

## Conditionals

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1. The question for this lecture: How are the truth conditions of conditional sentences like the following derived compositionally?

(1.1) If Brown wins the election, Smith will retire.

2. Something to set aside first. Examples like the two below suggest that there are two kinds of conditionals, typically called *indicative* and *counterfactual*:

(2.1) If Oswald didn't kill Kennedy, someone else did.

(2.2) If Oswald hadn't killed Kennedy, someone else would have.

We will only be considering indicative conditionals in this lecture.

3. And a question we should ask first: Do conditionals *have* truth conditions?
4. One theory is this: In a sentence of the form 'If A, C', 'A' and 'C' both denote truth values, and 'if' denotes the 2-place relation between truth values  $\{ \langle x, y \rangle : x = F \text{ or } y = T \}$ . So 'If A, C' is true iff 'A' is false or 'C' is true (equivalently, iff it is not the case that 'A' is true and 'C' is false).

[Compare this with theories we considered previously for 'X loves Y' and for 'Every F is G'. In the first case, 'X' and 'Y' denote people, and 'loves' denotes the 2-place relation between people  $\{ \langle x, y \rangle : x \text{ loves } y \}$ ; in the second case, 'F' and 'G' denote sets, and 'every' denotes the 2-place relation between sets  $\{ \langle x, y \rangle : x \text{ is a subset of } y \}$ .]

If this simple theory is right, then the following sentences all have the same truth conditions:

(4.1) If A, C.

(4.2) Either it is not the case that A or it is the case that C

(4.3) It is not the case that both it is the case that A and it is not the case that C.

This means that we can adequately translate the English sentence 'If A, C' into the Predicate Calculus formulae ' $A \supset C$ ' or ' $\neg A \vee C$ ' or ' $\neg[A \wedge \neg C]$ '.

5. Problems:
  - (5.1) According to the theory, If 'A' is false then 'If A, C' is true. So, since today is not Wednesday, it is true that if today is Wednesday then today is Thursday.
  - (5.2) According to the theory, If 'C' is true then 'If A, C' is true. So, since today is Tuesday, it is true that if today is Wednesday then today is Tuesday.
  - (5.3) You roll a die and I place a bet on what the outcome is by uttering 'If it's even it's a six'. You reveal that it's a 3. According to the theory, what I said was true and I win the bet.

It seems that our simple theory gives the wrong truth conditions for 'If A, C'. Perhaps it sometimes does not even have a truth value?

6. Some prominent philosophers have argued that it gives the *right* truth conditions: Grice, Lewis, Jackson. We will look at just two approaches: Grice's and Jackson's. They each

claim that in the problem cases we tend to mistake *assertibility* conditions for truth conditions.

7. According to Grice, our intuitions about the problem cases can be explained away by appeal to *conversational implicature*.

How? Suppose that the theory is right, and suppose that a speaker S assertorically utters a sentence of the form 'If A, C'.

- (a) If her grounds for the assertion are that 'A' is false, then according to the maxim of Quantity she ought instead to have uttered 'it is not the case that A', because it is more informative.
- (b) If her grounds for asserting this are that 'C' is false, then according to the maxim of quantity she ought instead to have uttered 'C', because it is more informative.
- (c) Since she did not utter either of these, and since she is observing the Cooperative Principle, neither of these can be her grounds for the assertion.
- (d) So her grounds must be that there is some appropriate connection between what 'A' says and what 'C' says.
- (e) Thus, it is conversationally implicated that there is some such connection.

Since an utterance of 'If A, C' conversationally implicates an appropriate connection between what 'A' says and what 'C' says, it is inappropriate to utter 'If A, C' unless there is such a connection. Thus, it is part of the *assertibility* conditions that there is such a connection. But it is not part of the *truth* conditions. In the problem cases, we mistake assertibility conditions for truth conditions.

8. There are, however, occasions on which it *does* seem ok to assert 'If A, C' on the grounds that C: 'I will go for a run if it rains, and I will go for a run if it does not rain'. This is a problem for Grice.

According to Jackson, an assertoric utterance of 'If A, C' only implicates that one's grounds for the assertion are not that 'A' is false. He claims that this is a *conventional implicature*, not a conversational implicature – it is part of the *conventional* meaning of 'if'.

To help decide between Grice and Jackson, we can try Grice's tests of cancellability and detachability: conversational implicatures can be cancelled, but conventional ones cannot; conventional implicatures can be detached, but conversational ones cannot.