAGA.

Glass (2017, pp. 1155-1158) strongly suggests that the theist argue that marginal independence fails, that “science depends on God,” and that in *this* way science does not actually explain away the evidence of E for theism:

[T]he theist could argue that some scientific explanations of features of the universe included in E (i.e. for which there are accepted scientific explanations) depend on other features of the universe not included in E which in turn depend on theism. For example, evolution requires a fine-tuned universe, which in turn provides the starting point for a design argument….[O]ur modern understanding of the evolution of the universe depends on big bang cosmology, which in turn provides the starting point for a version of the cosmological argument….[T]he theist could argue that the very existence of scientific laws confirms theism since such laws describe order in the universe which, the theist could argue, is more to be expected given theism than given non-theism. (Glass 2017, p. 1156)

Various strategies are open to the theist in response to SEAGA [the science explains away God argument], but some of these seem rather weak and perhaps serve to highlight the appeal of SEAGA. The best strategy for the theist is to argue that science may well depend on theism. (Glass 2017, p. 1160)

This strategy amounts to laying all of the evidential weight upon pre-condition arguments (PCAs) and not attempting to claim that there is a biological design argument (BDA) that has evidential force in addition to the PCAs. It’s important to stress here that the various PCAs on offer, to which Glass alludes, use as explananda only necessary conditions for the development of life and definitely do not include, nor attempt to include, sufficient conditions.[[7]](#footnote-7) (See, e.g., Collins, 2009, Barnes and Lewis, 2016.)

 But if, say, the origin of life or the existence of complex life forms is the initial E, it is argumentatively problematic to switch to “the existence of scientific laws,” “the life-permitting values of initial constants,” and/or “Big Bang cosmology” as the explanandum and to claim that this means that the sufficiency of natural processes to bring about the complexity of life at some much later point in the history of the universe does not constitute a SEAGA. As in the case of Mr. Smith and the weather, so here. If we push the argument back to pre-conditions only, a lifeless primordial soup that came about by and operates by natural scientific laws in accordance with the fine-tuned constant values exhibits these pre-conditions just as much as a world teeming with complex living things. Similarly, such a world could also trace its way back to an initial Big Bang, which would provide in that case just as much or just as little fodder for a cosmological argument (for God as the First Cause of a contingent universe) as it does now.

 While it is probabilistically possible for some evidence E to raise the probability of a cause that produces only necessary conditions for that E, in terms of the statement of the argument it is a bait and switch to say that one is arguing for God as an explanation of E and then move to arguments based on a different set of explananda. In that case, why not say in the first place that one is arguing *only* from the existence of those necessary conditions? In the case of Mr. Smith and the sunny weather, the implication of his initial claim *appeared* to be that sunny weather on that day, specifically, produced a theistic argument, not the pre-conditions for sunny (or rainy) weather. Similarly, if one says that the *actual* existence of complex life forms constitutes fodder for a theistic argument, one does not appear to be referring only to necessary (but far from sufficient) pre-conditions that, at most, would produce a universe in which complex life could later exist, but which might well remain entirely lifeless forever.

The point can be seen clearly in contrast to different type of example that Glass (2017, p. 1148) gives in which H1 and H2 are not marginally independent. If your friend is late to meet you at the train station when coming home from work, it makes sense both to say that this is explained by his having been kept late at work and by his missing the train. And if one says that one is making an explanatory argument for his being kept late at work based on his not being on time to meeting you, such a statement makes perfect sense, because, in keeping with the contrastive implication of such a statement, his staying late at work can explain his being late at the station *as opposed to his being on time*. Imagine that instead you said that your friend’s lateness is explained by his parents’ meeting before he was born, causing him to be conceived, which explains his being late, since his conception is a necessary condition for his being late. That would seem like a joke or a pun, since that would also “explain” his being on time that day, and in the same sense. One assumes that the friend’s existence is already in background information and that any explanatory argument from the evidence of his being late, specifically, will be made against that background.

