Evidence for projection of cleft exhaustivity

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Background

The meaning of clefts

An unembedded cleft of the form *It is x that P*:

- asserts that *x* is *P*
- triggers two not-at-issue inferences:
    - existential inference
    - exhaustivity inference

For instance:

(1)   It was [my]$_F$ dog that bit the mailman.

    a.   Assertion: My dog bit the mailman.

    b.   Existential inference: Someone's dog bit the mailman.

    c.   Exhaustivity inference: Nobody else's dog bit the mailman.

(Halvorsen, 1978; Horn, 1981)

Existential inference

The existential inference projects from entailment-canceling environments:

(2) #It wasn't [my]$_F$ dog that bit the mailman. The mailman is just lying about being bitten.

(3) #It might have been [my]$_F$ dog that bit the mailman, though it is more likely that the mailman is just lying about being bitten.

Therefore, it is generally considered a presupposition.

(Horn, 1981; Dryer, 1996; Rooth, 1999, a.o.).

Exhaustivity inference

The exhaustivity inference arises in unembedded clefts:

(4) #It was [my]$_F$ dog that bit the mailman, and so did [Mary's]$_F$ dog.

However, it ostensibly does not project:

(5) It wasn't [my]$_F$ dog that bit the mailman—it was [Mary's]$_F$ dog that bit him.

Example (5) does not imply that nobody else's dog bit the mailman.

In other words, there is no exhaustivity inference in (5).

(Horn, 1981; Velleman et al., 2012; Büring and Križ, 2013)

Exhaustivity: Presupposition or implicature?

The source of the exhaustivity inference

The source of the exhaustivity inference is the most controversial aspect of the meaning of clefts:

- presupposition (Velleman et al., 2012; Büring and Križ, 2013)
- conversational implicature (Horn, 1981; Pollard and Yasavul, 2016)

The challenge

The challenge is to explain why exhaustivity:

- is not easily cancelable in an unembedded cleft (like a presupposition)
- does not project from a negated cleft (unlike a presupposition)

Main finding

- Negated clefts trigger a previously undescribed inference that I term POTENTIAL EXHAUSTIVITY.

- This finding challenges the widely held view that cleft exhaustivity does not project.

- Thus, it provides compelling evidence that **exhaustivity is a presupposition**.

Cancellability

Given the lack of evidence for projection, why should we think that exhaustivity is a presupposition?

The main arguments are that exhaustivity is:

- not-at-issue

- non-cancellable in an unembedded cleft:

    (6) #It was [my]$_F$ dog that bit the mailman, and so did [Mary's]$_F$
         dog.

    However, this claim has been challenged by experimental studies.

Cancellability: Experimental evidence

Acceptability judgment task

Exhaustivity violation does not lead to strong unacceptability.

(7) #It is [Sabine]$_F$ who visited the zoo, and Anna visited the zoo.

(DeVeaugh-Geiss et al., 2015; Washburn et al., 2019)

Verification task

Some participants accept clefts as true despite an exhaustivity violation.

(De Veaugh-Geiss et al., 2018)

Cancellability: Corrective clefts

Pollard and Yasavul (2016) argue that clefts only imply exhaustivity when answering *wh*-questions.

They suggest that corrective clefts do not imply exhaustivity:

(8)   A: Did you hear, Bob got an NSF grant!
       B: Well, actually, it was Rob (who got an NSF grant). And Mike
       got one, too! (Pollard and Yasavul, 2016)

However, I argue that this is better explained by domain restriction.

We imagine a context where Bob and Rob are alternatives, while Mike is not.

Cancellability: Corrective clefts

Consider a context that does not allow for domain restriction:

(9) *Context: Six students took an exam: Ethan, Tyler, Nathan, Kevin, Marcus, and Jared. Only two of them passed.*
A: Did you hear, Nathan passed the exam!
B: #Well, actually, it was Kevin (who passed). And Jared passed, too!

To avoid an exhaustivity violation, the domain needs to restricted to just Nathan and Kevin.

But this is not supported by the context.

Unless, for instance, Nathan and Kevin are twins.

Interim summary

The main arguments against the presuppositional approach to cleft exhaustivity are:

- **Cancellability**: Exhaustivity violations are not as bad as one might expect given a presuppositional analysis. (domain restriction?)
- **Projection**: Lack of evidence for projection.

