The *only* class

Kai von Fintel

Today

- Yesterday's puzzle
- *only*, bare conditionals, and bare plurals
  - with a bonus sermon

The Puzzle from Yesterday

(1)   Only Muriel voted for Hubert. Nobody else did.

(2) ? Nobody but Muriel voted for Hubert. Only she did.

(3)   Marion is a special talent.

    a.   [Only she and nobody else] solved the puzzle.

    b. ?[Nobody else and only she] solved the puzzle.

Day Six:
only, bare conditionals, and bare plurals

only students

(4) Only students attended the show.

only students

(4)   Only students attended the show.

- some students attended the show
- no others attended the show

How does this work?

only students$_{\langle e,t \rangle}$ attended$_{\langle e,t \rangle}$

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only students$_{\langle e,t \rangle}$ attended$_{\langle e,t \rangle}$

two predicates don't combine to give a proposition

but both of our theories depend on that

Excursus: A Sermon

A Sermon

- Preface
- Dr. Brede
- Opportunities right from the start
- Science is inherently frustrating
- We're all imposters
- Don't go it alone

End of Sermon

Back to *only*

Two options

(4)   Only students attended the show.

1. *only* as a determiner ($\langle et, \langle et, t \rangle \rangle$)
2. *only students = only (some [students]$_F$)*
   (operating on a quantifier)

Determiner *only*

- would be non-conservative
- but mirror image of a conservative determiner ($\forall$)
- doesn't fit the crosscategorial profile of either of our theories

Let's explore the second option

only students = only (some [students]$_F$)

- *only* attaches to something that is already a quantifier
- so its argument is of type $\langle et, t \rangle$ (conjoinable)
- the usual meaning package

The predicted meaning

presupposition: some students attended

assertion: no non-entailed alternative *X* to *students* makes it true that *some X attended the show*

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$\Rightarrow$ all attendees were students ✓

Somewhat corroborating evidence

Even without *only*, we can just about perceive
an existential reading of the subject:

(5) Students attended the show.

von Fintel 1997's worry

(6)   Only [intelligent people] become physicists.

The prejacent by itself does not have a natural existential reading:

(7)   Intelligent people become physicists.

von Fintel 1997's solution

The operator in *only (Op intelligent people)* is a generic quantifier with a homogeneity presupposition.

von Fintel 1997's solution

The operator in *only (Op intelligent people)* is a generic quantifier with a homogeneity presupposition.

[I do not believe this anymore about these cases ($\Leftarrow$ read this in a non-neg-raised sense).]

[One issue is that I was too preoccupied by thinking in terms of propositional *only*. But one should really investigate whether *only sm STUDENTS* is the kind of quantifier that would go with existential readings.]

The case of *only if*

Tradition

Tradition says:

only if is the converse of *if*

if p, q ≡ *p only if* q

(8)   If John is at the party, (then) he left work early.

(9)   John is at the party only if he left work early.

The puzzle

What does *only* do to the meaning of *if* to "turn it around"?

The puzzle

What does *only* do to the meaning of *if* to "turn it around"?

After all:

(10)   *p because q $\not\equiv$ q only because p* !

von Fintel 1997

Tries to combine independently motivated analyses of *only* and *if*:

1. *only*: a kind of generalized negation.
2. *if*: quantification over possibilities, with some wrinkles.

Some variants

(11) a. John is at the party only if he left
          work early.

      b. John is only at the party if he left
          work early.

      c. Only if he left work early is John at
          the party.

Logical structure

Let's pretend:

(12)   only [he left work early]

                 [λp. if p, John is at the party]

Paraphrase

John's leaving work early is the only circumstance p such that if p obtains, John is at the party.

Prediction

John is at the party only if he left work early. =

If he left work early, John is at the party. &
Not: if he left work on time, John is at the party. &
Not: if he left work late, John is at the party. &
Not: if he is still at work, John is at the party.

Are we there yet?

Hmm

Things would work out great if the prejacent conditional had an "existential" meaning.

(13)   if p, q ⤳ *some* p-cirumstances are
        q-circumstances

Then, the negated conditionals in our case would assert that there is no circumstance in which John left work late (etc.) in which he is at the party. That in turn would let us infer that he must have left work early if he is at the party. Thus, we would derive the converse, as tradition always said we should.

But

But: that's not really what bare conditionals
mean.

(14)   if p, q ⤳ all p-circumstances are
        q-circumstances

This is an analysis with a venerable pedigree.

Our problem

only [p'] [λp. if p, q] =
If p', q &
Not: if p'', q &
Not: if p''', q &
Not: if p'''', q.

(15)   Not all p''/p'''/p''''-circumstances are
       q-circumstances.

This still allows there to be some
p''-circumstances that are q-circumstances.

von Fintel 1997

Conditionals satisfy the conditional excluded middle.

Herburger

Bassi & Bar-Lev

Readings

- Bassi, Itai & Moshe E. Bar-Lev. 2017. A unified existential semantics for bare conditionals. *Sinn und Bedeutung* 21.
- Herburger, Elena. 2018. Bare conditionals in the red. *Linguistics and Philosophy* 42(2). 131–175. doi:10.1007/s10988-018-9242-2.

Biting the bullet

Conditionals are in fact existential when they occur in *only if*-sentences.

Two variants

- Herburger: conditionals are $\exists/\forall$ ambiguous; the $\exists$-reading is chosen when the conditional is in a downward entailing environment (Strongest Meaning Hypothesis?)

- Bassi & Bar-Lev: conditionals are at their core existential; universal reading results from exhaustification; exhaustification doesn't embed under downward entailing operators

In *only if*, even the prejacent is existential

Only if you work hard do you succeed, but hard work doesn't guarantee success. You also need aptitude, luck and favorable circumstances.

The ellipsis test

Bassi & Bar-Lev:

(16)   Every boy calls his mother if he gets an
       A, and no girl does.

$\approx$ For every boy x, in **all** cases where x gets an A, x calls x's mother, and there is no girl x s.t. **there is** a case where x gets an A and x calls x's mother.

Exactly non-monotone quantifiers

(17)   Exactly two students call their mother if they get an A.

- **UE component**: there are two students x, s.t. in **all** cases where x gets an A, x calls x's mother.
- **DE component**: there are no more than two students x s.t. **there is** a case where x gets an A and x calls x's mother.

Caution

Neither Herburger nor Bassi & Bar-Lev have a compositional derivation of the *exactly* chameleon cases.

Restrictions of DE quantifiers

Is *if* existential or universal here?

(18)   Every student who will fail if they goof off
        has been assigned to a remedial session.

(19)   No student who will fail if they goof off
        came to the remedial session.

∃/∀ **ambiguities**

Something like this is everywhere

- bare plurals
- definite plurals
- modals
- conditionals
- imperatives

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We need a grand unified theory of $\exists/\forall$ ambiguities.

Two more classes

Day Seven (Thu July 25)

(Minimal) Sufficiency

Day Eight (Fri July 26)

The *only* connectives