 Nor is this merely a quibble over terminology, such as the word “explains.” While it does indeed seem odd to ignore the fact that “explanation” is usually used for something that is not merely a necessary condition, the problem is deeper and concerns whether or not there is explaining away when one grants the success of the scientific theories in question.[[8]](#footnote-8) Suppose that there was, prior to the rise of theories such as Darwinian natural selection, a BDA for theism that could be made separately from various PCAs, even if the various PCAs had been known at the time. Or consider that there are right now claimants for such a BDA (such as ID arguments), which make use of the *actual* arising of complex features of life *in addition to* the necessary conditions that are the explananda of various PCAs, and suppose that these BDAs offer at least *prima facie* *additional* evidence for theism. Suppose further that such additional BDAs vanish or are greatly weakened in the light of sufficient scientific information, rightly evaluated. In that case, it is quite arguable that there is a SEAGA after all and that the recommended strategy for denying SEAGA does not seem to be successful. And it is hard to see how any philosophical strategy can avoid this possibility aside from empirical study.

 In pursuit of the further claim that a positive dependence between God and science would “completely rule out SEAGA,” Glass (2017, p. 1157) makes a further suggestion:

If theism is conditionally independent of E given science, i.e. P(E|T, S) = P(E|S), then the positive dependence between science and theism can be expressed as P(T|E, S) > P(T|E, ~S), which in turn can be expressed as P(T|E, S) > P(T|E) and so the conclusion of SEAGA would be shown to be false.

In other words, S should be taken to screen off the probabilistic force from E for T. What this rather striking suggestion amounts to is that the theist will be advantaged somehow if he insists that *all* of the evidential force that such an E has for theism is captured by the positive relationship between theism and the pre-conditions for E.

 One problem with the claim that this strategy is helpful to theism is that it is not clearly true. By eschewing all claim of further evidential force from E, such as complex life forms, in favor of theism, beyond the PCAs, this suggested move would indeed make it impossible for the suggested scientific processes to explain away any such evidential force. But that tells us nothing about whether theism has a lower probability without a separate BDA than it would have with a separate BDA, and it therefore tells us nothing about whether granting all of these things is a helpful strategic suggestion for the theist or not. For if scientific processes screen off theism from the actual existence of complex life forms, there cannot be any residual *confirmation* from a separate BDA. After all, there is nothing about having a separate BDA that prevents the theist from using PCAs as well. So even if certain revelations of modern science about the Big Bang and fine-tuned constants have increased the probability of theism along the direct route, a question still remains as to whether a separate BDA would give theism a *still higher* probability when combined with the PCAs or whether a separate BDA used to give theism a higher probability than it presently has, prior to explaining away by other scientific discoveries. In probabilistic terms, do the PCAs “make up for” the loss of a BDA? Is the BDA itself a lost cause? What would the probabilistic situation be if scientists had made the discoveries used in the PCAs without discovering anything that eliminates a separate BDA? None of this can be decided without scientific study.

 Another problem with the screening-off suggestion to avoid SEAGA is the historical one. For undeniably there used to be at least an *apparently* separate BDA. No one thought that William Paley’s watchmaker was responsible merely for creating a “watch-permitting universe.” Indeed, Richard Dawkins has said that before Darwin, he does not know why anyone would have been an atheist (Dawkins 1996, pp. 5-6). The SEAGA claim is, centrally, a historical claim. The idea is that it was at least epistemologically excusable at some earlier point in time to think that E provided evidence for God’s existence and activity in *actually bringing about E*, not merely producing necessary preconditions for E, but that various more recent scientific discoveries (among which, as Glass says, Darwinism is prominent) have removed that previous appearance of epistemic force. In other words, the idea is that a theist who learns about these scientific discoveries thereby *loses* some evidence for theism.

In a footnote (p. 1157 n. 11) Glass says that he is not suggesting that theists must hold that God always and only works by secondary means but only that it is plausible for theists to hold that God works by secondary means with respect to the items contained in E. But historically, of course, that has not been the case. Glass quotes Thomas Aquinas as endorsing the idea that God works in the world by secondary causes (at least sometimes); this is of course true and unsurprising. But this does not mean that Aquinas thought that God works only by secondary causes to create biological entities. Far from it. Aquinas explicitly says that God created man’s physical body “immediately,” without any intermediary causes (*Summa Theologiae* 1:91:2). So in terms of historic Christianity, it is very much an open question whether some entity or event came about by secondary causes or not.

