

# Evidence of evidence is not (necessarily) evidence

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- Richard Feldman [3, 4] has been defending a principle whose slogan is: "evidence of evidence is evidence."
- More precisely, initially, the principle was articulated as "evidence that there is evidence for  $p$  is evidence for  $p$ ".
- The *intended application* of this initial principle (to be discussed below) suggests the following *first-pass*:  
(EEE<sub>1</sub>) If  $E$  supports the claim that (some)  $S$  possesses evidence which supports  $p$ , then  $E$  supports  $p$ .
- For the sake of initial discussion, I will make the following precise assumption about "evidential support":  
(R)  $E$  (evidentially) supports  $p$  iff  $E$  is *positively (epistemically) probabilistically relevant* to  $p$ .
- Assuming (R), there are simple counterexamples to (EEE<sub>1</sub>).
  - **Example 1.** A card  $c$  is sampled at random from a standard deck. Let: ( $E_1$ )  $c$  is a black card, ( $E_2$ )  $c$  is the ace of ♠, ( $p$ )  $c$  is an ace. And, assume that John knows (precisely) which card  $c$  is. This is a counterexample to (EEE<sub>1</sub>), given (R).

- ... because, given the setup, (1)  $E_1$  raises the (epistemic) probability of the claim that John knows  $E_2$ , (2)  $E_2$  supports (*entails!*)  $p$ , but (3)  $E_1$  is *probabilistically irrelevant* to  $p$ .
- This counterexample suggests the following *revised* (EEE):  
(EEE<sub>2</sub>) If  $E_1$  supports the claim that (some)  $S$  possesses evidence ( $E_2$ ) which supports  $p$ , then *the conjunction*  $E_1$  &  $E_2$  supports  $p$ .
- Example 1 does *not* refute (EEE<sub>2</sub>), since the conjunction  $E_1$  &  $E_2$  in that case *entails* (and  $\therefore$  *does* "(R)-support")  $p$ .
- Here is a counterexample to (EEE<sub>2</sub>).  
**Example 2.** Consider the following claims about a man named Joe: ( $E_1$ ) Joe has a full head of white hair; ( $E_2$ ) Joe is over 35 years of age; ( $p$ ) Joe is bald. And, suppose that John knows exactly how old Joe is.
- Then, plausibly, we have:
  - $E_1$  supports the claim that John possesses evidence ( $E_2$ ) which supports  $p$ . But, the *conjunction*  $E_1$  &  $E_2$  *refutes*  $p$ .

- More recently, Feldman [3] has defended the following further refinement of his initial (EEE)-principles:  
(EEE<sub>3</sub>) If  $S_1$  possesses evidence ( $E_1$ ) which supports the claim that  $S_2$  possesses evidence ( $E_2$ ) which supports  $p$ , then  $S_1$  also possesses evidence ( $E_3$ ) which supports  $p$ .
- Examples 1 and 2 do not bear on (EEE<sub>3</sub>), since the evidence ( $E_1$ ) that  $S$  possesses which supports the claim that  $S_2$  has some  $p$ -supporting evidence ( $E_2$ ) *need not be related in content* to the  $p$ -supporting evidence ( $E_3$ ) that  $S_1$  possesses.
- But, a slight refinement of Example 1 will do the trick here.  
**Example 3.** Add a second character (Jim) into Example 1. Suppose that Jim knows (i)  $E_1$  is true of the sampled card  $c$ , and (ii) John knows which card  $c$  is. But, suppose (i) and (ii) are *all* Jim knows regarding  $c$ . Suppose Jim *reasonably disbelieves or suspends judgment* on all claims about  $c$  — apart from claims (i) & (ii), and their logical consequences.

3 Naïve (EEE) Principles	Other Notions of "Support"?	Intended Applications	Reflections	References
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- The onus is now on the *defender* of (EEE<sub>3</sub>) to tell us *which part* (E<sub>3</sub>) of Jim's evidence (in Example 3) *does* support *p*.
- E<sub>3</sub> can't be E<sub>1</sub>, since E<sub>1</sub> is *irrelevant* to *p* [in the (R) sense].
- E<sub>3</sub> can't be E<sub>2</sub>, since Jim *reasonably disbelieves or suspends judgment on* E<sub>2</sub>, which implies that E<sub>2</sub> is *not* evidence that is *possessed by Jim* (Feldman [2] seems to agree with this).
- Because Jim *reasonably disbelieves or suspends judgment on everything but* (i) & (ii) — *there seems to be no part* (at least, there *need be no part*) of Jim's evidence that supports *p*.
- At this point, one might begin to worry that the notion of "support" (R) we have adopted is not "substantive enough".
- After all, it is well known [7] that (R)-support notions are intransitive, and do not transmit through entailments, *etc*.
- Next, I'll consider "more substantive" notions of "support". Then, we'll look at Feldman's *intended application* of (EEE).

