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Evidence for projection of cleft exhaustivity*

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Abstract This paper argues that negated clefts, as well as other types of embedded clefts, trigger a previously undescribed inference, which I term POTENTIAL EXHAUSTIVITY. Although negated clefts do not trigger an *actual* exhaustivity inference, they imply that the rejected alternative was under consideration as a *potential* exhaustive answer to the question addressed by the cleft. Therefore, negated clefts are infelicitous when the common ground entails that the rejected alternative cannot serve as an exhaustive answer. This finding challenges the prevailing assumption that cleft exhaustivity does not project, thereby providing compelling evidence that exhaustivity is a presupposition. Furthermore, it is proposed that the potential exhaustivity inference should not be seen as a component of the exhaustivity presupposition itself; instead, it emerges due to an independently-motivated constraint on presupposition accommodation.

Keywords: cleft, exhaustivity, presupposition, projection, accommodation, negation

1 Introduction

An unembedded cleft of the form *It is x that P* asserts that *x* is *P* and triggers two not-at-issue inferences: an existential inference and an exhaustivity inference (Halvorsen 1978; Horn 1981). This is illustrated in (1).

(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.

The existential inference projects from entailment-canceling environments, such as the scope of negation and possibility modals, as evidenced by the infelicity of (2)

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and (3), respectively. Therefore, it is generally considered a presupposition (Horn 1981; Dryer 1996; Rooth 1999; among others, cf. Büring & Križ 2013).

(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.

On the other hand, the exhaustivity inference ostensibly does not project (Horn 1981; Velleman, Beaver, Destruel, Bumford, Onea & Coppock 2012; Büring & Križ 2013). For example, (1) is taken to be an exhaustive list of people whose dogs bit the mailman, hence the infelicity of (4), where the cleft is unembedded. By contrast, its negated counterpart does not trigger an exhaustivity inference—otherwise, we wrongly predict (5) to be infelicitous. Similarly, (6) does not presuppose that if anyone's dog bit the mailman, it is the speaker's dog.

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

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

(6) It might have been [my]$_F$ dog that bit the mailman, though it is more likely that it was [Mary's]$_F$ dog that bit him.

Therefore, previous studies posit that negated clefts, as well as clefts embedded in other entailment-canceling environments, only trigger an existential inference, whereas the exhaustivity inference disappears, as shown in (7).

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

a. Assertion: My dog didn't bite the mailman.

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

The source of the exhaustivity inference is the most controversial aspect of the meaning of clefts. Existing theories ascribe this inference to a presupposition encoded by the cleft (Velleman et al. 2012; Büring & Križ 2013) or a conversational implicature (Horn 1981; Pollard & Yasavul 2016).

The apparent lack of evidence for projection is one of the main arguments for treating cleft exhaustivity as an implicature. But why should we think that exhaustivity is a presupposition at all? The main arguments are that exhaustivity is: (i) not-at-issue; and (ii) non-cancelable in unembedded clefts (although see Section 6), as illustrated in (4). Therefore, the challenge is to explain why exhaustivity is not easily cancelable in an unembedded cleft, much like a presupposition, but seemingly does not project from a negated cleft, unlike a presupposition.

The main finding of this paper is that negated clefts trigger a previously undescribed inference, which 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 rather than an implicature.

This paper is structured as follows. Section 2 presents the potential exhaustivity inference. Section 3 considers alternative explanations for the observations made in Section 2, arguing that they make incorrect predictions regarding other instances of negated clefts. Section 4 outlines two approaches in the literature that treat exhaustivity as a presupposition: the alternative-based approach and the homogeneity approach. Although these approaches account for the apparent lack of projection of exhaustivity, they do not account for the potential exhaustivity inference without additional assumptions. Section 5 proposes that potential exhaustivity emerges from an independently-motivated constraint on presupposition accommodation. Section 6 discusses the question of whether cleft exhaustivity is cancelable and context-dependent, concluding that the existing evidence is not necessarily incompatible with a presuppositional view of exhaustivity. Section 7 focuses on other discourse factors that affect the acceptability of clefts. It examines whether exhaustivity can be viewed as a non-conventionalized discourse preference, ultimately arguing against this perspective. Section 8 concludes.

2 Novel observation: Potential exhaustivity

As discussed in the previous section, the main argument against the presuppositional approach to cleft exhaustivity is the lack of evidence for projection (Horn 2014; Onea 2019). In this section, I present novel evidence suggesting that cleft exhaustivity does project, in contrast to the conventional wisdom.

