Knowledge from Non-Knowledge I: Deductive Inferential (Empirical) Knowledge from Falsehood

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- **The Naive View** (TNV) of Inferential Knowledge (slogan):

(TNV) Inferential knowledge requires *known relevant premises*.

- One key aspect of (TNV) is "counter-closure" [9, 10]:

(CC) If S comes to believe q *solely* on the basis of competent deduction from p and S knows that q, then S knows that p.

- It is useful to note how (CC) differs from *closure*:

(C) If S comes to believe q *solely* on the basis of competent deduction from p and S knows that $\boldsymbol{p}$, then S knows that $\boldsymbol{q}$.

- I won't discuss (C), but it's useful to *contrast it with* (CC).
  - Entailment *does* preserve ***some*** *good*-making features of premises. Most notably, entailment preserves *truth*.
  - ☞ *Why should it be* that entailment preserves ***any*** *bad*-making features of premises? [*e.g.*, entailment doesn't preserve *falsity*.]
- There are other, more concrete reasons to worry about (CC).
- There are various *(prima facie) counterexamples* to (CC).
  - *E.g.*, Think about NASA's inferential use of Newton's theory.

- It seems Saunders & Champawat [12, *p*. 9] were the first to raise an example of "knowledge from non-knowledge" (KFNK). Their example is *like* the following one (my spin):

> An urn contains 2 balls of unknown (to Sam) color distribution. Sam samples one ball (with replacement) from the urn many, many times. He is a very reliable counter and observer (and Sam knows all of the above facts). Sam then reasons as follows: "I have sampled a red ball from the urn *exactly* 10^9 times in a row. ∴ Both balls in the urn are red."

- As it happens, Sam has (slightly) miscounted the number of consecutive red ball observations he has made. Sam *actually* observed 10^9 *plus one* such consecutive outcomes.
- S & C do not analyze their example — they merely present it as a case which shows that Clark's [1] "no false lemmas" requirement [6] (in response to Gettier's [5]) is *too strong*.
- This seems to be *inductive* inferential knowledge involving a false relevant premise. My focus today will be on *deduction*.

- It seems Hilpinen [7, *pp*. 163–4] was the first to discuss the sorts of examples I'll be focusing on. His example has the same structure as Warfield's, which I'll be discussing below.

> A mother suspects that her child has temperature, and when she measures the temperature and looks at the thermometer, she takes it to read 40.0° C. . . . If the thermometer is fairly accurate and the mother has reasonably good eyesight, we can say under these circumstances that she knows that the child has temperature [*viz.*, that $t > 37°$ C]. . . . But the mother need not have perfect eyesight and the thermometer need not be completely accurate . . . the actual thermometer reading might be 39.7°, and the actual temperature of the child might be 39.2°. . . . This example suggests that a person can know things not only on the basis of (valid) inference from what he or she knows, but in some cases even on the basis of inference from what is not known (or even true), provided that the latter (evidential) propositions are sufficiently close to the truth.

- Since this example is mainly a digression for Hilpinen, he does not analyze it further. Such analyses came later.

- Klein has been thinking about "knowledge from falsehood" (KFF) for years. His recent paper [8] is a thorough summary.
- Klein's paper is fascinating and intricate, but I won't be delving into it today. I'll be using it largely as a *foil*.
- Klein thinks that (deductive) KFF cases *must* be such that:
  1. S believes q solely on the basis of a competent deduction from p, where p is false. *But*, there exists a *true* t such that:
  2. p *entails* t, *and* t propositionally justifies q (for S). [*i.e.*, S is *in a position to know* q on the basis of t.]
  3. Had S *not* come to believe p, then S would *not* have come to believe t (nor would have S *concluded/inferred* that q).
- My remarks today will be relevant to aspects (2) & (3) of Klein's cases/analysis (but not all of its many moving parts).
- Regarding (2), I will argue that some (KFF) cases will *not* have *any* Kleinian "nearby truths" (given some constraints).
- Regarding (3), I will discuss (KFF) cases with false relevant premises p that are *not merely* "*causally* essential".

- Warfield [13] discusses several examples of (KFF), and he defends (KFF) against various forms of resistance. As with Klein, my focus will be largely orthogonal to Warfield's.
- I'll focus on the following example from [13], which has the same *formal* structure as Hilpinen's:

  > I have a 7pm meeting and extreme confidence in the (exact) accuracy of my fancy watch. Having lost track of the time and wanting to arrive on time for the meeting, I look carefully at my watch. I reason as follows: "It is exactly 2:59pm. ∴ I am not late for my 7pm meeting." As it happens, it's exactly 3pm, not 2:59pm. [We may suppose that my fancy watch is running perfectly, but that I (unwittingly) set it so that it reads one minute early.]

