int.1 Counterfactuals

cnt:int:cnt:sec A very common and important form of "if ... then ..." constructions in English are built using the past subjunctive form of *to be*: "if it were the case that ... then it would be the case that ..." Because usually the antecedent of such a conditional is false, i.e., counter to fact, they are called *counterfactual conditionals* (and because they use the subjunctive form of *to be*, also *subjunctive conditionals*. They are distinguished from *indicative* conditionals which take the form of "if it is the case that ... then it is the case that ..." Counterfactual and indicative conditionals differ in truth conditions. Consider Adams's famous example:

> If Oswald didn't kill Kennedy, someone else did.
>
> If Oswald hadn't killed Kennedy, someone else would have.

The first is indicative, the second counterfactual. The first is clearly true: we know President John F. Kennedy was killed by *someone*, and if that someone wasn't (contrary to the Warren Report) Lee Harvey Oswald, then someone else killed Kennedy. The second one says something different. It claims that if Oswald hadn't killed Kennedy, i.e., if the Dallas shooting had been avoided or had been unsuccessful, history would have subsequently unfolded in such a way that another assassination would have been successful. In order for it to be true, it would have to be the case that powerful forces had conspired to ensure JFK's death (as many JFK conspiracy theorists believe).

It is a live debate whether the *indicative* conditional is correctly captured by the material conditional, in particular, whether the paradoxes of the material conditional can be "explained" in a way that is compatible with it giving the truth conditions for English indicative conditionals. By contrast, it is uncontroversial that counterfactual conditionals cannot be symbolized correctly by the material conditionals. That is clear because, even though generally the antecedents of counterfactuals are false, not all counterfactuals with false antecedents are true—for instance, if you believe the Warren Report, and there was no conspiracy to assassinate JFK, then Adams's counterfactual conditional is an example.

Counterfactual conditionals play an important role in causal reasoning: a prime example of the use of counterfactuals is to express causal relationships. E.g., striking a match causes it to light, and you can express this by saying "if this match were struck, it would light." Material, and generally indicative conditionals, cannot be used to express this: "the match is struck $\rightarrow$ the match lights" is true if the match is never struck, regardless of what would happen if it were. Even worse, "the match is struck $\rightarrow$ the match turns into a bouquet of flowers" is also true if it is never struck, but the match would certainly not turn into a bouquet of flowers if it were struck.

It is still debated What exactly the correct logic of counterfactuals is. An influential analysis of counterfactuals was given by Stalnaker and Lewis. According to them, a counterfactual "if it were the case that S then it would be

the case that T" is true iff T is true in the counterfactual situation ("possible world") that is closest to the way the actual world is and where S is true. This is called an "ontic" analysis, since it makes reference to an ontology of possible worlds. Other analyses make use of conditional probabilities or theories of belief revision. There is a proliferation of different proposed logics of counterfactuals. There isn't even a single Lewis–Stalnaker logic of counterfactuals: even though Stalnaker and Lewis proposed accounts along similar lines with reference to closest possible worlds, the assumptions they made result in different valid inferences.

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Bibliography