Consider the infelicity of the negated cleft in (8).

(8) *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: Actually, 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.

As noted in Section 1, it is commonly assumed that the exhaustivity inference disappears under negation. Therefore, we predict the meaning in (9) for the negated cleft. However, this analysis wrongly predicts (8) to be felicitous: the assertion in (9) is relevant as a partial answer to the Question Under Discussion (QUD), "Who was at the party?", and the existential presupposition is entailed by the common

ground, assuming that it is taken for granted that several guests came to the party. Yet, (8) is infelicitous, suggesting that something is wrong with the meaning components in (9).

(9) # 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.

I argue that the infelicity of (8) stems from an inference that I term POTENTIAL EXHAUSTIVITY. Clearly, (8) does not imply that nobody else was at the party, which is the exhaustivity inference associated with the corresponding affirmative cleft *It was Mary who was at the party*. However, the negated cleft implies that if Mary *had* come to the party, then nobody else would have. Thus, the meaning of the negated cleft is not (9) but (10).

(10) # 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.

In (8), the potential exhaustivity inference contradicts the common ground: it is assumed that there were several people at the party, so Mary couldn't have been the only guest, even if she had come. As a result, the sentence is infelicitous.

The potential exhaustivity inference arises not only in negated clefts like (8), but also in clefts embedded under possibility modals and in questions, as demonstrated by (11) and (12), respectively, stated in the same context as (8). In all of these cases, the embedded cleft implies that "Mary was at the party" was under consideration as an exhaustive answer to the QUD "Who was at the party?".

(11) John: Who was at the party last night?
Bill: Actually, 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.

(12) John: I bet it was a great party last night! # Is it [Mary]$_F$ who was at the party?

3 Alternative explanations

In the previous section, I argued that the infelicity of examples (8, 11, 12) stems from a violation of a potential exhaustivity inference triggered by the cleft. Before presenting the analysis, I briefly consider alternative explanations that do not assume that clefts trigger an exhaustivity presupposition.

First, it could be the case that clefts actually presuppose uniqueness instead of exhaustivity (as argued by Halvorsen 1978; Percus 1997), similarly to definite descriptions. On this approach, the meaning of the negated cleft in (8) is (13). Thus, (8) is odd because the uniqueness presupposition is not satisfied in the given context.

(13) # 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.

Although uniqueness correctly predicts the infelicity of (8), it makes incorrect predictions regarding other instances of negated clefts, as observed by Atlas & Levinson (1981). For instance, (14) is acceptable, indicating that the negated cleft does not imply that exactly one person's dog bit the mailman.

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

Another potential explanation might be that the problem in (8) lies in the asserted meaning rather than the not-at-issue level. So far, I assumed—following Halvorsen (1978), Horn (1981), and others—that the negated cleft *It wasn't Mary who was at the party* only asserts that Mary wasn't at the party. Now, suppose that a cleft actually asserts an identity statement, as argued by Pollard & Yasavul (2016) and De Veaugh-Geiss, Tönnis, Onea & Zimmermann (2018). In that case, the meaning of the negated cleft is (15).

(15) # 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.

On this approach, (8) is infelicitous because the assertion is entailed by the common ground: it is taken for granted that several guests came to the party, so asserting that Mary isn't identical to the plurality of guests that came to the party is uninformative. However, as pointed out by Križ (2017), this approach, too, makes incorrect predictions regarding other instances of negated clefts. Specifically, it wrongly predicts a sentence like (16) to be felicitous: given that both the speaker's dog and Mary's dog bit the mailman, it is true that the speaker's dog is not the maximal individual with the property in question. Yet, (16) is infelicitous, indicating that the negated cleft entails that the speaker's dog didn't bite the mailman at all, which is not predicted by the semantics in (15). In other words, strengthening the

assertion of an unembedded cleft to an identity statement, as proposed by Pollard & Yasavul (2016) and De Veaugh-Geiss et al. (2018), yields a meaning for negated clefts that is too weak.