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3 Naïve (EEE) Principles	Other Notions of "Support"?	Intended Applications	Reflections	References
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- Before delving into another, more "substantive" notion of evidential support (support\*), it is useful to note that *conclusive* evidential relations are *not* probative here.
- As we'll see shortly, Feldman's *intended application* of (EEE) is to *peer disagreement*. As such, principles stated (solely) in terms of *conclusive* evidence are *not* appropriate. To wit:  
(EEE<sub>c</sub>) If S<sub>1</sub> possesses *conclusive* evidence (E<sub>1</sub>) for the claim that S<sub>2</sub> possesses *conclusive* evidence (E<sub>2</sub>) for *p*, then S<sub>1</sub> also possesses *conclusive* evidence (E<sub>3</sub>) for *p*.
- While (EEE<sub>c</sub>) may well be *true*, it is *useless* in this context, since epistemic peers are *not* in strong enough epistemic positions to render (EEE<sub>c</sub>) *applicable* to their situation(s).
- Moreover, if S<sub>1</sub> were ever in such a position with respect to one of their *peers* (S<sub>2</sub>, who *disagrees* with S<sub>1</sub> on *p*), then (EEE<sub>c</sub>) would recommend S<sub>1</sub> do a "full 180" regarding *p*.
- And, *nobody* endorses a "180" stance on peer disagreement!

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3 Naïve (EEE) Principles	Other Notions of "Support"?	Intended Applications	Reflections	References
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- So, we need a *non-conclusive* "substantive" notion of evidential support here, to replace — or supplement — (R).
- Rather than investigate other *probabilistic* notions of evidential support, I will just suppose that support\* is the relation of *propositional justification*. That is, I'll assume:  
(J) *E* supports\* *p* for *S* iff *E* *propositionally justifies p* for *S*.
- Here, I will be assuming that "*E* *propositionally justifies p* for *S*" does *not* entail that *S* *believes p*, but it *does* entail that *S* *possesses E as evidence*. Now, consider this (EEE):  
(EEE<sub>3</sub>\*) If S<sub>1</sub> is justified (on the basis of E<sub>1</sub>) in believing that (S<sub>2</sub> is justified in believing that *p* on the basis of some E<sub>2</sub>), then S<sub>1</sub> is justified in believing that *p* on the basis of (some) E<sub>3</sub>.
- This principle *can't* be what Feldman has in mind, since (EEE<sub>3</sub>\*) would — if it were *applicable* to cases of *peer disagreement* — recommend that S<sub>1</sub> do a "full 180" regarding *p*. [This is the same flaw we saw with (EEE<sub>c</sub>).]

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3 Naïve (EEE) Principles	Other Notions of "Support"?	Intended Applications	Reflections	References
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- At this point, it is necessary to delve into the details of Feldman's *intended application* of (EEE)'s. He says...  
... even if it is true that the theists and the atheists have private evidence, this does not get us out of the problem. Each may have his or her own special insight or sense of obviousness. But each knows about the other's insight. Each knows that this insight has evidential force. And now I see no basis for either of them justifying his own belief simply because the one insight happens to occur inside of him. A point about evidence that plays a role here is this: evidence of evidence is evidence. More carefully, evidence that there is evidence for *p* is evidence for *p*. Knowing that the other has an insight provides each of them with evidence.
- Here's how the imagined dialectical situation unfolds:
  - S<sub>1</sub> starts out having a *justified belief that p*. Then,
  - S<sub>1</sub> *learns* he has a peer S<sub>2</sub> who (justifiably?) believes *~p*, and whose (total) evidence contains a "private insight" I<sub>2</sub>, which "supports" *~p* (in *some sense*, and, presumably, *relative to some collection of shared background evidence*).
  - Feldman thinks this endows S<sub>1</sub> with evidence *against p*.

