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**

- Hurford (1974)
- 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) $\text{exh}(P, alt)$
$= P \wedge \forall Q \in alt : \neg(P \to Q) \to \neg Q$

(4) $alt(B \vee (A \wedge B)) = \{A, B\}$

(5) $\text{exh}(B) \vee \text{exh}(A \wedge B)$
$= (B \wedge \neg A) \vee (A \wedge B)$

(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.

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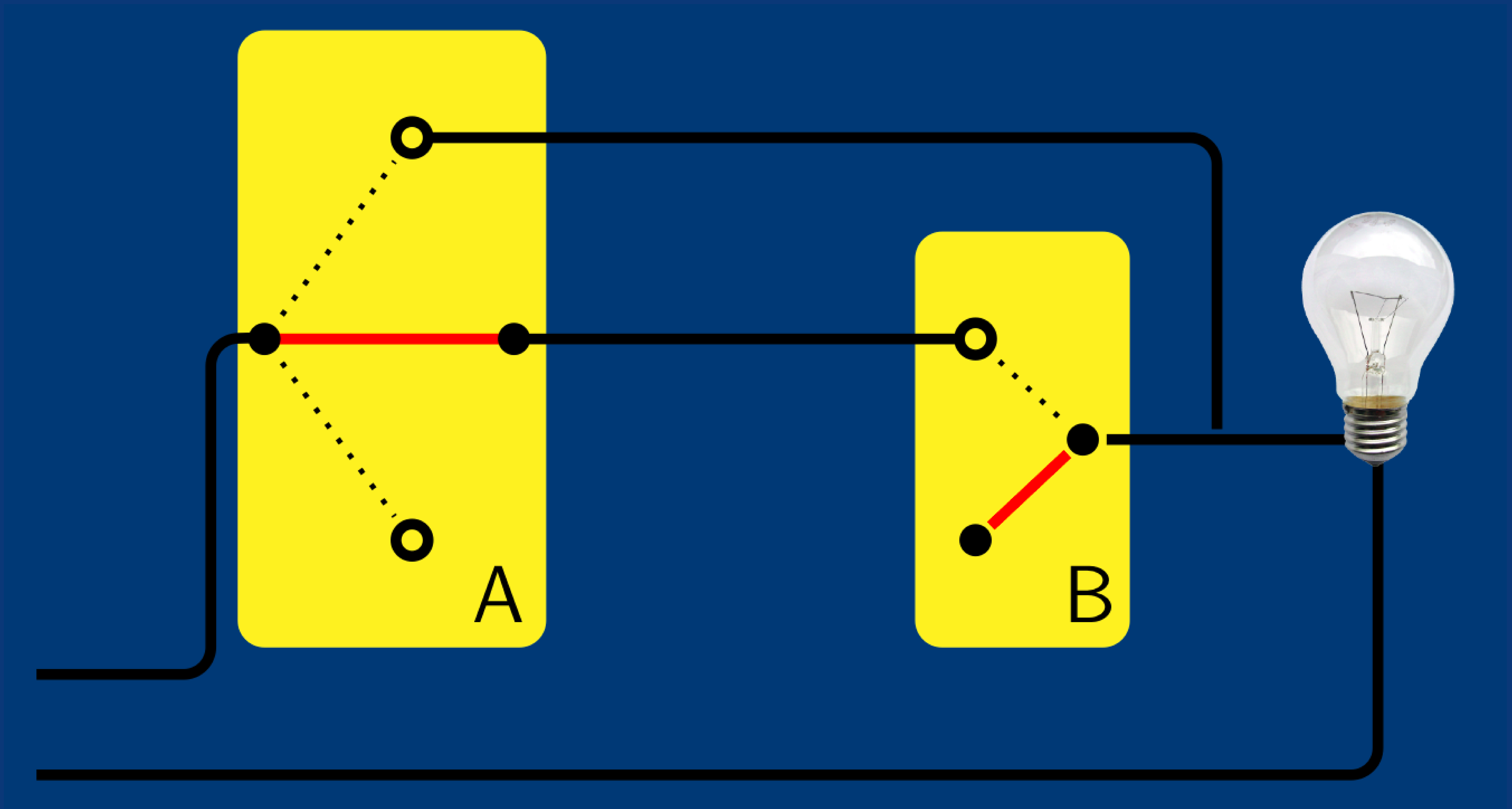
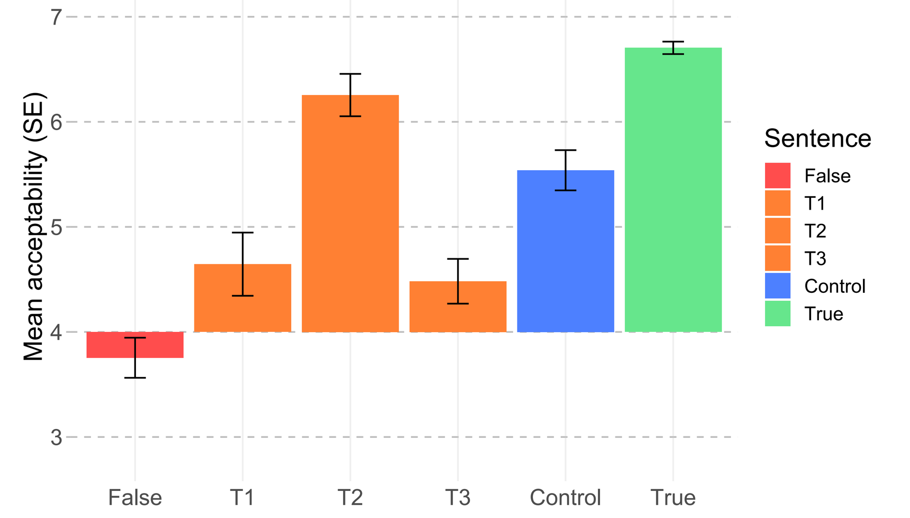
Evidence from **conditional antecedents** suggests that **semantic content** is remarkably fine-grained.



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

M-turk experiment

joint work with Alexandre Cremers



A mid $\wedge$ B down $>$ on (False)

$\neg\neg(A$ up $\vee$ B up$)$ $>$ on (T1)

$(A$ up $\vee$ B up$)$ $>$ on (T2)

$(B$ up $\wedge$ $\neg A$ up$)$ $>$ on (T3)

$\neg B$ down $>$ on (Control)

$\neg A$ up $>$ on (True)

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): $[\![B \vee (A \wedge B)]\!] = [\![B]\!]$
- Inquisitive semantics (Ciardelli et al., 2018): $[\![B \vee (A \wedge B)]\!] = [\![B]\!]$
- Alternative semantics (Alonso-Ovalle, 2009): $[\![B \vee (A \wedge B)]\!] = \{|B|, |A| \cap |B|\} \neq \{|B|\} = [\![B]\!]$
- Truthmaker semantics (Fine, 2012)

Counterfactual exhaustification

(7)

Modal

light on

if (B up, or A and B up)

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

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

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