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

4 Exhaustivity as a presupposition

In light of the discussion in the previous section, I adopt the presuppositional view on cleft exhaustivity. My proposal, presented in the next section, aligns with both the alternative-based approach (Velleman et al. 2012) and the homogeneity approach (Büring & Križ 2013).[1] I focus in this paper on distributive predicates, such as *be at the party* or *bite the mailman*. Simplifying slightly, both presuppositional approaches make the same predictions regarding the relevant sentences, so I will not attempt to argue for one analysis over the other.[2]

Velleman et al. (2012) propose that cleft constructions introduce a focus-sensitive cleft operator with the denotation in (17). The cleft operator is further decomposed into two operators: MIN_S and MAX_S, formulated in (18) and (19), respectively. A context S includes the QUD_S and a salient partial ordering of the alternatives in the QUD_S, which is represented as $\geq_S$ or $>_S$. The operator MAX_S is responsible for the exhaustivity presupposition.

(17) $\text{CLEFT}_S = \lambda w.\lambda p : \text{MAX}_S(p)(w).\text{MIN}_S(p)(w)$

(18) $\text{MIN}_S(p) = \lambda w.\exists q \in QUD_S[q(w) \wedge q \geq_S p]$
"There's a true answer at least as strong as p."

(19) $\text{MAX}_S(p) = \lambda w.\forall q \in QUD_S[(q >_S p) \rightarrow \neg q(w)]$
"No answer strictly stronger than p is true."

As an illustration, consider once more the unembedded cleft in (1), repeated here as (20). The cleft asserts that there is a true answer at least as strong as "My dog bit the mailman" and presupposes that that no stronger alternative is true. Given that *bite the mailman* is distributive, an alternative where the speaker's dog is part of a larger plurality that bit the mailman entails the prejacent of the cleft. Therefore, (20) presupposes that the speaker's dog is *not* part of a larger plurality that bit the mailman.

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

1 Križ (2017) proposes a semantic approach to cleft exhaustivity that does not treat exhaustivity as a separate meaning component. My analysis is not compatible with his approach, as discussed in Section 5.

2 See Renans & De Veaugh-Geiss (2019) for a study on cleft exhaustivity in collective predication, whose results are arguably problematic for the homogeneity approach of Büring & Križ (2013).

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.

The homogeneity approach (Büring & Križ 2013) derives the same presupposition for this sentence, but in a different way. According to this approach, a cleft presupposes that the pivot (the cleft phrase) is not part of a larger plurality of which the predicate of the cleft clause holds. The denotation of the cleft operator is given in (21). The argument z (type e) is the pivot, and P is the predicate of the dependent clause. The cleft asserts that z is P and presupposes that z is not a proper part of a maximal P. In the case of (20), the presupposition amounts to the statement that the speaker's dog is not part of a larger plurality that bit the mailman, the exact same presupposition predicted by the alternative-based approach.

(21) $\text{CLEFT} = \lambda z.\lambda P : \forall x \in max(P)[z \not\sqsubset x].P(z)$

On both approaches, the exhaustivity presupposition gives rise to an exhaustivity inference only in conjunction with the assertion. In (22), it is not presupposed that the speaker's dog bit the mailman. Crucially, if the speaker's dog didn't bite the mailman, it is possible that other dogs did. But if the speaker's dog did bite the mailman, then nobody else's dog did.

(22) It was $[\text{my}]_F$ 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.

Thus, 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 (7), repeated here as (23), the existential presupposition implies that someone's dog did bite the mailman. Consequently, there is no *actual* exhaustivity inference.

(23) # It wasn't $[\text{my}]_F$ dog that bit the mailman.

As noted in Büring & Križ (2013), the exhaustivity presupposition in (22) can be reduced to a conditional statement, as articulated in (24). Equivalently, it can be stated as a disjunction, as in (25), due to the equivalence of $A \rightarrow B \equiv \neg A \vee B$.

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

(25) My dog is not part of a larger plurality that bit the mailman.
$\Rightarrow$ Either my dog didn't bite the mailman, or nobody else's dog did.

In a negated cleft, the exhaustivity presupposition is entailed by the assertion, as shown in (26): the sentence presupposes $\neg p \vee q$ and asserts $\neg p$. Consequently, the exhaustivity presupposition projects but has no apparent effect on the resulting meaning.

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

a. Assertion: My dog didn't bite the mailman.

b. Exhaustivity presupposition: Either my dog didn't bite the mailman, or nobody else's dog did.

Thus, the presuppositional approach effectively neutralizes the exhaustivity presupposition in negated clefts, thereby circumventing the issue of projection. However, it does not explain the potential exhaustivity inference observed in Section 2 without additional assumptions. To illustrate, consider the infelicity of (27) within the context of (8). Just like in (26), the assertion entails the exhaustivity presupposition, so this presupposition does not affect the resulting meaning. Why, then, is this sentence infelicitous?

