Comments on “Conditional propositions and conditional assertions”

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Context and Content Workshop
LSA Institute, July 2005
The Murder Case

- Suspects: Gardener, Driver, Butler
- CK that $D$ has an airtight alibi—$C(w) \subseteq [\neg D]$
- Alice knows: $\neg G$; Bert has misleading evidence that: $\neg B$
- Thus: $C(w) \subseteq [B \lor G]$
- But: Alice is far more certain that $\neg G$ than that $\neg D$
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This Looks Like Bad News

**Pragmatic Constraint (PC)**

If $\llbracket P \rrbracket \cap C(w) \neq \emptyset$, then:

if $v \in C(w)$ then $f(\llbracket P \rrbracket, v) \subseteq C(w)$

**Belief Constraint (BC)**

$f_i(\cdot, w)$ should be closed under $i$’s conditional beliefs at $w$

The Murder Case pits these two against each other:

(1) Look, we agree that $B \lor G$ (and each is compatible with our CK); thus if $\neg B$, then $G$.

Alice objects since: $f_a(\llbracket P \rrbracket, v) \nsubseteq C(w)$ for at least one $v \in C(w)$
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Let’s Simplify

All we really need is asymmetry:

- \( w_1^*(B) = 1 \)  \( w_2(G) = 1 \)  \( w_3(D) = 1 \)
- alice:
  - \( B_a(w_1) = \{w_1\} \)  \( B_a(w_2) = \{w_1\} \)
- bert:
  - \( B_b(w_1) = \{w_1, w_2\} \)  \( B_b(w_2) = \{w_1, w_2\} \)

Making plausible assumptions about \( f_a(\llbracket \neg B \rrbracket, w_1) \), this causes the same trouble for (PC) + (BC)
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Maybe CG ≠ CK

Here’s a quote

“I am inclined to think that that some possible situations that are incompatible with the common knowledge of the parties to a conversation are nevertheless “live options” in that conversation.”

And another

“When it becomes clear that the guilt of the butler is in dispute, so that it is a live option in the context that the butler didn’t do it, Alice should insist that we reopen the possibility that it was the chauffeur. . . . The context set should be expanded to include possibilities compatible with the conditional knowledge of the parties on any condition compatible with the context.”
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If I’ve Got the Drift . . . (not a guarantee)

When Alice realizes that $w_2$ (a not-$B$ world) is being considered in $C$, she ought to insist that the common ground be $C' = C \cup \{w_3\}$ (plus maybe some others)

Then (PC) runs on $C'$, not $C$

(2) If $w \in C'$ and $\llbracket P \rrbracket \cap C' \neq \emptyset$, then $f(\llbracket P \rrbracket, w) \in C'$

What’s with the Direct Argument? Is it still good? If so, can Bert just re-run it, pairing $C'$ down to $C$ (by asserting the disjunction) and then posing the conditional to Alice again?
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A Slightly Different Framework

Common Grounds (Zeevat, Gerbrandy, Jäger)

A common ground $C$ is a pair $\langle s, (R_i)_{i \in G} \rangle$ where

- $s \subseteq W$
- $\bigcup_{i \in G} R_i$ is reflexive
- for each $i \in G$: $\text{dom}(R_i) \subseteq s$

These are nifty:

- $\llbracket \Box_i \phi \rrbracket_C = \{ w : \forall v (wR_i v \Rightarrow v \in \llbracket \phi \rrbracket_C) \}$
- Exactly the facts in $C$ are those that are mutually believed in $C$
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What Assertions Do To CGs

We want to keep track of what assertions do to these $C$’s

Dynamics

a successful assertion of (non-modal) $P$ in $C$ updates $C$ to $C + P$:

- first, add the content: $s \cap \llbracket P \rrbracket^C$
- second, restrict the $R_i$: $R_i|(s \cap \llbracket P \rrbracket^C)$, each $i$

It follows that: $C + P \subseteq \llbracket P \rrbracket^C$
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Assertion Pre-Conditions

If an assertion of $P$ in $C$ is to have the intended effect some pre-conditions ought to hold of $C$—I want to look at one in particular:

(3) It is not common ground that Hearer believes $\neg P$

Suppose asserting an indicative, with antecedent $P$, in $C$ requires that $C$ meet this $P$-assertion pre-condition

(4) $C \not\subseteq [\Box_H \neg P]^C$

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Something Fishy About Bert’s Argument

There is a prediction that Bert’s conditional

(5) If the butler didn’t do it, then the gardener did

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Would This Force Rejecting Direct Argument?

Maybe not

- Proper assertion of $P \lor Q$ in $C$ will take us from a common ground in which $P \lor Q$ isn’t presupposed to one, $C'$, in which it is
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Other Paths

I am tempted by two very different options (but don’t blame Bob)

1. Privatize!
   - Make the semantics of indicatives more information-dependent
   - Indicatives are epistemic modals scoped over materials
   - Rebuff Edgington’s worry about equivocation by identifying meanings with update potentials

2. Socialize!
   - Make the side-constraints/definedness conditions for indicatives appeal to information “in the group”
   - Makes “asserting” a conditional more like conjecturing that the domain is structured in the way the conditional says

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Another Option

- Change (PC) to (NPC): prefer, first, to return a (set of) world(s) in $C$ but reach outside if the speaker’s beliefs require it
- Require truth (falsity) w.r.t. all antecedent-admissible selection functions for truth (falsity) simpliciter—those allowed by (BC) + (NPC) for the parties to the conversation

Assume $i$ also has a set of fallbacks around $B_i(w)$—system of spheres $S_i$ centered on $B_i(w)$; $S_{[p]} = \text{minimal } p\text{-permitting sphere in } S_i$

**NPC**

if $[p] \cap C \neq \emptyset$ & $w \in C$ then:

- $f_i([p], w) \subseteq C$, if $[p] \cap B_i(w) \neq \emptyset$
- $f_i([p], w) \subseteq S_{[p]}$, otherwise
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(PC) constrains indicatives because it constrains the selection function for conditionals whose antecedents are “compatible” with the context, where compatibility is cashed-out in terms of consistency w/ $C$.

- A context is a pointed model $(M, w)$ for a fixed set $G$ of relevant parties to the conversation.
- $C_c$ represents CK among $G$ at $(M, w)$.

**Generic PC**

If $[p]$ is compatible with the context $c$ and $w \in C_c$, then $f_c([p], w) \subseteq C_c$.
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Another puzzle about ‘if’

Stalnaker’s Suggestion

Quarter-/Half-Baked Thoughts

Even Less Baked Thoughts

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Generic PC

If \(\llbracket p \rrbracket\) is compatible with the context \(c\) and \(w \in C_c\), then 

\[ f_i(\llbracket p \rrbracket, w) \subseteq C_c \]
We might then try out different tests for “compatibility”:

- $[p]$ is compatible with $c = (M, w)$ iff $[p] \cap B_i(w) \neq \emptyset$, $\forall i \in G$
- Or: $[p] \cap D_c \neq \emptyset$, where $D_c = \bigcap_{i \in G} B_i(w)$
Higher Hurdles

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