(Horn, 2014; Onea, 2019)

Today's talk

Cleft exhaustivity does project!

Novel observation: Potential exhaustivity

Consider the following example:

(10)   *Context: Jane invited ten of her friends to a party last night.*
        Usually, almost everyone shows up to Jane's parties. John missed
        the party this time but believes Bill attended.
        John: Who was at the party last night?
        Bill: I don't know exactly, I wasn't there either. #But it wasn't
        [Mary]$_F$ (who was at the party). She told me earlier that she had
        the flu.

Novel observation: Potential exhaustivity

We assumed that the exhaustivity inference disappeared under negation:

(11) #It wasn't [Mary]$_F$ who was at the party.

    a.   Assertion: Mary wasn't at the party.

    b.   Existential inference: Someone was at the party.

Therefore, (10) should have been felicitous.

Novel observation: Potential exhaustivity

I argue that the infelicity stems from a POTENTIAL EXHAUSTIVITY inference:

(12) #It wasn't [Mary]$_F$ who was at the party.
    a. Assertion: Mary wasn't at the party.
    b. Existential inference: Someone was at the party.
    c. **Potential exhaustivity inference: Mary could have been the only guest at the party.**

This inference contradicts the common ground.

The common ground entails that there were several people at the party.

Novel observation: Potential exhaustivity

The same inference arises in other entailment-canceling environments:

(13) John: Who was at the party last night?
Bill: I don't know exactly, I wasn't there either. #But it might
have been [Mary]$_F$ who was at the party. She told me earlier that
she wanted to go.

Once again, the embedded cleft implies that "Mary was at the party" was
under consideration as an exhaustive answer.

Alternative explanations

Could it be that clefts actually presuppose uniqueness instead of exhaustivity (as argued by Halvorsen, 1978; Percus, 1997)?

(14) #It wasn't [Mary]$_F$ who was at the party.

    a.   Assertion: Mary wasn't at the party.

    b.   Uniqueness presupposition: Exactly one person was at the party.

The answer is no.

Uniqueness incorrectly predicts (15) to be infelicitous:

(15)   It wasn't [my]$_F$ dog that bit the mailman. It was [Mary's]$_F$ and [Bill's]$_F$ dogs that bit him.

(Atlas and Levinson, 1981)

Alternative explanations

Alternatively, the problem lies in the asserted meaning.

We assumed that:

(16) #It wasn't [Mary]$_F$ who was at the party.

    a.   Assertion: Mary wasn't at the party.

    b.   Existential presupposition: Someone was at the party.

Now, suppose that a cleft asserts an identity statement (Pollard and Yasavul, 2016; De Veaugh-Geiss et al., 2018):

(17) #It wasn't [Mary]$_F$ who was at the party.

    a.   Assertion: Mary is not identical to the maximal individual who was at the party.

    b.   Existential presupposition: Someone was at the party.

Alternative explanations

On this approach, (18) is infelicitous because the assertion is entailed by the common ground.

(18) #It wasn't [Mary]$_F$ who was at the party.

    a.   Assertion: Mary is not identical to the maximal individual who was at the party.

    b.   Existential presupposition: Someone was at the party.

However, this analysis incorrectly predicts (19) to be felicitous:

(19) #It wasn't [my]$_F$ dog that bit the mailman. [Mary's]$_F$ dog bit him, too.

Presuppositional exhaustivity

I adopt the presuppositional view on cleft exhaustivity:

- Alternative-based approach (Velleman et al., 2012)
- Homogeneity approach (Büring and Križ, 2013)

Both approaches make the same predictions regarding distributive predication:

(20)   It was $[my]_F$ dog that bit the mailman.

Therefore, my analysis will be compatible with both approaches.

Presuppositional exhaustivity

The exhaustivity presupposition gives rise to an exhaustivity inference only in conjunction with the assertion:

(21)   It was $[my]_F$ dog that bit the mailman.
    a.   Assertion: My dog bit the mailman.
    b.   Exhaustivity presupposition: My dog is not part of a larger plurality that bit the mailman.

It is not presupposed that my dog bit the mailman.

Crucially, if my dog didn't bite the mailman, it's possible that other dogs did.

But if my dog did bite the mailman, then nobody else's dog did.

Projection without exhaustivity

In other words, the exhaustivity presupposition is formulated in a way that allows it to project without producing an exhaustivity inference.

