

Negated Conditionals

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Abstract:

Sentence connectors like "if-then", "...-if" etc. can syntactically be understood as operators which take two sentences or sentence fragments as inputs and produce a complex sentence as their respective outputs. Following Grice, connectors can be interpreted as triggers of conventional or conversational implicatures as well as (potential) presuppositions. If we embed conditionals under negation the final outputs depend on such relevant *background assumptions*.

I will concentrate on the following examples:

1. (a) "*It is not the case that if* he proposes to her, she will refuse him." [Grice (1989, 82)]
Background assumption "He proposes to her." yields the reading:
 "*If* he proposes to her, she will *not* refuse him."
(b) "*It is not the case that if* I will capture your queen *then* I will lose this chess match."
Background assumption "I will capture your queen" yields:
 "*If* I will capture your queen *then* I will *not* lose this chess match."
= keeping "if-then"-structure & negations of the consequent (*apodosis*) in both cases.
2. "*It is not the case that if* it is raining we can have supper."
Empty background assumption yields a *logical* reading:
 "It is raining *and* we cannot have supper."
= *negation of the consequent* & changing to a *conjunction*
3. "*It is not the case that if* John leans out of that window any further, he'll fall."
Suggested inference "*If* John *doesn't* lean out of that window any further, he *won't* fall." as background assumption yields
 "John leans out of that window any further *if and only if* he *won't* fall."
4. "*It is not the case that if* it were raining, *then* John would be inside."
(i) Background assumption "It is *not* raining & John is *not* inside." yields simply
 "John *is* inside" – switching from a subjunctive to an indicative consequent & ignoring the antecedent (protasis) completely!
(ii) Background assumption only "It is not raining." yields
 "*It is* raining *and* John *is* inside." – switching from a counterfactual to a indicative conditional.

In order to grasp the semantic as well as the pragmatic part of meaning we start with a two-dimensional translation of complex conditionals. At the beginning there is no functional connection between both dimensions. The first dimension is used to explicate the truth-functional part of meaning ("what is said"). The second one is reserved for representing several kinds of background assumptions (potential presuppositions, implicatures, expected meanings etc.). But in the context of negation we observe a complex but homogeneous interaction of both dimensions. Horn (1985) distinguishes between a *descriptive* negation (two-valued *semantics*) and a *metalinguistic* use of negation (*pragmatics*). If we take the controlled interaction between different levels of utterance interpretation into account we can use *one and the same negation operator* to get the above mentioned cases which vary in accordance with the relevant type of background assumptions.

Furthermore, using our two-dimensional logic of conditionals in particular and sentence connectors in general we can precisely define such relations like "necessitation", "presupposition", "scalar implicature" etc. There are alternative interpretations of known experimental data with respect to indicative and counterfactual conditionals.