

Notes on “Coherence of Inferences”

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In “[Coherence of Inferences](#)”, I argued that “the paradigmatic examples of deductions, such as *modus ponens* and hypothetical syllogism, are not inferential forms, but coherence requirements for inferences”. My reasoning was based on the assumption that the so called premises are actually inferences—the predominant Quinean view that this assumption rests on a use-mention fallacy is criticised [in another paper](#). I also made the bolder claim that “since any reasoner aims to be coherent, any inference must be deductive”. These claims need to be revisited.

Let’s start with the notion that deductions are patterns of coherence. This doesn’t explain what we should call the inferences used in these patterns. It can be argued that the inferences used in these patterns are the actual deductions. So, a deduction is an attempt to establish a material implication. Consequently, these coherence patterns only apply to deductions. To illustrate this point, let $A \sim B$ be an inductive claim that it is improbable that B is false if A is true. This inference will contradict *modus ponens*, given that it’s still possible, but unlikely, that B is false if both A increases the chances of B being true and A is true.

In fact, logic should be viewed from a probabilistic lens from the ground up. Inferences are attempts to increase the probability of the conclusion. So-called inductive inferences attempt to identify when it is improbable that the conclusion is false given the truth of the premises, whereas deductive inferences attempt to identify when it is certain that the conclusion cannot be false given the truth of the premises. Since we can be wrong about our deductive claims, what appears to us to be certain presently can become uncertain later on. Deduction aims to be certain, even though it is fallible. Whether we are certain of the conclusion will depend on the nature of the subject (if the object of study is homogeneous or stochastic).

Another reason to abandon the emphasis on the formal aspects of logic is that any serious analysis of inferences in terms of logical form is impractical since it should involve not only the surface premises but also all background assumptions in a Russellian fashion (whether or not the epistemic agent has referential or attributive intentions is irrelevant, since any Russellian analysis reveals ontological commitments in any assertive commitment).