

So the Equivalence Thesis takes the *logical form* of the indicative conditional to be that of $A \rightarrow B$. This implies that an indicative conditional behaves just as the exclusive disjunction (or \vee). (e.g. ‘If it rains, then the streets are wet’ says the same as ‘either it doesn’t rain or the streets are wet’.)

Here’s an argument for ET:

1. The indicative conditional is truth-functional
2. If the indicative conditional is truth-functional, then the logical form of the indicative conditional is that of $A \rightarrow B$
3. Therefore, the logical form of the indicative conditional is that of $A \rightarrow B$

The second premise of this argument is motivated by the observation that other truth-functional connections clearly do not give us the way we intuitively reason with indicative conditionals. (e.g. ‘if Trump doesn’t use Twitter, then Paris is in France’, this is true but \wedge would make it false; ‘If Trump does use Twitter, then Paris is in Germany’, this is false but \vee would render it true; etc...)

Paradoxes of the conditional

The Equivalence Thesis runs into trouble, however.

- A. Contraposition: “If Corbyn has majority support, then it isn’t a large majority. Therefore, if Corbyn is supported by a large majority, then he doesn’t have majority support.” ($A \rightarrow B \vdash \neg B \rightarrow \neg A$)
- B. Antecedent strengthening: “If I strike this match then it will light. Therefore, if I pour water on this match and strike it, it will light.” ($A \rightarrow C \vdash (A \wedge B) \rightarrow C$)

Both inferences are valid in TFL, yet seem invalid in English. It is possible to deny that in these examples we’re dealing with genuine indicative conditionals, or that the conditionals we have are complex (i.e. the first ‘conditional’ in A is just an atomic sentence, i.e. that he’s supported by a no more than a small majority; the second conditional in B, similarly, has an atomic antecedent: ‘water-and-striking’ instead of ‘water’ and ‘striking’). But there are serious problem cases:

- C. Ice is not warmer than water. Therefore, if ice is warmer than water, ice is not warmer than water. ($\neg A \vdash A \rightarrow B$)
- D. Ice floats on water. Therefore, if ice is denser than water, ice floats on water. ($B \vdash A \rightarrow B$)

Argument against ET

This suggests that merely sometimes indicative conditionals conform to the material conditional: sometimes they do not. Yet ET implies that they always conform to the material conditional. Hence, ET is false.

1. If the indicative conditional is truth-functional, then the logical form of the indicative conditional is that of $A \rightarrow B$
2. The logical form of the indicative conditional is not that of $A \rightarrow B$
3. Therefore, the indicative conditional is not truth-functional

Two available routes

The ‘paradoxes of the conditional’ present us with two available options. Either we reject ET and offer a non-truth-functional account of the indicative conditional:

Non-truth-functional accounts agree that ‘If A, B’ is false when A is true and B is false; and they agree that the conditional is sometimes true for the other three combinations of truth-values for the components; but they deny that the conditional is always true in each of these three cases. (Edgington 2008)

In that case we have to find a non-truth-functional interpretation of the correctness of inferences like: “If Paula’s argument is valid, then she gets full marks. But look, her argument is valid! So she gets full marks.”

Alternatively, we can employ Grice’s framework and say that *what is said* in ‘if..., then...’ statements is always truth-functional, but that this does leave room for further *implicatures*.

Suppose I believe that the match will be cancelled anyway, and I tell you that “if it rains, the match will be cancelled”. What I say can indeed be asserted based on what I believe. However, by uttering just “If it rains, the match will be cancelled” I also imply (conventionally) that the condition of rain would somehow be responsible if the match were to be cancelled. So I have said something misleading.