

On Sharon and Spectre's argument against closure

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1 Introduction

Sharon and Spectre give the best argument against closure that I know of, and they are to be commended for bringing clarity to a discussion often enmeshed in obscurity. Nevertheless, I think that their argument proves less than they advertise.

Sharon and Spectre's ultimate target is the following closure principle, taken from Williamson (2000) via Hawthorne (2005):

(CP) Necessarily, if S knows p, competently deduces q from p, and thereby comes to believe q, while retaining knowledge of p throughout, then S knows q.

Crucial to their argument against CP is another closure principle about evidence (I omit qualifications that won't matter for our purposes):

(CE) Necessarily, if e is evidence for p for S and p entails q, then e is evidence for q for S.

Sharon and Spectre's master argument is the following:

1. CE is false.
2. If CE is false, then CP is false.
Therefore,
3. CP is false.

I have doubts about both premises of this argument. Let's start with the first premise.

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2 Is evidence open?

CE is intimately related to Hempel's "special consequence condition," according to which if e confirms H and H entails H' , then e confirms H' (see Hempel 1965). Alleged counterexamples to Hempel's condition (and, therefore, to CE) abound. For instance, suppose that a die has been thrown. You are informed that it landed on an even number. This is some evidence that it landed on 2. Of course, that it landed on 2 entails that it didn't land on 4. But that it landed on an even number is not at all evidence that it didn't land on 4—on the contrary, it is evidence that it did land on 4.

Alleged counterexamples to CE, therefore, are old hat. But Sharon and Spectre go beyond simply multiplying counterexamples to CE. They argue that CE is in conflict with other well-entrenched principles about evidence. Their argument takes slightly different forms throughout the essay. My reconstruction appeals to the following principles:

(Underdetermination): It is possible for e to be evidence for p even if e doesn't entail p .

(Entailment): If p entails e , then e is not evidence for $\neg p$.

Notice that my Underdetermination principle is not exactly Sharon and Spectre's, but it is closely related to it.¹ Sharon and Spectre do not appeal to Entailment, but they flirt with several connected principles.² Notice also that, in order to avoid irrelevant counterexamples, Entailment needs to be restricted to contingent propositions. Here is the argument that Underdetermination and Entailment are incompatible with CE³:

1. e is evidence for p and e doesn't entail p . (Underdetermination)
2. e is evidence for $(\neg e \vee p)$. (1, CE)
3. e is not evidence for $(\neg e \vee p)$. (Entailment)

Step 3 follows from 1 and CE because p entails $(\neg e \vee p)$. Notice that the negation of $(\neg e \vee p)$ is (equivalent to) $e \wedge \neg p$. This last proposition entails e , and so, by Entailment, e is not evidence for $(\neg e \vee p)$. Sharon and Spectre's argument is, in effect, an argument by elimination: Underdetermination, Entailment and CE are mutually incompatible; but Underdetermination and Entailment are true; therefore, CE is false. Unfortunately, Sharon and Spectre do not spend much time on the elimination premises of this argument. I think that there is much more to say about Entailment and Underdetermination than they let on.

Let us take Entailment first. Vogel and Pryor have argued against that principle.⁴ Now, I think that Vogel and Pryor are wrong, but their arguments must be taken into

¹ Sharon and Spectre's version of Underdetermination says that there can be two (or more) inconsistent theories supported by the same body of evidence. My Underdetermination principle is weaker, but is all they need.

² Sharon and Spectre's main principle is what they call Consistency of Evidence (CS): If e evidentially supports h , e does not evidentially support the negation of h . Notice that Entailment is weaker than CS, but (again) is all that Sharon and Spectre need to make their argument.

³ For more on this argument, see Comesaña (2013a) and Comesaña (2013b).

⁴ See Vogel (forthcoming) and Pryor (2013).

account.⁵ That they must be wrong can be seen by noticing that Entailment follows from the following principle [see Comesaña and Sartorio (2014)]:

Epistemic Difference-Making (EDM): If e is evidence for H , then $\neg e$ is not evidence for H .