- The rest of the talk will focus mainly on variants of this.
- Next, I will discuss a KFF-variant I have recently described in an *Analysis* paper [3]. This will bear on Klein's item (3).
- Then, I will describe other KFF-cases, which will bear on Klein's item (2), and similar requirements of other authors.
- In closing, I'll return to Hilpinen's "approximate truth" remark.

- In [3], I offer the following variant of Warfield's watch case:

  > I have a 7pm meeting and extreme confidence in the (exact) accuracy of both my fancy watch and the Campanile clock. Having lost track of the time and wanting to arrive on time for the meeting, I look out of my office window (from which the Campanile clock is almost always visible). As luck would have it (owing, say, to the fluke occurrence of a delivery truck passing by my window), the Campanile clock is obscured from view at that instant (which *is* exactly 2:59pm). So, instead, one minute later (at 3), I look carefully at my watch, which (because it happens to be reading one minute slow) reads exactly 2:59pm. I reason: "It is exactly 2:59pm (p); therefore (q) I am not late for my 7pm meeting." Thus (supposing Warfield is right), I have inferential knowledge that q, based on a relevant premise p, which is a falsehood. Now, for the twist. If my belief that p had been *true*, then (we can plausibly suppose) it would have been based on my reading (at exactly 2:59pm) of the Campanile clock, which would have read exactly 2:59. Unbeknownst to me, however, the Campanile clock has been (and would have been) *stuck at 2:59* for some time.

- It seems to me that I do *not* obtain inferential knowledge of q, on the basis of p, in the counterfactual scenario. [See Luzzi's [10] for an insightful diagnosis/discussion.]
- If this is correct (and assuming that Warfield is correct about his original case), then we have a *stronger* KFF…

- …we seem to have a case involving inferential knowledge of q on the basis of a false relevant premise p, *and such that*:
  - ☞ If S's belief that p had *not* been false, then S would *not* have been in a position to know that q on the basis of a competent deduction from p.
- Now, S's belief that p is *not merely* "*causally* essential" to the production of S's inferential knowledge that q (in Klein's sense). The *falsity* of S's belief that p seems "essential".
- There are several reasons why this is important:
  - Commentators (to date) have not focused on the precise role that the *falsity* of S's belief that p can play.
  - Commentators (to date) seem to presuppose that it is *despite* the falsity of S's basis belief that S knows q.
  - Some commentators presuppose that there must be a *specific* "*nearby* truth" that plays a certain epistemic role. This example (and other variants) call that into question.
- Next, I will discuss some forms of "resistance" to (KFF)/(KFNK). I will begin with "Coffman's Conjecture".

- Coffman [2, *pp*. 190–1] conjectures that in *all* cases of (KFF)…

  …we can identify a *true proposition* p' with the following two features:

  - the subject is (at least) disposed to believe p',
  - if the subject's inferential belief (that q) had been based on a belief in p', the inferential belief would (still) have constituted knowledge.

- In the cases on which I am focusing, Coffman's chosen p' is:
  (p') It is *approximately* 2:59pm (*e.g.*, 2:59pm ± 2 minutes).
- We can amend our last example, so as to *refute* (*this* version of) Coffman's conjecture. To wit, consider this amendment:

  I am confident that my fancy watch is *exactly* accurate, whereas I believe that the Campanile clock is only accurate to within (say) two minutes. And, as a result, I am disposed to come to believe "it is *approximately t*" when I look at the Campanile clock and it reads exactly t; whereas, I am disposed to come to believe "it is *exactly t*" when when I look at my fancy watch and it reads exactly t.

- Having said that, I think there is *something* right about this "approximate truth" idea (remember, Hilpinen thought so too).

- Interestingly, one thing Klein is trying to do in [8] is to *explicate* Hilpinen's "p is close to the truth" requirement.
- The key to Klein's explication is t. Recall, (2) Klein's t must (*i*) be entailed by p, and (*ii*) propositionally justify q (for S).
- Klein *also* requires that t satisfy the following condition:

  4. Whatever *doxastically* justifies S's belief that p must also *propositionally* justify t (for S).

- In our examples, it seems that $t = p'$ (*viz.*, Coffman's p').
- Note that p' satisfies Klein's (2)–(4). Clearly, (2) p entails p'. And, it also seems clear that (3) p' propositionally justifies q (for S). A little thought reveals that p' satisfies (4), too.
- I *suppose this* is what doxastically justifies p for S (?):
  (p'') My watch *reads* 2:59pm, and my watch is *exactly* accurate.
- And, plausibly, p'' *does* propositionally justify t (for S).
- Coffman's KFF-conjecture about p' was false. What about Klein's conjecture about t? Must there *always* be such a t?

- I don't think so. I have a rather complicated argument for this claim, which involves (KFNK) [but *not* (KFF)] cases with a generalized Hilpinen/Warfield structure [4].
- I don't have time here to slog through that argument. Instead, I will discuss a different (and simpler) sort of (KFF) example that arose from discussions with Tomoji Shogenji.