 Glass defines the features of the universe found in E in part by the fact that they are *now* taken by scientific consensus to be well explained naturalistically (and so designated in Premise 1 of the SEAGA as he reconstructs it), but surely that is the whole point of a historical SEAGA—that theists have been forced by scientific discoveries to abandon the claim of a BDA with its own separate force. Which, of course, *just is* the historical “explaining away” claim. It would be historically impossible to try to maintain that there never was *held* to be a separate BDA in the first place. And if a person who previously thought that there was a separate BDA changes his mind after having his scientific knowledge updated, how can we be at all sure that this does not involve an adjustment (downward) in his credence for theism? Even if such a person is still a theist (for other reasons) and now thinks that God must have worked entirely by secondary means to bring about the features in E, it hardly follows that no probabilistic explaining away has taken place in his rational probability distribution. Moreover, this could be the case even if the theist is aware of and uses the PCAs.

 So granting that the scientific consensus is correct and that the features of E are well explained by natural processes could indeed have a negative effect, for all we know a significant negative effect, upon the probability of theism, even if the theist stands pat on the PCAs. The question, remember, is not whether theism is *compatible* with, say, Darwinism. It obviously is. The question rather is whether, e.g., Darwinian explanations disconfirm theism by removing a separate, rational BDA, and if so, how much.

 Of course it may be that any attempt to go up against scientific consensus, challenge Premise 1 of the SEAGA, and maintain a separate BDA is empirically quite hopeless. The point is simply that there is not some clear theological-philosophical jiu-jitsu move by which the theist can grant the non-existence of a separate, cogent BDA while denying that the scientific explanations in question have lowered the probability of theism on total evidence.

 In a similar analysis to Glass’s, Jonah Schupbach (2016) suggests that a precondition for two hypotheses even to be potential competitors is that they do not lie in a causal chain with one another. Schupbach gives the example of Marcy’s shooting Victor. If Victor’s death is the evidence E, then Marcy’s shooting him explains E. We can also say that Marcy’s having a motive for killing him explains E. But Marcy’s motive is what caused her to shoot him, so it is epistemically unimportant to say that Marcy’s shooting him “screens off” the epistemic impact of his death from her motive. Given that Marcy shot Victor (S), his death does not raise the probability that she had a motive (M) any further. P(M|E & S) = P(M|S), but that doesn’t result in explaining away. In such a causal chain case one hypothesis does not damage the other’s epistemic status.

 Glass’s condition for explaining away is helpful here. That condition again is that, in the presence of E, one hypothesis is negatively relevant to the other hypothesis. In the presence of Victor’s death by gunshot, finding out for certain that Marcy was the one who shot him is not negatively relevant to the proposition that she had a motive for doing so (M). We simply replace the confirmation of M coming from E (Victor’s death by gunshot) with the confirmation of M coming from S (Marcy actually did shoot him). We can see that, right from the outset, the proposition that she actually shot him captured the entirety of the evidential force of E in favor of her having a motive, so the two propositions cannot compete.

 Schupbach analogizes the case of Marcy’s motive to the case of alleged competition between God’s creative action and natural processes such as Darwinian natural selection as explanations of complex life forms. He suggests that if one already believes that these lie in a causal chain (God causes the natural world by an act of creation, and the secondary forces of natural processes then bring about complex life), one will not consider God’s creative action to be in competition with natural selection, and therefore one will not consider the alleged success of natural explanations in accounting for the actual arising of complex life to disconfirm theism or even God’s creative action. Schupbach cites biologist Theodosius Dobzhansky and philosopher of science Ernan McMullin as taking the position that God creates only by way of secondary processes.

 But matters are not epistemically so simple. Marcy’s motive is not an action. Her motive *can only* causally explain Victor’s death by causally explaining some action that she takes (like shooting him). But it is not at all obvious that God’s creative action *can only* explain the actual arising of complex life forms by way of God’s bringing nature into existence in the first place, invisibly sustaining nature in some metaphysical sense (as the ground of being), and/or producing a set of fine-tuned constants necessary for the existence of complex life.

Indeed, if one holds to a theological tradition in which God performs miracles, one is committed to the proposition that God can and sometimes does work in the world in some more direct and obvious sense and manner, as Aquinas thought he did in creating man’s body. Moreover, not every theist (not even every sophisticated theist) who accepts miracles attempts to define *a priori* a narrow set of circumstances (e.g., some historical, religious context) that are the *only* circumstances in which God would work more directly. The question within such a theological tradition is then whether the actual arising of complex life forms constitutes evidence that he has done so in that instance, which is an empirical question.

