Week 3: Conditional analyses

Seminar on Ability // NYU, Fall 2024
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1 Conditional analyses

Hume (1748) argued that 'S can φ' means 'If S tries to φ, S succeeds'. The view was influentially revived by Moore (1912).

and variants have been defended by many since.

Prima facie motivation: felt pairwise equivalences like these.

(1) a. I can hit a bullseye on this throw.
  b. If I try to hit a bullseye on this throw, I'll succeed.

(2) a. I can swim across this pool.
  b. If I try to swim across this pool, I'll succeed.

(3) a. This elevator can carry 1500 pounds.
  b. ?If this elevator tries to carry 1500 pounds, it will succeed.
  c. [Maybe better:] If you [generic] try to carry 1500 pounds in this elevator, you'll succeed.

When I'm an iffy darts player, most people have somewhat ambivalent feelings about something like (1-a); an important observation now is that *feelings about (1-b) seem similar* (still, tbd what explains that).

Austin (1961) distinguishes two versions of a conditional analysis, one which says that the *analysis* of ability involves conditionals, and one which says that *sentences* about ability actually involve unpronounced conditionals. Austin argues against the second claim, and I don't know of good arguments for it, though it's worth noting that it's to some degree standard in linguistic semantics.

2 The strength of the conditional

The pairwise equivalences above suggest an initially plausible analysis of 'can' in terms of 'if'. But what 'if'?

I'll use $>$ for 'if'.

2.1 Cross: 'if-might'

Roughly: consider the closest possible worlds to actuality where some 'test condition' is met. $A_s\varphi$ is true at w iff φ is true at *one* of those worlds. Essentially: what *would* happen, were you to try to φ, must be *compatible* with doing φ.

On the orthodox Humean approach, the test condition is the agent trying to φ; we'll return to this.

This is consonant with the general idea that 'able' is an existential quantifier. But it also seems to face the same problems as that view: the fact that, if I try to hit the bullseye, I *might* succeed should not make us confident that I can hit the bullseye, since my rate of success is low.

2.2 A variably strict conditional?

A different approach would combine the Humean idea with a Lewisian/Kratzerian analysis of conditionals, where $p > q$ means: q is true in *all* worlds most similar to actuality where p is true (where there can be many such, equally similar, worlds).

On this view, conditionals express a kind of *relativised necessity*, where the relativization is to the conditional antecedent.

hence "variably strict" analysis.

This might do better for explaining our hesitancy about asserting that I can hit the bullseye. But it seems to run into the same trouble as Brown's view with negated ability ascriptions: on this view, 'I cannot hit the bullseye' says that trying to hit the bullseye is *compatible* with failure. But this seems too weak: 'I cannot hit the bullseye' seems instead to mean that if I try to hit a bullseye, I *will* fail.

2.3 Thomason/Stalnaker

It looks like we want a conditional that commutes with negation in the sense that (4-b) follows from (4-a):

(4) a. Not (if S tries to φ, $\varphi(S)$)
 b. If S tries to φ, $\neg\varphi(S)$.

As Thomason (2005) points out, that's what we get from the analysis of conditionals given in Stalnaker 1968; Stalnaker and Thomason 1970, which is characterized (relative to Lewis's conditional logic) by:

He notes 'The variably strict theories are much more popular; the variably material theories seem to be much better supported by the linguistic evidence'; I think the popularity claim might not be true any more.

- *Conditional Excluded Middle*: $\vdash (p > q) \vee (p > \neg q)$

and hence validates the inference from $\neg(p > q)$ to $p > \neg q$.

Stalnaker gives a corresponding semantics where, for any conditional antecedent φ and world w, there is a unique φ-world "closest" to w, written $f(\varphi, w)$; $\varphi > \psi$ is true at w iff φ is impossible or ψ is true at $f(\varphi, w)$. Putting this together with the CA:

(5) $[\![A_S\varphi]\!]^{c,w} = 1$ iff $[\![try(S,\varphi) > \varphi(S)]\!]^{c,w} = 1$ iff $[\![\varphi(S)]\!]^{c,f(try(S,\varphi),w)} = 1$

This captures duality well. And together with a theory of indeterminacy/vagueness, it does a nice job with the ambivalent feelings people have about 'I can hit the bullseye'.

3 Counterexamples to the conditional analysis

There are many cases where the CA gives intuitively implausible glosses.

3.1 Incompatible plans

(6) [*John makes plans with Latifa to go to dinner. William invites John to a film. He says:*]
 a. I can't go tonight. I'm going to dinner.

But the corresponding conditional (7) is obviously true:

(7) If John tries to go to a film, he succeeds.

One potential response is that the conditional in the analysis of 'can' is context-sensitive to features other than those that influence the interpretation of 'if', so that (7) is actually false in this context.

3.2 Inability to try

Lehrer (1968) calls attention to cases where S can't even try, but if she could, she'd succeed:

(8) Sam has a phobia of red candies, so she cannot even *try* to reach out and take one. If she tried to take one, she would succeed; but she cannot take one, because she cannot even try.

