

Conditionals in Paris 2019

John Mackay
University of Wisconsin-Madison

1. Overview of Indicative/Subjunctive Distinction

Five differences between indicative and subjunctive conditionals:

i. Morphological/Syntactic:

- (1) If the match is struck, it will light.
- (2) If the match were struck, it would strike.

- (3) If the butler didn't commit the crime, the gardener did.
- (4) If the butler hadn't committed the crime, the gardener would have.

The traditional name in English for the forms in (1) and (3) is “indicative” and that for the forms in (2) and (4) is “subjunctive”. I will continue to use these terms here. However, they are misleading. The English subjunctive is in general somewhat vestigial. Iatridou (2000) observes that past-oriented morphology—sometimes past tense, sometimes imperfect aspect—is present on the “subjunctive” form in a wide variety of languages.

ii. Truth conditions:

Adams (1970) draws our attention to the following pair:

- (5) If Oswald didn't shoot Kennedy, someone else did.
- (6) If Oswald hadn't shot Kennedy, someone else would have.

As Adams points out, most of us likely accept (5) and reject (6). We think (5) is true because we know that Kennedy was killed; thus, someone else must have killed him, if Oswald did not. The subjunctive (6), by contrast, suggests that some second assassin was waiting in the wings, which most of us presumably reject.

Many other such pairs differ in their intuitive truth conditions between indicative and subjunctive forms.

iii. Assertability conditions:

Stalnaker (1975) defines the *context set* as the set of worlds consistent with the presuppositions of the context (the *common ground*). He states the following observations:

- (i) An indicative conditional is assertable only if the antecedent is compatible with the common ground (equivalently: if the antecedent is incompatible with the common ground, the conditional is assertable only in the subjunctive).
- (ii) It is *not* the case that a subjunctive conditional is assertable only if the antecedent is incompatible with the common ground. However, the cases in which a conditional with an antecedent compatible with the common ground is asserted in the subjunctive are rare.

Observation (i) is motivated by the fact that it is odd to assert a conditional in the indicative when the antecedent is presupposed to be false. The evidence for (ii) involves examples like the following from Anderson (1951):

- (7) If the patient had taken arsenic, he would show just the symptoms which he does, in fact, show.

As Anderson points out, (7) is naturally taken to support the hypothesis that the patient took arsenic.

iv. Interaction with actuality:

Jackson (1987) observes that subjunctive conditionals can be used to contrast counterfactual possibilities with how things actually are, while indicative conditionals cannot.

- (8) If Oswald didn't shoot Kennedy, things are different from how they actually are.
(9) If Oswald hadn't shot Kennedy, things would be different from how they actually are.

(9) is a natural claim to make, and is true. (8), by contrast, sounds absurd or nonsensical. In general, an indicative conditional cannot have an antecedent or consequent stating that things are different from how they actually are.

v. Interaction with singular and kind terms?

This claim is more controversial, but some theorists maintain that indicatives give rise to non-rigid readings of singular terms (names and pronouns) and kind terms, while subjunctives give rise to rigid readings of them.

Chalmers (1998) presents the following examples:

- (10) If Prince Albert Victor killed those people, he is Jack the Ripper (and Jack the Ripper killed those people).
(11) If Prince Albert Victor had killed those people, he wouldn't be Jack the Ripper (and Jack the Ripper wouldn't have killed those people).

(12) If XYZ is the liquid in the oceans and lakes, water is XYZ.
(13) If XYZ were the liquid in the oceans and lakes, water wouldn't be in the oceans and lakes.

All are intuitively true. But this suggests, argues Chalmers, that in the indicative, "Jack the Ripper" and "water" are read non-rigidly. "Jack the Ripper" has an intension such that at some possible world it picks out Prince Albert Victor, and "water" has an intension such that at some possible world it picks out XYZ.

Possible worlds analyses: Lewis and Stalnaker

In a possible worlds analysis of the conditional, the conditional *if p, q* is true at a world *w* iff the consequent *q* is true at certain possible worlds at which *p* is true.

The fact that indicative and subjunctive versions of a conditional can differ in truth value means that it cannot be the case that either conditional requires the consequent to be true at all possible worlds at which the antecedent is true.

