

A Tension in TW's Usage of Probabilistic Relevance in KAIL

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I mentioned in my discussion of TW's stuff on the explanatory power of knowledge vs true belief (see my chapter 3 notes) that TW has a comparative notion of *explanatory* relevance that is radically different than his notion of *evidential* relevance. This is despite the fact that TW uses *probabilistic* relevance in his treatments of both concepts. I will use the notation $\epsilon(C, D)$ to denote "the degree to which D (*explanans*) is explanatorily relevant to C (*explanandum*)". While TW was not claiming that $\epsilon(C, D) = \rho(C, D)$, he was claiming that ρ is a "guide" to ϵ . And, it was crucial to his main example (which was supposed to bolster his case for the explanatory power of knowledge over true belief) that the following principle is *violated* by ϵ

(1) If D entails C but E does not entail C , then $\epsilon(C, D) > \epsilon(C, E)$.

In fact, TW gives an example in which (he claims) (i) D entails C , (ii) E does not entail C , but (iii) $\epsilon(C, D) < \epsilon(C, E)$. And, TW thinks (therefore) that it is a *virtue* of ρ that it is capable of *violating* (1) in exactly this way.

On the other hand, in chapters 8-10, TW presupposes a view about evidential relevance that seems to be at odds with his notion of explanatory relevance. In his discussion of scepticism, TW is committed to the following two central claims:

(2) S 's evidence in the good case (E_g) is different from S 's evidence in the bad case (E_b). That is, $E_g \neq E_b$.

(3) E_g supports the hypothesis that S is in the good case (H) more strongly than E_b does. That is, $\epsilon(H, E_g) > \epsilon(H, E_b)$. [Here, I use $\epsilon(H, E)$ for "the degree to which E is evidentially relevant to H ".]

Intuitively, (3) entails (2), but not conversely. So, (3) is *the* crucial claim that TW must motivate in order to get his story about scepticism off the ground. Interestingly, TW doesn't seem to think he needs to argue much for (3). After all, according to TW, E_g entails H , whereas E_b does not entail H . The only explanation for this I can see is that TW must be presupposing that the following principle *cannot be violated* by ϵ

(4) If E_g entails H but E_b does not entail H , then $\epsilon(H, E_g) > \epsilon(H, E_b)$.

Note that (4) is precisely the property that ϵ *must* violate, if TW's story about the explanatory power of knowledge vs true belief is going to work. That is, (1) and (4) are the same (formal) properties, and both are (for TW) understood as being reflected in (formal) properties of *measures of probabilistic relevance*. In the case of ϵ , TW proposed the correlation coefficient ρ as a (partial) *explicatum* — because it *violates* (1). But, in the case of ϵ , which TW also thinks of in terms of "degree of probabilistic relevance", ρ would be a *disastrous explicatum* — because it *violates* (4)! Unfortunately, TW doesn't say anything about how he would measure degree of evidential support ϵ . But, presumably, he is committed to ϵ being a probabilistic relevance measure (because he explicates qualitative support as positive probabilistic relevance), and he cannot use ρ for his explication of ϵ , since it would undermine his evidential asymmetry argument in response to the sceptic.

I think this leaves TW in a rather uncomfortable position with respect to his simultaneous usage of probabilistic relevance to explicate (at least partially) both the concepts of explanatory and evidential relevance. Either there is a deep and fundamental *asymmetry* between explanation and confirmation (which TW has given us no reason to believe, and which would shock many philosophers of science!), or at least one of his explications that use probabilistic relevance should go. I would embrace the latter horn, myself. As I already explained in my chapter 3 notes, I think ρ is a bad explicatum for ϵ on various grounds. So, my choice would be to abandon TW's probabilistic relevance approach to explanatory relevance. I would keep the account of evidential relevance (*modulo* various issues we have discussed in the past couple of weeks). But, I would add to it something more precise about the comparative (and even quantitative) concepts of evidential support — like those implicit in his discussion of scepticism, *e.g.*, (3) and (4). Specifically, I would endorse deductive limiting-case desiderata like (4), and I would therefore *not* use ρ (or anything like it) to gauge degree of evidential relevance. Instead, I would opt for an approach based on likelihood-ratios — something like what Sherri does in her book. I've written a lot about such accounts of evidential support elsewhere.