PH130 Meaning and Communication
Lecture 8 s.butterfill at warwick.ac.uk

Note: Symbols

'A⊃B' is often material implication (A is false or B is true)

In *Starting Logic* we used 'A→B' for material implication.

Adams (1965: 184): "We here use … the arrow '→' to symbolise the *non*-material 'if-then'." Bennett and Jackson make similar uses of '→'.

Recap: Why 'if P,Q' conditionals have to be 'not or'

(1) If P, Q entails ¬(P∧¬Q)

(2) ¬P or Q entails if P, Q

[For doubts about (2), see Sainsbury (1991) §3.1 and Bennett (2003) §18.]

Indicative vs. counterfactual conditionals

If the Islamic State in Iraq hasn't captured three American Soldiers, someone else has.

If the Islamic State in Iraq hadn't captured three American Soldiers, someone else would have.

'Paradoxes' of material implication

Does the *apparent* validity of the so-called 'paradoxes of material implication' give us reason for rejecting the claim that conditionals are truth-functional?

Argument 1

Gordon Brown is the next P.M

If Gordon Brown is not the next P.M., David Beckham is.

Argument 2

Gordon Brown is the next P.M

Either Gordon Brown is the next P.M. or David Beckham is the next P.M.

The conclusion of Argument 2:

Either Gordon Brown is the next P.M. or David Beckham is the next P.M.

Conversationally implicates:

1. That we have sufficient evidence for the PE (by the Maxim of Quality—we are trying to be truthful)

2. That we do not have evidence for either disjunct of the PE (by the Maxims of Quality and Manner—we are trying to be informative and brief)

Similar claims about the conclusion of Argument 1 seem plausible. [Compare (Adams 1965: 179–80).] Do these facts about conversational implicature explain why the argument appears unacceptable?

Exercise. Which (if any) of the 9 arguments Adams offers (F1–F9) in (1965) only appear to have false conclusions because of conversational implicatures?

Exercise. Adams offers the following argument for denying that conditionals with false antecedents are capable of being true or false. Is this argument plausible?

> "the term 'true' has no clear ordinary sense as applied to conditionals, particularly to those whose antecedents prove to be false"
>
> "This is to say that conditional statements with false antecedents […] there are no clear criteria for the applications of those terms ['true' and 'false'] in such cases."
>
> "This is, of course, an assertion about the ordinary usage of the terms 'true' and 'false', and it can be verified, if at all, only by examining that usage.
>
> "We shall … leave it to the reader to verify by observation of how people dispute about the correctness of conditional statements whose antecedents prove false, that precise criteria are lacking." (Adams 1965: 169).

Are there really 'no clear criteria' for deciding the truth of conditionals with false antecedents?

1. suppose we are playing a guessing game
2. you are trying to guess the colour of a ball in my hand
3. I know what the colour of the ball is
4. I say "if it's not black it's blue"
5. Is what I say in (4) true when I am holding a black ball? Is it true when I am holding a red ball?
7. the guessing game scenario is important because in this case the usual complexities of conversation are largely suspended (Burgess 2004).

Argument 3 (from Adams)

It is not the case that if John passes history, he will graduate.

Therefore: John will pass history.

Argument 4

No head injury is too trivial to ignore

Therefore: Patients with minor head injuries should not be examined.

Confusing negations. Contrast:

> "Although his attendance at school was still very poor, Stanley never failed to miss a movie at the local theaters."
>
> (http://itre.cis.upenn.edu/~myl/languagelog/archives/000500.html)

> "There is an art, or, rather, a knack to flying. The knack lies in learning how to throw yourself at the ground and miss. … it's going to hurt if you fail to miss the ground. Most people fail to miss the ground, and if they are really trying properly, the likelihood is that they will fail to miss it fairly hard. Clearly, it is the second part, the missing, which presents the difficulties.
>
> (Douglas Adams quoted from the above url)

Incidentally there is a class of words in American English (squat, dick, …) called that seem to be entirely unaffected by the presence of negation:

a. Claudia discovered many treasures

a'. Claudia did not discover many treasures

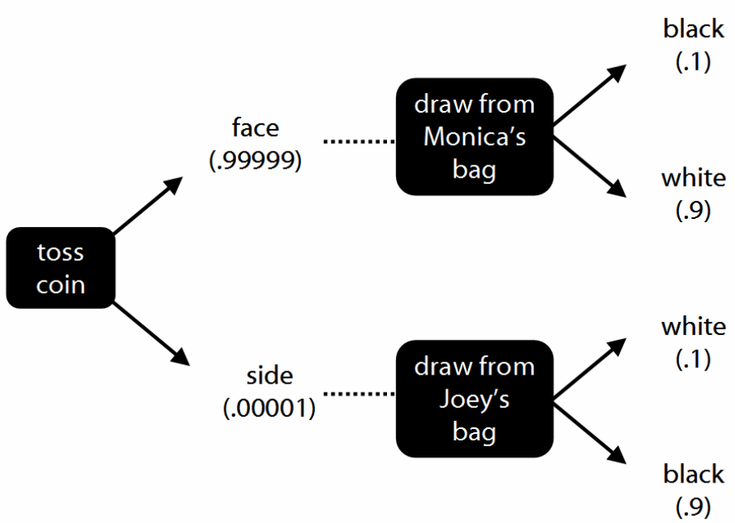
b. Irma understands dick about clones.

b'. Irma does not understand dick about clones.

(Postal 2006: Chapter 5)

The Real Argument against treating conditionals as truth functional (preview)

The diagram below describes a game. Black boxes show events; the numbers in brackets are the probabilities of the named outcomes.



Which of the following propositions seem reasonable? Consider each in turn. If you could place a bet with even odds, would you rather bet that it is true or that it is false?

a. Supposing the coin lands on its side, the ball will be white.

b. The coin will not land on its side.

c. Either the coin will not land on its side or the ball will be white.

d. If the coin lands on its side the ball will be white.

If you give different answers for (c) and (d)—if you would prefer to bet on the truth of one and on the falsity of another—how could they be *logically equivalent*?

How did you work out whether it would be advantageous to bet on (c)? How about (d)?

References

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