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3 Naive (EEE) Principles ○○○	Other Notions of "Support"? ○○	Intended Applications ●○○○○	Reflections ○	References
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- This suggests that Feldman may, in fact, have a *mixed support*\* /support (EEE)-principle in mind here.
- I can think of only two useful "*mixed-support*" (EEE)'s:
  - (EEE<sub>4</sub>) If  $S_1$  learns (*viz.*, comes to *know*) that ( $S_2$  possesses some "*p*-supporting insight"  $I$ ), then  $S_1$  thereby acquires (some) evidence ( $E_3$ ) which supports  $p$ .
  - (EEE<sub>5</sub>) If  $S_1$  learns (*viz.*, comes to *know*) that ( $S_2$  is justified in believing that  $p$  on the basis of some  $E_2$ ), then  $S_1$  thereby acquires (some) evidence ( $E_3$ ) which supports  $p$ .
- In order to simplify the discussion, I am just supposing here that  $S_1$  comes to **know** something relevant about  $S_2$ .
- *These* (EEE) principles are *not* refuted by any of our examples, above. In all of those examples,  $S_1$  merely has *some reason to believe*  $S_2$  has (some)  $p$ -supporting evidence.
- To refute *these* principles, we'd need examples in which  $S_1$  *knows* that  $S_2$  has  $p$ -supporting (or  $p$ -justifying) evidence.

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3 Naive (EEE) Principles ○○○	Other Notions of "Support"? ○○	Intended Applications ●○○○○	Reflections ○	References
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- I won't discuss religious (or philosophical) "insight" here. I'd rather focus on interesting cases of *scientific* "insight".<sup>1</sup>
- I think there are often cases involving attitudes toward *scientific theories* in which principle (EEE<sub>4</sub>) is applicable.
- Historically, attitudes of astronomers/physicists towards *Newton's theory of planetary motion* ( $p$ ) is a nice example.
- Even though there was overwhelming evidence in support of  $p$  (in, say, the mid-1800's), there were also some *anomalies* ( $I$ ), which (in some sense) *counter-supported*  $p$ .
- Many astronomers and physicists were aware of these  $I$ 's. But, they *also* knew there had been a *track-record of cases in which similar I's had ultimately been explained by p*.
- Thus, learning about the "existence of a known anomaly" would *not* have warranted a change in attitude toward  $p$ .

<sup>1</sup>I also won't be discussing cases in which (EEE<sub>5</sub>) is applicable, since I think these cases are not as interesting (or as frequent) as cases involving (EEE<sub>4</sub>).

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3 Naive (EEE) Principles ○○○	Other Notions of "Support"? ○○	Intended Applications ○○○●○○	Reflections ○	References
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- Ultimately, Feldman wants (EEE) to yield *p*-counter-supporting evidence (for  $S_1$ ), *which warrants a change in  $S_1$ 's epistemic attitude toward  $p$* . Thus, he seems to have in mind an (EEE) like:
  - (EEE'<sub>4</sub>) If  $S_1$  (who justifiably believes  $p$ ) learns that ( $S_2$  possesses some "*p*-counter-supporting insight"  $I$ ), then  $S_1$  thereby acquires (some) *p*-counter-supporting evidence ( $E_3$ ), *such that  $E_3$  warrants a change in  $S_1$ 's attitude toward  $p$* .
- But, *any* sufficiently interesting and comprehensive scientific theory  $p$  is *bound* to have *some* "anomalies".
- So, it is hardly "newsworthy" to discover that *some* (good) scientist has performed *some* experiment that generated *some* evidence that is "anomalous" with respect to  $p$ .
- If  $p$  has faced similar "anomalies" in the past, and has been able to *explain them away*, then this *can* warrant "sticking to your guns" wrt  $p$  (*e.g.*, Newton's theory of gravitation, the motions of Uranus, and Neptune; and, later, Mercury [8]).
- Of course, the devil will be in the details ...

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3 Naive (EEE) Principles ○○○	Other Notions of "Support"? ○○	Intended Applications ○○○●○○	Reflections ○	References
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- Let's suppose that  $S_1$  and  $S_2$  *share a salient collection of background evidence  $K$* . And, let us suppose that  $S_2$  has an "insight"  $I$  which counter-supports  $p$ , relative to  $K$ .
- If  $S_1$  learns that  $S_2$  has  $I$ , then the *epistemic upshot* of this learning episode will depend on  $K$ ,  $I$ , and other evidence  $E_1$  that  $S_1$  may themselves possess (which is *not* in  $K$ ).
- For one thing, If  $I$  is not "sufficiently *independent*" of  $E_1$  (relative to  $K$ , and regarding  $p$ ), then  $I$  might even combine with  $E_1$  so as to *more strongly support  $p$*  for  $S_1$ . A *tension*:
  - (a) Feldman's (EEE) principles imply that  $S_1$ 's learning that  $S_2$  has *some*  $p$ -counter-supporting insight *necessarily* requires  $S_1$  to *lower their credence* in  $p$  (or *suspend judgment on  $p$* ).
  - (b) But, plausibly,  $S_1$ 's learning *the content* ( $I$ ) of  $S_2$ 's  $p$ -counter-supporting insight does *not* necessarily require  $S_1$  to lower their credence in  $p$  (and *may* require *raising* said credence).
- Besides, (a) *alone* casts doubt on Feldmanian (EEE)'s, in light of scientific "anomaly" cases (see [6] for *current* examples).