 To hold not merely that God’s ultimate or initial creative activity has partly caused the arising of life but also that that is the only way in which God could (or perhaps would) be involved in bringing about life is a strong position, and a theologically controversial one. That is presumably the reason for the acceptance by many theists, at least pre-Darwin, of a separate BDA.

Moreover, holding that God could have engaged in both activities (creating the natural order and also taking special action to insure that complex life actually arises) while granting that as a matter of fact he did only the first of these, could mean that there is less evidence for theism than there would be if a separate BDA were evidentially viable. We can at least say that taking a separate BDA off the table is not an obviously trivial concession.

 To put this in terms of the Marcy and Victor scenario, suppose instead that Victor has been both shot and hit on the head with a rock. The coroner says that he probably would have survived the shot but that the knock on the head foreclosed on this possibility. The investigating officer says something like, “Whoever did this must have really hated him. The killer wasn’t content with just shooting him. He or she had to make sure by knocking him on the head, too.” If Marcy is one of the suspects, Victor’s death by both gunshot and head injury constitutes especially strong evidence for her hating him.

 Now suppose that a very reliable witness comes forward who states that he saw Marcy shoot Victor, that he kept her under observation the whole time thereafter, and that she did not hit Victor with a rock. The police must now abandon the picture of a single, highly vindictive killer who carried out both actions. In light of the witness’s testimony we now have less reason to believe in Marcy’s hating Victor and wanting to see him dead. She might, for example, have shot him in a moment of anger which she immediately regretted. The witness has not merely confirmed that Marcy shot Victor. The witness has also definitely taken off the table the idea that Marcy knocked Victor over the head in addition to shooting him.

 If the initial police officer were to say, “Let’s grant for the sake of the argument that someone other than Marcy hit Victor with the rock,” he should realize that within that scenario there is less reason to believe that Marcy hates Victor.

 Whether science explains away God or not is a matter for detailed empirical investigation which the theist cannot avoid by adopting a particular philosophical stance nor by switching to a different argument, any more than the naturalist can. Granting for the sake of the argument everything that the non-theist wants to say about the alleged failure of separate BDAs doesn’t answer that question either. Glass stresses (2017 p. 1158) that a naturalist who claims that science explains away God cannot avoid confronting the details of pre-condition arguments. I would agree if the naturalist is trying to say that the deliverances of modern science *in general* explain away the need for God and that there are *no* good science-based theistic arguments. But at the same time, the theist who wishes to grant the success of natural theories in explaining things like the existence of complex life forms cannot claim, without further investigation, that such success does not reduce the probability of theism.

8. Conclusion

The warning to be careful about granting an explanation of E that could in principle be an alternative to the explanation you think is true applies in a wide variety of circumstances. Suppose that the explanation you think is true (H1) is unpopular and an alternative (H2) that is not mutually exclusive with H1 is highly popular. You may think that it will save wrangling just to grant that H2 is part of the explanation for E while trying to save a place at the table for H1 in addition. But an advocate of H2 who thinks that H1 is false or that H1 is not even part of the explanation of E is likely to take some convincing of the need for H1. He will be very unlikely to agree without a struggle that P(E|H2 & ~H1) is sufficiently low and H1 sufficiently helpful that H1 is highly confirmed by E modulo H2. So granting H2 “for the sake of the argument” merely shifts the battle to this further question. In many cases where you are trying to argue for H1, you will be faced with the need to argue that P(E|~H1 & H2) is quite low, but this would normally form a useful part of the argument for H1 even if you never grant H2. Such considerations apply even to cases where it seems intuitive to say that (H1 & H2) provides a better explanation of E than either conjunct alone.

 You may try to argue that your opponent has misconceived the situation and that H2 and H1 are not in competition, since the marginal independence assumption fails and H1 is in fact the correct explanation of E *via* explaining H2. This strategy is recommended by Glass and by Schupbach with regard to scientific theistic arguments. But an attempt to make such an argument by saying that God explains complex life only by way of explaining its pre-conditions has several problems. It makes a confusing use of “explains” and its cognates. It ignores the *prima facie* contrastive meaning of arguing from the actual existence of complex life. And, worst of all, we cannot tell if it is successful at avoiding explaining away, since it amounts to the abandonment of a separate biological design argument for theism in addition to pre-condition arguments. If in fact a separate BDA had *prima facie* epistemic force in favor of theism, then dropping it and using only PCAs may indeed result in a lower probability for theism than there would be if both types of argument were used. If scientific progress has forced the abandonment of a separate BDA, this amounts to a case in which scientific progress has, in that respect, at least partially explained away God. Whether or not this is the case can be discerned only by empirical investigation, not by abstract philosophical reasoning.