In fact, in a negated cleft like:

(22)   It wasn't [my]$_F$ dog that bit the mailman.

the existential presupposition implies that someone's dog did bite the mailman.

As a result, there is no exhaustivity inference.

Projection without exhaustivity

The exhaustivity presupposition can be reduced to a conditional statement:

(23) My dog is not part of a larger plurality that bit the mailman.
      ⇒ If my dog bit the mailman, then nobody else's dog did.

Equivalently, it can be stated as a disjunction:

(24) Either my dog didn't bite the mailman, or nobody else's dog did.
      ($A \Rightarrow B \equiv \neg A \lor B$)

(Büring and Križ, 2013)

Projection without exhaustivity

In a negated cleft, the resulting meaning is equivalent to the assertion:

(25)   It wasn't [my]$_F$ dog that bit the mailman.
   a.   Assertion: My dog didn't the mailman.
   b.   Exhaustivity presupposition: Either my dog didn't bite the mailman, or nobody else's dog did.

The exhaustivity presupposition projects but has no apparent effect.

Potential exhaustivity

How do we explain the potential exhaustivity inference?

(26) John: Who was at the party last night?
      Bill: I don't know exactly, I wasn't there either. #But it wasn't
      [Mary]$_F$ (who was at the party). She told me earlier that she had
      the flu.

I argue that it is explained by an independently-motivated constraint on
presupposition accommodation.

Post-Accommodation Informativity

A proposition cannot be felicitously asserted if it is already entailed by the common ground (Stalnaker, 1978).

Doron and Wehbe (2023) propose the following constraint:

(27) *Post-Accommodation Informativity* (PAI):
      A sentence S presupposing p can be felicitously asserted only if S is informative after presupposition accommodation.

For instance, PAI accounts for the infelicity of:

(28) #Jane and her husband aren't single.

Once the presupposition that Jane has a husband is accommodated, the assertion is no longer informative.

Proposal

The CG in (29) entails that there were several people at the party:

(29)   *Context: Jane invited ten of her friends to a party last night.*
       Usually, almost everyone shows up to Jane's parties. John missed
       the party this time but believes Bill attended.

Therefore, the exhaustivity presupposition in (30) is only compatible with
the CG by virtue of the first disjunct:

(30) #It wasn't [Mary]$_F$ who was at the party.
       Exhaustivity presupposition: Either Mary wasn't at the party, or
       nobody else was at the party.

The are no worlds in the context set where only Mary was at the party.

However, the CG does not entail that Mary herself was one of the
attendees.

Proposal

Therefore, the disjunctive presupposition in:

(31)   Either Mary wasn't at the party, or nobody else was at the party.

is contextually equivalent to:

(32)   Mary wasn't at the party.

Once this presupposition is accommodated, the assertion is uninformative:

(33) #It wasn't [Mary]$_F$ who was at the party.
   a.   Assertion: Mary wasn't at the party.
   b.   Exhaustivity presupposition (contextually equivalent to): Mary
         wasn't at the party.

As a result, the sentence is infelicitous.

Proposal

In sum, negated clefts are only felicitous when the second disjunct is
considered a live possibility:

(34)   Either Mary wasn't at the party, or nobody else was at the party.

There must be worlds in the context set where the exhaustivity proposition
is true.

As a result, negated clefts produce a **potential exhaustivity** inference.

For example:

(35) #It wasn't [Mary]$_F$ who was at the party.

implies that Mary could have been the only guest at the party, had she
come.

Beyond exhaustivity

The felicity conditions of clefts cannot be explained solely by exhaustivity:

- Positive clefts are usually odd as answers to explicit questions:

    (36)   A: Who cooked the beans?
            B: #It was [John]$_F$ (who cooked the beans).

                                                        (Destruel and Velleman, 2014):

- Corrective clefts are slightly odd when the addressee is not strongly committed to the contrary alternative:

    (37)   A: The beans are really good! Maybe Mary cooked them.
            B: Actually, it was [John]$_F$ (who cooked the beans).

                                            (Zimmermann, 2011; Destruel et al., 2019)

Beyond exhaustivity

Two options come to mind:

- Clefts trigger:
    - an existential presupposition
    - an exhaustivity presupposition
    - some other kind of presupposition
- Clefts are subject to a certain discourse preference that is not semantically encoded.