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- In other words, I think Feldman will need some additional *caveats* in his (EEE)-principles to make them plausible.
- (EEE<sub>6</sub>) If  $S_1$  (who justifiably believes  $p$ ) learns that ( $S_2$  possesses some " $p$ -counter-supporting insight"  $I$ ), then  $S_1$  acquires (some)  $p$ -counter-supporting evidence ( $E_3$ ) — *such that*  $E_3$  warrants a change in  $S_1$ 's attitude toward  $p$  — **only if**
  - (1)  $I$  counter-supports  $p$ , relative to *shared background*  $K$ .
  - (2)  $I$  is sufficiently "evidentially independent" of  $S_1$ 's other evidence  $E_1$  (which is *not* contained in  $K$ ), regarding  $p$ .
- There are other reasons to require "independence" (2). In the absence of (2), we seem to get some *bizarre predictions*.
  - Suppose  $S_1$  has  $n$  peers  $S_i$ , each of whom has *some*  $p$ -counter-supporting insight. When  $S_1$  learns that each  $S_i$  has *some* insight, does this yield a *stronger*  $E_3$  (for  $S_1$ ) than if  $S_1$  had only learned that *one* of the  $S_i$  has *some* "insight"?
  - What if all of  $S_1$ 's peers  $S_i$  share the very same "insight" (content)  $E^*$ ? Then, wouldn't (EEE) principles *without* an "independence" caveat [like (2)] be "*double-counting*"?

- Here are two other cases illustrating the importance of some sort of "evidential independence" requirement like (2).
  - Suppose  $S_1$  has  $n$  peers  $S_i^-$ , each of which has *some*  $p$ -counter-supporting insight, and  $S_1$  also has  $n$  peers  $S_i^+$ , each of which has *some*  $p$ -supporting insight. Suppose  $S_1$  learns about *both* (i) the existence of the insights of the  $S_i^-$ , and (ii) the insights of the  $S_i^+$ . Do (i) and (ii) "cancel out"?
  - Consider one of  $S_1$ 's peers  $S_1^+$ , who has some  $p$ -supporting insight. And, suppose  $S_1$  also has their own  $p$ -supporting insight. Why doesn't (EEE) lead (absurdly) to this sequence:
    - (I)  $S_1$  learns that  $S_1^+$  has some insight which supports  $p$ . (EEE) implies that  $S_1$  acquires evidence  $E_I$  which supports  $p$ .
    - (II)  $S_1^+$  learns that  $S_1$  has some insight which supports  $p$ . (EEE) implies that  $S_1^+$  acquires evidence  $E_{II}$  which supports  $p$ .
    - (III)  $S_1$  learns that  $S_1^+$  has acquired new evidence  $E_{II}$  which supports  $p$ . (EEE)  $\Rightarrow$   $S_1$  acquires  $p$ -supporting evidence  $E_{III}$ .
    - (IV)  $S_1^+$  learns that  $S_1$  has acquired new evidence  $E_{III}$  which supports  $p$ . (EEE)  $\Rightarrow$   $S_1^+$  acquires  $p$ -supporting evidence  $E_{IV}$ .
    - (V) and so on...

- There are some general epistemological issues (regarding the nature of "evidence") lurking in the background here.
- Two important dimensions are the *first-order/higher-order* dimension [5] and the *internal/external* dimension [1].
- With regard to the former, one may wonder whether the sorts of "collapse principles" implicit in Feldman's discussion make sense — *even in first-person cases*.
  - If  $S$  is justified in believing that  $S$  has  $p$ -counter-supporting evidence, does it follow that  $S$  has such evidence?
  - *Maybe (not)*, but even supposing that  $S$  learns that  $S$  possesses some  $p$ -counter-supporting evidence, this may *not* require any change in  $S$ 's attitude toward  $p$  (e.g., where  $S$  believes  $p$ ).
- With regard to the latter, one may wonder whether one needs to have *some* "access" to some further properties of one's peer's "insights" in order for (EEE) to be *applicable*.
  - We do *not* seem to be *in a position to know* much about the *content* of the sorts of "insights" Feldman is talking about, or even whether they are "evidentially independent", etc.

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