 If all of this leads to more debate than might otherwise have occurred, that is not necessarily a bad thing. Philosophers and for that matter scientists generally enjoy a good debate provided both sides are fair, careful, and rigorous. While you are trying to decide what to do in a given situation, remember: Be careful what you grant.

Appendix

Competition Assuming Marginal Independence

Let H1 be “John won a 5k race.”

Let H2 be “John’s statements are motivated by vanity.”

Let E be “John says that he won a 5k race.”

Suppose that the prior probabilities of both H1 and H2 are .3, and suppose that H1 and H2 are marginally independent—i.e., independent aside from E. Hence P(H1|H2) = P(H1|~H2) = .3 and *vice versa*.

Suppose further that P(~H1 & ~H2), P(H1 & H2), P(H1 & ~H2), and P(H2 & ~H1) are all greater than zero. These conditions are jointly satisfiable, and the priors of each part of this partition (which will not be used directly in the calculations) are:

P(~H1 & ~H2) = .49

P(H1 & H2) = .09

P(H2 & ~H1) = .21

P(H1 & ~H2) = .21[[9]](#footnote-9)

First, suppose a situation in which each of H1 and H2 alone has equal likelihood *vis a vis* E, as follows:

P(E|H1 & ~H2) = P(E|H2 & ~H1) = .4

P(E|H1 & H2) = .6

P(E|~H1 & ~H2) = .01

It follows from these assumptions that H1 and H2 compete by the indirect pathway, so either one disconfirms the other modulo E. We can see this as follows:

P(E|H1) = P(E|H1 & H2) P(H2|H1) + P(E|H1 & ~H2) P(~H2|H1) = (.6)(.3) + (.4)(.7) = .18 + .28 = .46

P(E|~H1) = P(E|~H1 & H2) P(H2|~H1) + P(E|~H1 & ~H2) P(~H2|~H1) = (.4)(.3) + (.01)(.7) = .12 + .007 = .127

P(E) = P(E|H1) P(H1) + P(E|~H1) P(~H1) = (.46)(.3) + (.127) (.7) = .138 + .0889 = .2269

Since both priors and likelihoods are the same in this distribution, the same numbers are also correct for P(E|H2) and P(E|~H2).

By Bayes’s Theorem,

P(H1|E) = P(H1)P(E|H1)/P(E) = (.3)(.46)/.2269 = .138/.2269 ≈ .608

But if H2 is granted, the posterior is much lower. Since H1 and H2 are marginally independent, the posterior of H1 given E once H2 is granted (by a conditional form of Bayes’s Theorem) is

P(H1|E & H2) = P(H1|H2) P(E|H1 & H2)/P(E|H2) = (.3) (.6)/ .46 = .18/.46 ≈ .3913

So H2 disconfirms H1 modulo E (and vice versa). H1 is confirmed in both instances (whether or not H2 is granted) but does not even rise above .5 when H2 is granted, when the probability of E is the same given either of the two hypotheses alone.

Suppose then that we present a cogent argument that P(E|H2 & ~H1) is lower than P(E|H1 & ~H2). Suppose that we retain the above assumptions with one exception. Let

P(E|H2 & ~H1) = .1.

This would be the case, for example, if John is a habitual truth teller so that he is unlikely to say that he won a 5k if he is motivated by vanity alone, when the statement is untrue.

Then we have the following:

P(E|H1) is .46, as calculated above, but

P(E|H2) = P(E|H2 & H1)P(H1|H2) + P(E|H2 & ~H1)P(~H1|H2) = (.6)(.3) + (.1)(.7) = .18 + .07 = .25

Thus, if H2 is granted, we have

P(H1|E & H2) = P(H1|H2) P(E|H1 & H2)/P(E|H2) = (.3) (.6) /.25 = .72

So by arguing that H2 (vanity) all by itself is a much poorer explanation of John’s utterance than the truth of what he says, we allow H1 to be confirmed to a respectable posterior probability well above .5 (namely, .72), even when H2 is granted.