To the arguments in Comesaña and Sartorio (2014) I add here the following. Suppose that EDM fails, and that you know that you are in one of those situations where it fails. You are about to be informed that either e or $\neg e$ is true (you don't know which). You don't yet have evidence for H , and so do not believe it. But, it seems, you should: for you know that, no matter what, you will soon be informed that there is evidence for H . Therefore, you should already believe H , against our assumption. In other words, denying EDM commits one to saying that van Fraassen's reflection principle can fail even in cases where there is no threat of memory loss or irrationality.⁶

EDM, therefore, should be accepted. But EDM entails Entailment. Suppose that EDM is true, but Entailment is false. If Entailment is false, then there is some e and some H such that H entails e and yet e can justify us in rejecting H . Now, if H entails e , that means that $\neg e$ entails $\neg H$. In that case, $\neg e$ can justify us in rejecting H (at least those of us who are aware of the entailment). But, if EDM is correct, then e cannot also justify us in rejecting H . Therefore, EDM entails Entailment.

I am, so far, agreeing with Sharon and Spectre that something like Entailment is needed to generate their argument, and that it is true. Now, Sharon and Spectre suggest at one point that they can do without anything like Entailment. I reconstruct their argument as follows.⁷ Suppose that our evidence is given by an atomic proposition a and that it supports two alternative theories: $(a \wedge b)$ and $(a \wedge \neg b)$ (where b is another atomic proposition). Then, by closure, a also supports the following proposition: $[(a \wedge b) \vee \neg (a \wedge \neg b)]$. But that proposition is logically equivalent to its second disjunct: $\neg (a \wedge \neg b)$, which in turn is logically equivalent to $\neg a \vee b$. Therefore, assuming that logically equivalent propositions are supported by the same evidence, a supports $\neg a \vee b$. But that last claim, Sharon and Spectre say, is "absurd." Now, why would it be absurd to say that a supports $\neg a \vee b$? It is, of course, incompatible with Entailment, but if we are not assuming Entailment or anything like it,⁸ I do not see how Sharon and Spectre's argument goes through.

To recap: Underdetermination, Entailment and CE form an inconsistent triad. Moreover, against Sharon and Spectre, something like Entailment really is needed

⁵ For an exchange between Pryor and myself on this issue see Pryor (2013) and Comesaña (2013b).

⁶ See van Fraassen (1984). The reflection principle says, roughly, that if one's conditional confidence at a time t in a proposition p , given that one's confidence in that proposition at a later time t' will be r , should also be r . Thus, for instance, if I know that I will later be confident that p , then I should already be confident that p .

⁷ In my reconstruction I only use two atomic propositions, where they use three. I don't see the need for the third proposition.

⁸ They could, as they intimate in note 31, appeal to the principle that evidence for a disjunction must be evidence for at least one of the disjuncts. It is not clear to me why one would accept this principle about disjunctions but reject Entailment.

to generate the inconsistency. There are, however, good arguments in favor of Entailment. But what about Underdetermination?

Sharon and Spectre do not spend much time (if any) arguing for Underdetermination, perhaps because they think that the arguments are obvious. I do not think that they are. In the remainder of this section I briefly present what have seemed to many to be the strongest arguments for Underdetermination and then briefly state how I think those arguments can be addressed.

First, a worry that Sharon and Spectre themselves mention: it might be thought that giving up Underdetermination lands us squarely into skepticism. If we deny Underdetermination, then we think that our evidence only supports that which it entails. But, the argument goes, our evidence doesn't entail nearly as much as we think we are justified in believing. Therefore, giving up underdetermination entails that we are not justified in believing nearly as much as we think we are justified in believing. This argument would go through for a position which abandons Underdetermination but keeps the conception of evidence that naturally goes with it. According to this conception, for instance, when I am justified in believing that I am facing a red wall under normal conditions, my evidence consists in phenomenal states, such as its looking to me as if the wall is red. If that is all my relevant evidence, then I can be justified in believing that the wall is red under those conditions only if Underdetermination is true. But there are alternative conceptions of evidence that do not have this consequence. For instance, one may hold that, under those circumstances, that the wall is red is itself part of of my evidence (and basically so, not just because I inferred it or quasi-inferred from some more basic evidence). Thus, the argument that abandoning Underdetermination entails skepticism presupposes a conception of evidence that is not mandatory. Of course, it may well be that the alternative conception of evidence compatible with the rejection of both skepticism and Underdetermination is untenable, but it would take an independent argument to show that (I address a version of that argument below).⁹