  Your sister Sue, who studies Japanese at Columbia, tells you that (p) her new boyfriend Sean was born in Japan and he speaks Japanese. You know Sue does not tell a lie on matters of this nature (and that she is sufficiently expert on both topics, but see below). So, you (justifiably) come to believe that p. From the conjunction p, you competently deduce that (q) Sean speaks Japanese. As it turns out, Sean was not born in Japan. But, this need not undermine your knowledge that q.

- Sue, who studies Japanese at Columbia, would not be fooled by Sean into believing that he spoke Japanese if he did not speak Japanese (though she *can* be fooled about where Sean was born — because she is not *as* expert on such matters).
- This (again) seems to be a case of (KFF). The question is whether it satisfies Klein's t-requirements (2)–(4).

- In Shogenji's example, we have the following claims:
  (p) Sean is from Japan and Sean speaks Japanese.
  (q) Sean speaks Japanese.
- If Klein is right, then there must be a true t such that:

  2. p *entails* t, *and* t propositionally justifies q (for S).
  3. Had S *not* come to believe p, then S would *not* have come to believe t (nor would have S *concluded/inferred* that q).

- The only claim that seems to be a plausible candidate for the "Kleinian surrogate" t in this example is q *itself*.
- So, if Klein's requirements are to be satisfied in this type of case, he'll have to say that t *propositionally justifies itself*.
- Klein [8, *fn.* 48] thinks that in such cases it is important that he be able to identify an *alternative* "surrogate" proposition $t \neq q$, so as not to require "self-propositional justification".
- I don't think that can be done in this sort of case.

- I'll briefly discuss one last form of "resistance" to (KFF).
- Coffman's choice of "surrogate epistemicizer" here was:

  (p') It is *approximately* 2:59pm (*e.g.*, 2:59pm ± 2 minutes).
- But, why not go for the following *alternative* "surrogate"?

  ($p^\star$) My watch *reads* 2:59pm, and it is "reasonably" accurate.

  After all:

  (i) I am (plausibly) *disposed to believe* $p^\star$ in the example.

  (ii) It could be argued (plausibly) that if my belief that q had been based on $p^\star$ (rather than p) then it would (still) have constituted inferential *knowledge* that q.
- This is an interesting line. But, is there a "dilemma" here?

  (a) $p^\star$ does *not* entail q. Then, we have a *non*-deductive "surrogate inference" going "proxy" for a competent *deduction* that led to knowledge that q. Is that kosher?

  (b) $p^\star$ *does* entail q. Then, presumably, $p^\star$ must *also* entail *some* "approximate truth" claim *like* p'. And, then, one wonders whether *that* claim is doing the "epistemicizing".

- In the sorts of examples we've been discussing, there seems to be *some* truth to Hilpinen's "approximate truth" remark.

  ☞ If S's belief that p had *not* been (even) *approximately true*, then S would *not* have been in a position to know that q on the basis of a competent deduction from p.
- Even in my *Analysis* example — where the *falsity* of p is explanatorily relevant to the fact that S knows that q on the basis of p — the *approximate truth* of p is *also* relevant.
- As decades of research on "verisimilitude" have shown, it is difficult to explicate "p is approximately true" [11, *chs.* 10–11].
- This is a neat (and surprisingly under-explored) area of overlap between the contemporary literatures of (mainstream) epistemology and philosophy of science.

- Final remark: it's not clear *precisely how* the *existence* of "nearby" known/true claims is supposed to bear on the probative value of (*prima facie*) KFF (or KFNK) cases [10, 13].

[1] M. Clark, *Knowledge and grounds: a comment on Mr. Gettier's paper*, *Analysis*, 1963.

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[3] B. Fitelson, *Strengthening the case for knowledge from falsehood*, *Analysis*, 2010.

[4] ———, *Knowledge from non-knowledge*, unpublished manuscript, 2010.

[5] E. Gettier, *Is justified true belief knowledge?*, *Analysis*, 1963.

[6] G. Harman, *Thought*, Princeton University Press, 1973.

[7] R. Hilpinen, *Knowledge and conditionals*, *Philosophical Perspectives 2 (Epistemology)*, 1988.

[8] P. Klein, *Useful false beliefs*, *New Essays in Epistemology*, Q. Smith (*ed.*), 2008.

[9] F. Luzzi, *Counter-Closure*, *Australasian Journal of Philosophy*, September, 2010.

[10] ———, *Knowledge from ignorance*, *Phd. Dissertation, U. Aberdeen*, December, 2010.

[11] D. Miller, *Out of Error: Further Essays on Critical Rationalism*, Ashgate, 2005.

[12] J. Saunders and N. Champawat, *Mr. Clark's definition of 'knowledge'*, *Analysis*, 1964.

[13] T. Warfield, *Knowledge from falsehood*, *Philosophical Persepctives 19 (Epistemology)*, 2005.