However, this change (arguing that the probability of the utterance given vanity alone is .1) is also helpful to the confirmation of H1 if H2 is not granted.

Given the probabilities stipulated,

P(E|~H1) = P(E|~H1 & H2) P(H2|~H1) + P(E|~H1 & ~H2) P(~H2|~H1) = (.1)(.3) + (.01)(.7) = .03 + .007 = .037

So

P(E) = P(E|H1) P(H1) + P(E|~H1) P(~H1) = (.46) (.3) + (.037) (.7) = .138 + .0259 = .1639

If we do not grant H2 and argue convincingly that John would not say that he won a 5k if it were not true, we have

P(H1|E) = P(H1)P(E|H1)/P(E) = (.3) (.46)/.1639 ≈ .842

So arguing for John’s truthfulness is a helpful part of the argument either way.

Since granting H2 disconfirms H1 modulo E in this scenario, and since one needs to argue for a low P(E|H2 & ~H1) anyway, one might as well not grant H2.

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1. For further discussion of measures of support and of coherence, see Crupi et. al. (2007), Fitelson (1998), Good (1950), Keynes (1921), T. McGrew (2003), L. McGrew (2016). [↑](#footnote-ref-1)
2. I owe this point to Timothy McGrew. [↑](#footnote-ref-2)
3. In the field of biblical studies, there is sometimes a failure to recognize that the theory that an author was introducing a narrative detail for symbolic reasons tends to compete with the theory that the author was narrating the detail because he believed it to be historically true. This case is much like that of John and the 5k in the last section. This leads to a concomitant failure to recognize the historical value of seemingly artless narration of details that have no apparent symbolic meaning. (See L. McGrew, 2021, pp. 350-351.) [↑](#footnote-ref-3)
4. I do not mean to attribute to these philosophers any particular personal views (which they do not state) about the natural processes in question or their sufficiency to explain the evidence. The burden of their argument is that there are good strategies for the theist to adopt to rebut SEAGA *even if* these processes are the true explanations of E. This means that these recommended strategies should work for a theist who is merely granting these things for the sake of the argument. [↑](#footnote-ref-4)
5. I owe this objection to a reviewer. [↑](#footnote-ref-5)
6. In an earlier paper, Glass (2012, pp. 92-93) made the quite different suggestion that the probability that complex life forms would arise on earth given natural processes and no design is *low*, due to the improbability of the origin of life and the origin of the eukaryotic cell given natural processes alone. Apparently at that time he considered this to be a good theistic strategy. [↑](#footnote-ref-6)
7. Interestingly, Richard Swinburne makes two outright errors concerning this point. First, he claims that a fine-tuning argument can have significant force for theism only if the features included in it lead with “considerable probability” to the existence of human and animal bodies. This is incorrect, since in principle a pre-condition argument could have significant force for theism even if this were not the case. Second, he implies that we have independent scientific evidence that the conditions at the beginning of the universe really did predict the arising of animal and human bodies with a significantly high probability (Swinburne 2004, p. 189). This is also not true. Swinburne’s own listed specifics of constant values and the like that must be “just so” for the universe to be life-permitting do not come close to being sufficient conditions. I note these surprising slips by Swinburne because it seems plausible that they arise from the idea that we should abandon any separate BDA but that we can pack all the previous force that was thought to come from BDAs into the FTA instead, thus avoiding an admission of explaining away. [↑](#footnote-ref-7)
8. A reviewer points out that merely necessary conditions could be a *part of* a causal explanation according to the “difference making” theory advocated by James Woodward (2003). In that sense the friend’s conception is part of the causal explanation for his being late, because he could not be late if he didn’t exist. But when the contrastive implication is taken into account (his being late as opposed to his existing and being on time), then the merely necessary condition of his existence does not make a difference to that contrastive outcome. Similarly, even if God’s existence is a difference maker for the existence of complex life as opposed to its non-existence, just in the sense that it is needed to bring about certain pre-conditions, it is arguably not a difference maker for the actual existence of complex life as opposed to a state of affairs in which, even though a life-permitting universe exists, no complex life exists—a very plausible outcome given that the pre-conditions in question are so far from being sufficient. [↑](#footnote-ref-8)
9. My thanks to Timothy McGrew for generating the unique distribution in which all of these prior conditions are jointly satisfied, as a proof that the conditions assumed are probabilistically consistent. [↑](#footnote-ref-9)