Or suppose Louise is completely vegetative. So, she can't sit up. But if she tried to sit up, she would succeed, since the only way she would try is if she were no longer vegetative.

Are these judgments about trying univocal?

3.3 Actual failure

Austin (1961): a skilled golfer attempts an easy putt. Flukily, he misses. We might still judge (9), as said before the event, to have been true:

(9) I can make this putt.

After all, he *could* have made that putt. But (10) is definitely false, since it has a true antecedent and false consequent:

(10) If I try to make this putt, I'll succeed.

3.4 Trying prevents succeeding

David can breathe normally; but if tries to breathe normally, he fails (trying throws him off).

See Vranas 2010.

There's room for resistance here; certainly there are cases where *attentively trying to φ* can prevent you from φ-ing. But couldn't David count as trying to breathe normally by, e.g., doing something that doesn't count as breathing normally?

3.5 Non-agents

The elevator can carry 1500 pounds. This black hole can swallow that galaxy. Neither seems well-glossed by the elevator/black hole trying.

4 The act conditional analysis

In response to these worries, developing a remark of Chisholm 1964, Mandelkern et al. (2017) propose:

(11) $[\![A_s \varphi]\!]^{c,w} = 1$ iff $\exists \psi \in \mathcal{A}_{S,c} : [\![try(\psi, A) > \varphi(S)]\!]^{c,w} = 1$

$\mathcal{A}_{S,c}$ is the context's set of actions, what we call the *practically available actions* (for S, in c). Contextual flexibility in how this is set can deal with all the counterexamples above:

- *incompatible plans*: as a default matter, $\mathcal{A}_{S,c}$ will only include actions compatible with S's plans in c.
- *inability to try*: as a default matter, $\mathcal{A}_{S,c}$ will only include actions that S can try to do

compare standard ways of thinking about decision problems in decision theory

- *actual failure*: there was something that the golfer could have tried to do—maybe aim a bit more to the left—such that if he had tried that, he would have made the putt.
- *trying prevents succeeding*: there's *something* such that, if David tries to do it, he'll breathe normally — say, playing piano.

4.1 Non-agents again

The ACA doesn't really have any extra resources for dealing with non-agents. Here there are two natural strategies:

- invoke generic or implicit agents, and dismiss other cases as involving circumstantial modals
- get rid of 'trying' from the antecedent. In fact, there's a lot of variation in the literature, but most of the alternatives (intends, wants, has beliefs and desires that rationalize, etc.) are still agentive. Cross proposed that the antecedent should concern *test conditions*, and Boylan has recently taken this up: test conditions could be tryings for agents, and something else for non-agents. Again cf. the treatment of decision problems in decision theory.

5 Subjective vs. objective readings

A nice feature of the ACA is that it seems able to capture two readings of ability ascriptions:

(12) [*Lucie is faced with an array of 100 buttons. One of them will disarm the bomb; the other 99 will detonate it. She does not know which one disarms the bomb (in fact, it's 77).*]

a. Lucie is able to disarm the bomb.

Intuitively, there is a false, or at least very unlikely, reading of this: Lucie has absolutely no idea which button is the right one to push.

Intuitively there's also a true reading: Lucie obviously can push button 77, but pushing button 77 *just is* disarming the bomb.

Hard to see how to account for these two intuitions on a traditional view. On the ACA, you can get the two readings by individuating the available actions differently:

- as {*push 1, push 2, push 3, . . . push 100, don't push*}. One of these is certainly such that, if Lucie tries to do it, she disarms the bomb.
- as *{disarm the bomb, don't disarm the bomb}*. If Lucie tries to disarm the bomb, there's a small chance she'll succeed, but she'll most likely fail.

Could the true reading here be circumstantial? I guess so — but there is obviously a true agentive reading of 'Lucie can push button 77', and it seems like that's exactly what leads us to accept a true reading of 'Lucie can disarm the bomb'.

6 The logic of the ACA

It depends on the logic of the underlying conditional. But if you follow the arguments above, we need something like Stalnaker's conditional. Then we confront a surprising fact: the ACA can be reformulated as a $\Diamond$, like this:

(13) $[\![A_S\varphi]\!]^{c,w} = 1$ iff $\exists w' \in R(w) : [\![S(\varphi)]\!]^{c,w'} = 1$, where $R(w) = \{u : \exists\psi \in \mathcal{A}_{S,c} : u = f(try(S,\psi), w)\}$

So the logic of ability, on the ACA, is a normal modal logic! It's at least as strong as K.

Do we also have T? It's touchy. Yes if S does φ by trying to do ψ, and whatever S *actually tries to do* is practically available, then $A_S\varphi$ is true. But what if S does something without trying *anything*?

So what about the Kenny arguments? Also, if this is a version of A as $\Diamond$, is there anything to choose between here? We've circled back to the orthodox, existential analysis, albeit with a non-standard metasemantics.

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