If option 2 is correct, could it be the case that exhaustivity is merely a discourse preference, too?

My answer will be no.

Unexpectedness

Tönnis (2021) argues that clefts (in German) typically address unexpected questions.

On the other hand, canonical sentences usually address expected questions.

(38)   A: Who cooked the beans?
        B: [John]$_F$ did. / [John]$_F$ cooked the beans.
        B': #It was [John]$_F$ (who cooked the beans).

Unexpectedness

This analysis potentially applies to corrective clefts.

If the addressee is not strongly committed to the contrary alternative, the question remains somewhat expected.

For instance, in:

(39)   A: The beans are really good! Maybe Mary cooked them.
       B: Actually, it was [John]$_F$ (who cooked the beans).

A's statement does not settle the question "Who cooked the beans?".

Unexpectedness

Why are clefts sensitive to expectedness?

I suggest that this is due to the general association between predictability and markedness.

The link between predictability and form length is well established:

- Word length (Zipf, 1935)
- Grammatical marking (Greenberg, 1966; Haspelmath, 2021)
- Phonetic word duration (Gahl, 2008)

Unexpectedness as a discourse preference

> ### Unexpectedness as a discourse preference
>
> - Clefts are marked relative to canonical sentences.
> - Therefore, it is more efficient to reserve clefts for unusual situations.
> - Addressing an unexpected question is, naturally, less predictable.

This does not necessarily mean that these discourse requirements are not conventionalized.

However, their effect on naturalness is gradient (Destruel et al., 2019; Tönnis and Tonhauser, 2022).

Therefore, it is probably a non-conventionalized discourse preference.

Unexpectedness as a discourse preference

Thus, the infelicity of the cleft in:

(40)   A: Who cooked the beans?
        B: [John]$_F$ did. / [John]$_F$ cooked the beans.
        B': #It was [John]$_F$ (who cooked the beans).

is perhaps comparable to the oddness of passives in certain contexts:

(41)   a.   John ate the beans.
        b. #The beans were eaten by John.

Is exhaustivity a discourse preference, too?

Could it be, then, that exhaustivity arises in a similar way?

Exhaustivity as a discourse preference

- Exhaustive assertions are relatively rare.
- Therefore, speakers tend to use marked constructions to highlight the unpredictability of an exhaustive assertion.
- In many languages, this discourse function is often taken by clefts.

Once again, it does not follow that exhaustivity is not encoded.

However, exhaustivity violations do not lead to strong unacceptability (DeVeaugh-Geiss et al., 2015; Washburn et al., 2019):

(42) #It is [Sabine]$_F$ who visited the zoo, and Anna visited the zoo.

Is exhaustivity a discourse preference, too?

So, is exhaustivity merely a (strong) discourse preference?

The answer is probably no.

If exhaustivity is not encoded, how do we account for potential exhaustivity?

(43)   John: Who was at the party last night?
       Bill: #I don't know exactly, but it wasn't [Mary]$_F$ (who was at the party).

Is exhaustivity a discourse preference, too?

Negated clefts are never exhaustive answers:

(44)   A: Who cooked the beans?
        B': I don't know, but it wasn't [John]$_F$ (who cooked beans). He
        hates beans.

If exhaustivity is a discourse preference, why would negated clefts produce
a potential exhaustivity inference?

One might argue that it is because clefts are typically used in situations
that call for exhaustivity.

That is, a negated cleft is a partial answer to a question that requires an
exhaustive answer.

Is exhaustivity a discourse preference, too?

But if it is enough that the question requires an exhaustive answer, why are unembedded clefts infelicitous as partial answers?

For instance, (45) is odd, even with a rise-fall-rise intonation contour:

(45) A: Who passed the exam?
      B: #Well, it's [Mary]$_F$ who passed, but I don't know about the others.

I conclude that exhaustivity is not a discourse preference.

It is part of the semantics of clefts.

Conclusion

- Negated clefts trigger a previously undescribed inference of potential exhaustivity.
- Even though the exhaustivity presupposition does not affect the resulting meaning of negated clefts, the assertion has to be informative after the exhaustivity presupposition is accommodated.
- This indicates that cleft exhaustivity does project, in contrast to the received view.
- The fact that exhaustivity projects lends support to the presuppositional approach.

Thank you!

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