Both Stalnaker (1968) and Lewis (1973) give a *variably strict conditional* theory according to which the conditional *if p, q* requires *q* to be true at the world or worlds where *p* is true which are closest in some respect to the world of evaluation. Lewis, however, only intends his theory as an account of counterfactuals, not of indicatives.

Stalnaker gives his semantics in terms of a selection function *f*. Given an antecedent *p* and a world of evaluation *w*, the value of *f(p, w)* will be a world *w'*. The conditional has the following truth conditions:

if p, q is true at *w* iff *q* is true at *f(p, w)*.

Stalnaker's semantics incorporates the *uniqueness assumption*—the thesis that for any proposition *p* and for any world *w*, there is a single closest *p*-world to *w*. Lewis does not accept this assumption, nor even the weaker *limit assumption* that for any *p* and *w* there is a defined set of closest *p*-worlds to *w*. Lewis states a number of equivalent formulations of his view; one involves a relation of comparative similarity between worlds \leq , where $w' \leq_w w''$ means that *w'* is more similar to *w* than is *w''*. Lewis assigns the counterfactual conditional the following truth conditions:

if p, q is true at *w* iff either:

- (i) *p* is true at no accessible world, or
- (ii) there is a world *w'* such that
 - *p* is true at *w'*
 - for all worlds *w''*, if $w'' \leq_w w'$ then *p* \supset *q* is true at *w''*.

These differences lead to some differences between the logics of the two theorists. But in principle, either semantics may be applicable to either the indicative or the subjunctive forms.

Asymmetry of Past and Future in Subjunctives

In Lewis (1973), there is little definition of "similarity". This led Fine (1973) to object to Lewis's theory with the following sentence:

(14) If Nixon had pressed the button, there would have been a nuclear holocaust.

Sentence (14) suggests that the standard way we evaluate the subjunctive conditional involves selecting (a) world(s) that:

- are just like the actual worlds up to some time before the antecedent
- start to vary from the actual world in a way to make the antecedent true somewhat naturally
- proceeds afterwards in accordance with the laws of nature

Edgington (2008), meanwhile, points out that subjunctives can receive epistemic readings. Suppose that a treasure hunt is being organized in teams of two, and the organizer tells one member of a team that the treasure is either in the attic or the garden. That player tells his teammate to look in the garden while he looks in the attic. Afterwards, when the treasure is

found in the attic, the teammate asks why he was asked to look in the garden. The other player responds that given that the treasure was either in the attic or the garden:

(15) If it hadn't been in the attic, it would have been the garden.

Stalnaker's Constraint on the Indicative

Stalnaker (1975) argues that in indicatives, the selection function is subject to the following constraint:

If the conditional is being evaluated at a world in the context set, then the world selected must, if possible, be within the context set as well (where C is the context set, if $w \in C$, then $f(p, w) \in C$.)

This constraint is itself stated in conditional form. Its antecedent, "if the conditional is evaluated at a world in the context set" is equivalent to "if the presuppositions if the context are all true at the world of evaluation". This means that the constraint does not guarantee that the world selected is in the context set for all indicatives. All it takes is for the speakers to have one false presupposition for it to be consistent with Stalnaker's constraint that the world selected for an indicative be outside the context set.

For both indicatives and subjunctives, another constraint on Stalnaker's selection function is that for all propositions p and worlds w , if p is true at w , then $f(p, w)=w$. This is why Stalnaker's semantics validates *modus ponens*. The antecedent on Stalnaker's constraint on indicatives, discussed above, is critical for the indicative constraint to be consistent with this point. Suppose it were always the case that the selected world were within the context set, even if the world of evaluation were outside the context set. Suppose further that some propositions p and $\sim q$ were true at the world of evaluation w , but speakers falsely presupposed q . In that case, then at any p world in the context set, q would be true. Thus if p , q would be true, even though p was true and q false. But Stalnaker's constraint, rightly, does not make this prediction.

The difference in assertability, however, stated above, does not have this conditional qualification. Given that the constraint on selection functions only restricts the selected world to the context set when the world of evaluation is in the context set, why is the principle of assertability not likewise restricted to the claim that if the world of evaluation is in the context set, then a conditional whose antecedent is compatible with the common ground should be asserted in the indicative?

- Stalnaker's (1978) model of assertion: an utterance should be assertable at every world in the context set, not just at the world of evaluation.

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