Second, it might be thought that abandoning Underdetermination entails the indefeasibility of justification. For if we are only justified in believing what is entailed by our evidence, the argument goes, then (given the monotonicity of entailment) nothing can make it the case that a piece of evidence that once supported a proposition no longer does so once we acquire new information. As it stands, the argument rests on a simple mistake. Abandoning Underdetermination commits one to saying that evidence *e* cannot support a proposition *p* unless *e* entails *p* (in other words, entailment is necessary for evidential support), but it doesn't commit one to saying that if evidence *e* entails *p*, then *e* supports *p* (in other words, entailment need not be sufficient for evidential support). Now, it is true that according to standard probabilistic accounts of evidential support, entailment is sufficient for evidential support. So much the worse for standard probabilistic

⁹ Footnote 46 of Sharon and Spectre's paper is relevant here. They say that "[t]aking *p* itself [in my case, that there is a red wall in front of me] as one's new evidence will not essentially affect the argument. Standard conditionalization is unwarranted on *p* since its probability is less than 1 (...), and using Jeffrey conditionalization will leave things as they stand." As I go on to say in the main text, so much the worse for both standard and Jeffrey conditionalization.

accounts of evidential support. If I ran across a proof of some theorem that I can just barely follow, I may have as part of my evidence propositions which entail the theorem. If a more mathematically sophisticated friend then wrongly tells me that the proof makes a subtle fallacy, then I am no longer justified in believing the theorem, despite still having evidence which entails it. Standard probabilistic accounts of evidence also have the consequence that once a proposition is part of my evidence, it remains part of my evidence forever more. Again, so much the worse for standard probabilistic accounts of evidence. If I am facing a red wall under normal conditions, then (to go back to the alternative conception of evidence sketched in the previous paragraph) it is part of my basic evidence that there is a red wall in front of me. However, if a friend then tells me that there are red lights shining on the wall, then it is no longer part of my evidence that there is a red wall in front of me, and I may well cease to be justified in believing that proposition. So, abandoning Underdetermination does not commit one to thinking of justification as indefeasible, for two reasons: first, we may not be justified in believing a proposition even if it is entailed by our evidence; second, propositions which are part of our evidence at a time can lose that status upon the acquisition of further information.

Finally, it might be suggested that rejecting Underdetermination, particularly if that rejection is married to a conception of evidence according to which "external world" propositions can be part of our basic evidence, as I urged above, simply does not give experience its due in epistemology. For it is undeniable that experiences play a crucial role in empirical justification (otherwise, why call it empirical justification?), and it is not clear what role they can have in a picture which rejects Underdetermination and takes propositions about the external world as part of our basic evidence. In reply, I grant, of course, that experiences must play a crucial role in our epistemology, but I deny that there is no crucial role for them to play once we reject Underdetermination and accept that external world propositions can be part of our basic evidence. Those external world propositions are part of our evidence only because we have experiences whose content is those propositions. Thus, for example, it is part of my basic evidence that there is a red wall in front of me because I have an experience with the content that there is a red wall in front of me. The charge, therefore, cannot be that on this alternative conception experiences do not play a crucial role. The argument (if there is one) now has to center on what precise role experiences must play in an epistemological theory. At this point, however, the argument can no longer rely on a vague intuition that experiences must play a central role, but rather on theoretical considerations regarding what precise role experiences must play. It is not clear that those theoretical considerations will favor the traditional role of experiences as being our basic evidence over the alternative role of their providing us with basic evidence, particularly when we take into account that Underdetermination is a member of an inconsistent triad, and so that there are obvious benefits to giving it up.

So far we have considered the first premise of Sharon and Spectre's argument against closure. That premise says that CE is false. I have reconstructed Sharon and Spectre's argument against CE as claiming that CE is part of an inconsistent triad whose two other members (Entailment and Underdetermination) cannot be given

up.¹⁰ But Sharon and Spectre do not really give much in way of an argument for the claim that neither Entailment nor Underdetermination can be given up. In the case of Entailment, I think that there are good arguments in its favor. Underdetermination is trickier. Abandoning it requires a conception of evidence and the role of experience in epistemology which is not traditional. Nevertheless it is, I have argued, defensible. To this extent, then, there is a weakness in Sharon and Spectre's first premise of their master argument. Let us now turn to its second premise.

