EXCEPTIVES UNDER NEGATION: STRENGTHENING THE CASE FOR PEX

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Introduction

Starting point: *but* exceptives yield two key inferences (e.g. von Fintel 1993).

(1) I solved everything but Problem 4.

a. *Universal inference*
I solved everything other than Problem 4 ($\phi_\forall$)

b. *Exclusion inference*
I didn't solve Problem 4 (ϕ_{excl})

- One view: the exclusion inference is a grammatical implicature (EXH).

We show: the exclusion inference patterns as a *presupposition*.

Consequence: support that EXH is presuppositional (Bassi et al. 2021).

The EXH analysis

Core claim: the two inferences arise from the interaction of *but* and EXH.

(2) [EXH [$_{vP}$ I solved [$_{DP}$ everything but Problem 4]]]
(e.g. Gajewski 2008, 2013, Hirsch 2016, Crnič 2018)

Step 1: *but* subtracts *Problem 4* from the quantifier restrictor to yield $\phi_\forall$.

(3) a. $[\![\text{but}]\!] = \lambda x\,.\,\lambda y\,.\,y \neq x$
b. $[\![vP]\!] = \lambda w\,.\,\forall x\,[\,x \neq \text{Problem 4} \rightarrow \text{solve}_w(I, x)\,] = \phi_\forall$

Step 2: EXH asserts *both* the prejacent, and the exclusion inference.

(4) **Defining EXH**
$[\![\text{EXH}]\!]^{\text{ALT}} = \lambda p_{st}\,.\,\lambda w\,.\,p(w) \wedge \forall p' \in \text{ALT}\,[\,p \not\subseteq p' \rightarrow \neg p'(w)\,]$

- For concreteness, we assume that alternatives are computed by: (i) substituting *Problem 4*; (ii) deleting elements within the DP. By (ii):

(5) **Sample alternative**
solve(I, Problem 4)

(6) **Entailment**
$\neg$solve(I, Problem 4) $= \phi_{excl}$

- The additional alternatives regulate the distribution of *but* (cf. Hirsch 2016).

However: Bassi et al. (2021) take EXH to be a presupposition trigger.

(7) **Defining PEX**
$[\![\text{PEX}]\!]^{\text{ALT}} = \lambda p_{st}\,.\,\lambda w : \forall p' \in \text{ALT}\,[\,p \not\subseteq p' \rightarrow \neg p'(w)\,]\,.\,p(w)$

(8) [PEX [$_{vP}$ I solved [$_{DP}$ everything but Problem 4]]]
$\rightsquigarrow$ P: ϕ_{excl} A: $\phi_\forall$ *(after Baron 2022, Crnič 2022)*

Question: is the exclusion inference *asserted* or *presupposed* content?

Comparing EXH and PEX

Test case: EXH and PEX yield distinct meanings under negation.

- **With EXH:** negation yields a weak disjunctive meaning.

(9) **LF: NEG > EXH**
[not [EXH [$_{vP}$ I solved [$_{DP}$ everything but Problem 4]]]]
$\rightsquigarrow$ A: $\neg(\phi_\forall \wedge \phi_{excl}) \Leftrightarrow \neg\phi_\forall \vee \neg\phi_{excl}$
(equally compatible with denial of either $\phi_\forall$ or ϕ_{excl})

- **With PEX**: the universal is negated, while the exclusion inference projects.

(10) **LF: NEG > PEX**
[not [PEX [$_{vP}$ I solved [$_{DP}$ everything but Problem 4]]]]
$\rightsquigarrow$ P: ϕ_{excl} A: $\neg\phi_\forall$
(only compatible with denial of $\phi_\forall$)

Next step: the two inferences do have different status, supporting PEX.

Prediction 1: default pattern

Observe: by default, negation most naturally targets $\phi_\forall$ rather than ϕ_{excl}.

(11) *(I heard you solved Problems 1-3, but not 4.)*
No, I DIDN'T solve everything but Problem 4.

a. I didn't solve Problem 3 either.
b. ??I solved Problem 4 too.

(12) **Continuations**
a. (11-a) $\Rightarrow \neg\forall x\,[\,x \neq \text{Problem 4} \rightarrow \text{solve}(I, x)\,]$ $(\neg\phi_\forall)$
b. (11-b) $\Leftrightarrow$ solve(I, Problem 4) $(\neg\phi_{excl})$

- The intuition can further be brought out by comparing adverbs.

(13) **Adverbs**
a. Unfortunately, I DIDN'T solve everything but Problem 4.
b. ??Fortunately, I DIDN'T solve everything but Problem 4.
($\neg\phi_\forall$ = unfortunate, $\neg\phi_{excl}$ = fortunate)

More support: a question can naturally interrogate $\phi_\forall$, but not ϕ_{excl}.

(14) **Questions**
a. *(I know you didn't solve Problem 4, but I'm hopeful about 1-3.)*
Did you solve everything but Problem 4?
b. *(I know you solved Problems 1-3, but I'm concerned about 4.)*
??Did you solve everything but Problem 4?

Result: the data fit best with $\phi_\forall$ asserted, and ϕ_{excl} presupposed — per PEX.

Prediction 2: marked stress

Prediction: for ϕ_{excl} to be targeted, it must be locally accommodated.

(15) **Baseline: *quit***
I didn't QUIT smoking, because I never smoked!
(for cases with PEX, see Bassi et al. 2021)

- Local accommodation can in general be signaled by marked stress.

Observe: shifting stress to *but* affects intuitions in the negation data.

(16) *(I heard you solved Problems 1-3, but not 4.)*
No, I didn't solve everything BUT Problem 4.

a. I solved Problem 4 too.
b. #I didn't solve Problem 3 either.

(17) **Observed inference**
a. $\Rightarrow$ solve(I, Problem 4) $(\neg\phi_{excl})$
b. $\not\Rightarrow \neg\forall x\,[\,x \neq \text{Problem 4} \rightarrow \text{solve}(I, x)\,]$ $(\neg\phi_\forall)$

- Our take: marked stress on *but* involves local accommodation of ϕ_{excl}.

Step 1: stress signals an A operator, which converts the presupposition to assertion under negation (Beaver & Krahmer 2001). $\Rightarrow \phi_{excl}$ *can* be denied in (16).

(18) $[\![\mathit{A}]\!] = \lambda p_{st}\,.\,\lambda w\,.\,1$ if p(w) = 1, 0 if p(w) = 0 or #

(19) **LF for (16)**
[not [A [PEX [I solved [$_{DP}$ everything BUT Problem 4]]]]]
$\rightsquigarrow$ P: – A: $\neg(\phi_\forall \wedge \phi_{excl}) \Leftrightarrow \neg\phi_\forall \vee \boxed{\neg\phi_{excl}}$

Step 2: a parse with A is more complex, so it competes with one without A. $\neg\phi_\forall$ can be conveyed without A (see (10)). $\Rightarrow \phi_\forall$ *cannot* be denied in (16).

Result: with marked stress on *but*, ϕ_{excl} *can* be denied, and $\phi_\forall$ *cannot* be.

Conclusion

Today: evidence that, with a *but* exceptive, the universal inference is *asserted*, but the exclusion inference *presupposed*, supporting: EXH $\rightarrow$ PEX.

- As a marked option, the presupposition can be re-analyzed.

Future: exceptives vary in syntax and semantics (Potsdam 2019, Vostrikova 2021, Mayr & Vostrikova 2022, a.m.o.). How do others behave with negation?

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