Exclusification in conditional antecedents

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Evidence from conditional antecedents suggests that semantic content is remarkably fine-grained.

If switch B was up, or switches A and B were up, the light would be on.

References
• Hurford (1974)
• Typically explained in terms of redundancy (Simons, 2001; Katzir and Singh, 2013; Meyer, 2013, 2014; Clardelli et al., 2017)

Why does (1) not violate Hurford’s constraint?

Exclusification
(3) \( \text{exh}(P, a|t) \)

\[ = P \land \forall Q \in a|t : \neg(P \to Q) \to \neg Q \]

(4) \( a|t(B \lor (A \land B)) = (A, B) \)

(5) \( \text{exh}(B) \lor \text{exh}(A \land B) \)

\[ = (B \land \neg A) \lor (A \land B) \]

(1) If switch B was up, or switches A and B were up, the light would be on.

(6) If switch B was up but not A, the light would be on.

Mean acceptability (SE)

<table>
<thead>
<tr>
<th>Sentence</th>
<th>False</th>
<th>T1</th>
<th>T2</th>
<th>T3</th>
<th>Control</th>
<th>True</th>
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M-turk experiment

Joint work with Alexandre Cremers

Cumulative link mixed model (N = 192):
• T1 and T3 rated significantly lower than control (both \( z < -2.5, p < .01 \))
• T2 was rated significantly higher than control (\( z = 2.1, p = .039 \))
• Posthoc comparison of targets T1 and T3 revealed no difference between the two (\( z = -0.5, p = .62 \))

Semantic frameworks
• Possible worlds (Stalnaker, 1968; Lewis, 1973): \( [B \lor (A \land B)] = [B] \)
• Inquisitive semantics (Ciardelli et al., 2018): \( [B \lor (A \land B)] = [B] \)
• Alternative semantics (Alonso-Ovalle, 2009): \( [B \lor (A \land B)] = \{B, |A \cap B|\} \neq \{|B|\} = [B] \)
• Truthmaker semantics (Fine, 2012)

Counterfactual exhaustion

Modal

If (B up, or A and B up)

a. \( \text{exh}_2(\text{switch B is up}) \) (What happened to the switches?)

b. Switch B is up, and nothing happened to switch A

c. \( \forall w' \in \text{f} : \text{switch B is up in } w', \text{ and } w' \text{ agrees with } w \text{ on the position of switch A} \)