Exclusification in conditional antecedents

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Publication date
2019

Citation for published version (APA):

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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.

Exclusification in conditional antecedents

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Hurford’s constraint

1. If switch B was up, or switches A and B were up, the light would be on.
2. If John were from Paris or France, he would speak French.

(2) violates Hurford’s constraint

Typically explained in terms of redundancy (Simons, 2001; Katzir and Singh, 2013; Meyer, 2013, 2014; Ciardelli et al., 2017)

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

Exclusification

(3) \( \text{exh}(P, alt) = P \land \forall Q \in alt : \neg(P \rightarrow Q) \rightarrow \neg Q \)

(4) \( alt(B \lor (A \land B)) = (A, B) \)

(5) \( exh(B) \lor exh(A \land B) = (B \land \neg A) \lor (A \land B) \)

(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.

References

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):
  \( \{B \lor (A \land B)\} = \{B\} \neq \{\{B\}, \{\{A\}\} \} \)
- Alternative semantics (Alonso-Ovalle, 2009):
  \( \{B \lor (A \land B)\} = \{\{B\}, \{A\} \} \neq \{\{B\}\} = \{B\} \)
- Truthmaker semantics (Fine, 2012)

Counterfactual exhaustification

(7) Modal

light on

if (B up, or A and B up)

(8) a. exh_B (switch B is up) (Q: What happened to the switches?)

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

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