3 If evidence is open, is knowledge open?

I hesitate to outright attribute the second premise to Sharon and Spectre, if only because it is obviously false. Suppose that CE is false. It does not follow that CP is false. For one, if a thoroughgoing form of skepticism is true, then CE's falsity is compatible with CP's truth. CP is, after all, a (modally strong) conditional, whose antecedent attributes knowledge. If thoroughgoing skepticism is true, this conditional is automatically true, independently of the truth value of CE. Therefore, it is obviously false that if evidence is open then so is knowledge. Now, Sharon and Spectre might have in mind instead a slightly modified version of the second premise, according to which if CE is false, then either skepticism is true or CP is false; and they may then be happy to add the rejection of skepticism as an additional premise (they do in fact clearly reject skepticism). But the point is a logical one: CP does not entail CE. Moreover, as we will see below, CP plus anti-skepticism does not entail CP. Indeed, it is not obvious what is needed to bridge the logical gap between CP and CE.

Let us start by noting that there is another closure principle that Sharon and Spectre do accept. The principle in question admits of different formulations—here's one (I omit qualifications to the antecedent):

(CC) If p entails q , then S 's rational confidence in p cannot be greater than S 's rational confidence in q .

CC takes us at least three-quarters of the way towards CP. For suppose that S knows p and p entails q . Given that S knows p , S 's rational confidence in p is high enough to constitute knowledge. By CC, S 's rational confidence in q is at least as high as S 's confidence in p . But then, it seems that S has all that he needs to know q : q is true and S 's rational confidence in q is high enough for knowledge. Of course, there are Gettier cases. But it would be surprising (to say the least) if every case where CP fails were a Gettier case. Take one of the cases where Sharon and Spectre think that CP fails. I believe that the wall is red on the basis of my evidence that it looks red. I then competently deduce that if it looks red to me, then it is red. Why do I not know that conditional? It is true. My confidence in it is high enough for knowledge. The case is not recognizable as a Gettier case. It is not recognizable as a traditional

¹⁰ They also claim, at one point, that CE just is incompatible with Underdetermination alone, but I have argued that this argument fails and that they need something like Entailment.

lottery case either (as Sharon and Spectre seem to suggest in footnote 60). Why do I then not know the conditional?

Sharon and Spectre's response is that I do not know it because I have no evidence for it. True, my rational confidence in the conditional is at least as high as my rational confidence in its consequent, but my rational confidence in the consequent is evidence-based, whereas my rational confidence in the conditional is not evidence-based. But why must my rational confidence in the conditional be evidence-based in order for me to know it? Isn't it enough that it is rational? A position of this kind has recently been defended by, for instance, Cohen (2010) and Wedgwood (2012).

Sharon and Spectre's answer consists, essentially, in saying that it is implausible to hold that we can come to know "ordinary, contingent truths" on the basis of rational confidence which is not evidence-based. The propositions for which CP fails according to Sharon and Spectre may well be contingent, but they are far from being ordinary. They are the gap-fillers between the evidence and what the evidence justifies the subject in believing. They all say, in essence, that the evidence is not misleading. So, although positions such as Cohen's and Wedgwood's are properly labeled "neo-rationalists" because of their acceptance of a priori knowledge and justification of contingent truths, it's not as if they contend that we can know a priori that grass is green. Instead, what we can know a priori are those metaphysically heavy-weight propositions [the terminology is from Dretske (2005)] which is hard to see how else they could be known. Of course, Sharon and Spectre would reply that they are not known. But now we have descended to a clash between closure and anti-rationalism. The argument at this level will not be as clean as Sharon and Spectre's surgical approach to the problem (I mean this as a compliment) suggests.

4 Conclusion

Sharon and Spectre's paper allows us to isolate an inconsistent triad: CE, Underdetermination and Entailment are incompatible with each other. They conclude that CE has to go. I argued that more attention should be paid to the possibility of rejecting Underdetermination. They go on to argue that if CE has to go, then CP has to go with it. I argued that they have not taken proper account of neo-rationalist positions. These differences notwithstanding, it is a testament to the clarity and insight of Sharon and Spectre's paper that it allows us to focus on what is essential to the problem of closure.

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