Some Setup & History

The Contemporary Dialectic

Assessment & A Worry

References

- Two key principles regarding inferential knowledge.
  - **Closure** (C). If S knows that P and S competently deduces Q from P (while maintaining her knowledge that P), then S (thereby) comes to know that Q (via deductive inference).
  - **Counter-Closure** [8] (CC). If S competently deduces Q from her belief that P, (thereby) coming to know Q (via deductive inference), then S knew that P (and she maintained her knowledge of P throughout the inference).

- My main focus will be on (CC), but I'll return to (C) in the end. I'll also discuss the following *generalization* of (CC).

  **Generalized Counter-Closure** (GCC). If S infers Q from her belief that P, (thereby) coming to know Q (via said inference), then S knew that P (and she maintained her knowledge of P throughout the inference).

- Interestingly, the first (alleged) cases of “knowledge from falsehood” (KFF) were (alleged) counterexamples to (GCC).

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- In the immediate wake of Gettier, Saunders & Champawat [11] presented (something similar to) the following case.

  **Urn**. An urn contains 2 balls of unknown (to Sam) color distribution (each ball is either red or blue). 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: “(P) I have sampled a red ball from the urn exactly n times in a row. ∴ (Q) Both of the balls in the urn are red.”

- As it happens, the streak of red balls observed by Sam had length n + 1. So, P is false, but (intuitively) Sam knows Q.

- I will return to **Urn**, below. But, first, I will rehearse some of the recent literature on KFF. Here, I follow Luzzi’s [8].

- Recently, there’s been a flurry of papers on KFF (and KFNK) [6, 13, 7, 2, 9, 4, 1, 8, 10, 12]. I won’t attempt a survey here. Rather, I’ll focus on one recurring theme (and one worry).

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- Here is a typical (putative) counterexample to (CC) [8].

  **Handouts**. Counting with some care the number of people present at my talk, I reason: “(P) There are 53 people at my talk; therefore (Q) 100 handout copies are sufficient.’

- As it happens, P is false. There are 52 people in attendance — I double counted one person who changed seats during the count. Nonetheless, I (intuitively) know that Q.

- The standard (initial) response to such examples is to posit the existence of an *alternative epistemicizer*, P′, such that (a) S is disposed to believe P′, (b) S is in a position to know P′, and (c) P′ would suffice to epistemicize S’s belief that Q.

  (P′) There are *approximately* 53 people at my talk.

- Unfortunately, this choice of P′ will not always work. Luzzi [8] reports the following example due to Crispin Wright.\(^1\)

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- **Marbles**. As they swiftly roll by on the wooden track I have assembled for them, I count a series of marbles. The procedure yields 53 as a result. With some confidence, I come to believe that there are 53 marbles on the wooden track. Recalling that my logic professor told me earlier that day that precision entails approximation, I competently deduce that there are approximately 53 marbles (without any loss of confidence in my belief that there are 53).

- Despite my best efforts in the difficult task of counting the rapidly-rolling marbles, I double-counted one marble; there are actually only 52. So, P is false, but I know that Q.

  In this case, retreating to P′ is not helpful, since P′ = Q.

- At this point, there are various alternative epistemicizers that the defender of (CC) might try to appeal to. Specifically, consider the following two alternatives:

  (P′\(_S\)) My total evidence (E\(_P\)) regarding P.

  (P′\(_G\)) E\(_P\) and if E\(_P\), then Q.

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\(^1\)I had independently come up with similar examples in a seminar I taught at Berkeley in 2010 [5]. Luzzi & Wright scooped me on various things, in fact.
As Luzzi [8] points out, using \( P'_a \) as one's alternative epistemicizer has the consequence of turning a (seemingly) deductive inference into an ampliative (or inductive) one.

We can try to restore the intuitively deductive nature of the inference in this case by using something like \( P'_S \) instead.

But, the availability of \( P'_S \) is not limited to deductive cases.

By combining Saunders & Champawat's Urn and Wright's Marbles, we can generate an inferential chain that results in a dilemma for the [GCC] alternative epistemicizer strategy.

**Wright's Urn.** An urn contains 2 balls of unknown (to Wright) color distribution (each ball is either red or blue). Wright samples one ball (with replacement) from the urn many times. He is a very reliable counter and observer (and he knows all of this). He then reasons as follows: “(P) I have sampled a red ball from the urn exactly \( n \) times in a row. \( \therefore (Q_1) \) I have sampled a red ball from the urn approximately \( n \) times in a row. \( \therefore (Q_2) \) Both of the balls in the urn are red.”

As before, Wright seems to know \( (Q_2) \) in this case. But, his pair of inferences trace back to a false initial premise \( (P) \).

As in Marbles, appealing to an approximation claim \( P' \) as our alternative epistemicizer for \( Q_1 \) will not work (since \( P' = Q_1 \)). Using \( P'_S \) would ensure that \( Q_1 \) is “deduced”.

But, then, what prevents us from epistemicizing \( Q_2 \) via \( P''_S \)?

\[ (P''_S) \ E_p \text{ and if } E_p, \text{ then } Q_2. \]

This would seem to turn \( Q_2 \) into deductive inferential knowledge. But, intuitively, this inference was ampliative.

Consider the following two principles:

- **Factivity.** If \( E \) is (an explanatorily essential) part of \( S \)'s epistemic basis for her belief that \( Q \), then \( E \) is true.

- **Actuality** [1]. If \( S \) comes to believe that \( Q \) via competent deductive inference from her belief that \( P \) (while maintaining her belief that \( P \)), then \( P \) is (an explanatorily essential) part of \( S \)'s epistemic basis for her belief that \( Q \).

**Factivity + Actuality** jointly entail the following principle:

\[ (\dagger) \text{ If } S \text{ comes to believe that } Q \text{ via competent deductive inference from her belief that } P \text{ (while maintaining her belief that } P) \text{, then } P \text{ is true.} \]

The (alleged) counterexamples to (CC) we've been discussing would seem to be uncontroversial counterexamples to \( (\dagger) \).

So, either Factivity or Actuality must go. Defenders of (CC) tend to reject Actuality — they drive a wedge between:

- (1) Why does \( S \) believe that \( Q \)?
- (2) Why does \( S \) know that \( Q \)?

\( (1)' \)'s explanans include \( S \)'s inference from her belief that \( P \), but \( (2)' \)'s explanans do not (they incl. another epistemicizer \( P' \)).

This disunified explanatory strategy threatens Closure's (epistemic) explanatoriness, since ampliative alternative epistemicizers \( P'_a \) are almost always available. In the end, I prefer the package \{Actuality, (C)\} to \{Factivity, (C), (CC)\}.

References