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

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

b. Exhaustivity presupposition: Either Mary wasn't at the party, or nobody else was at the party.

I argue that the difference between (26) and (27) stems from the way the exhaustivity presupposition is satisfied. Unlike in (26), the exhaustivity presupposition in (27) is compatible with the common ground only by virtue of the first disjunct. There are no worlds in the context set where Mary was the only guest at the party, but it is possible that Mary herself didn't go. Importantly, there is no presupposition failure, as the disjunction as a whole can be accommodated. Therefore, the infelicity of (27) remains unexplained.

Notice that there is nothing inherently problematic in accommodating a disjunctive presupposition where one of the disjuncts contradicts the common ground. This is perhaps counterintuitive, as natural language disjunctive sentences typically suggest that both disjuncts are viable possibilities, i.e., $p \vee q$ normally implies $\Diamond p \wedge \Diamond q$ (Zimmermann 2000). Similarly, the exhaustivity presupposition can be stated as a conditional, as shown in (24), and natural language conditionals presuppose that their domain is non-empty. For instance, the indicative conditional *If it rains, the lunar rover will get wet* is infelicitous if stated on the moon, where it cannot possibly rain. Thus, it might seem that the exhaustivity presupposition in (27) implies, by virtue of its logical structure, that it is possible that nobody other than Mary was at the party.

However, this implication does not directly follow from the exhaustivity presupposition. Unlike natural language disjunctions or conditionals, a presupposition is a proposition, not a sentence, and hence it cannot trigger its own implicatures or presuppositions. Furthermore, it is untenable to build into the exhaustivity presupposition a requirement that there must be worlds in the context set where the exhaustivity statement holds true, such as worlds where Mary was the only guest at the party. The common ground comprises the set of propositions that all participants in a conversation mutually accept as true or assumed for the purposes of the discussion. From this perspective, it is conceptually inconsistent for these propositions to independently contribute new propositions to the common ground or directly refer to the common ground.[3] Therefore, a different solution is needed, as outlined in the next section.

5 Proposal

I propose that the potential exhaustivity inference is explained by an independently-motivated constraint on presupposition accommodation. According to Stalnaker (1978), a proposition cannot be felicitously asserted if it is already entailed by the common ground. For instance, the second clause in (28) is infelicitous because it is entailed by the common ground once the common ground is updated with the proposition expressed by the first clause (unless it is understood as stating that Jane and her husband are also married to other people).

(28) Jane isn't single, # and neither is her husband.

Doron & Wehbe (2023) propose an additional constraint on common ground update, articulated in (29). This constraint is conceptualized within a model where the asserted content is evaluated only after the presuppositions are accepted into the common ground.

(29) *Post-Accommodation Informativity* (PAI):
A sentence S presupposing p can only be felicitously asserted if S remains informative following the accommodation of p. (Doron & Wehbe 2023)

As an illustration, PAI accounts for the infelicity of (30). Even if the common ground does not yet entail that Jane has a husband, once the existential presupposition triggered by the definite description is accommodated, the assertion is no longer informative, as it is entailed by the presupposition.

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

3 I thank Omri Doron for suggesting this argument to me.

In the party example in (8), the common ground presumably entails that there were several guests at the party. Consequently, the exhaustivity presupposition in (27) is only compatible with the common ground by virtue of the first disjunct: there are no worlds in the context set where Mary was the only guest at the party. On the other hand, the common ground does not entail that Mary herself was one of the attendees. Therefore, the disjunctive presupposition in (27) is contextually equivalent to "Mary wasn't at the party". Once this presupposition is accommodated, the assertion is uninformative, as shown in (31). As a result, the sentence is infelicitous, as it violates PAI.

(31) # It wasn't $[\text{Mary}]_F$ 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.

It is worth noting that the proposed analysis is only viable under the assumption that the exhaustivity presupposition is accommodated prior to the evaluation of the asserted content. Consequently, it is incompatible with the homogeneity-based approach proposed by Križ (2017), where exhaustivity is semantically encoded but is not a presupposition. His analysis is couched within a trivalent semantics framework, and he rejects the notion that "the truth of the assertive meaning component and the truth of the presupposition can be evaluated separately" (Križ 2017: 20). On his account, the exhaustivity component is collapsed with the assertion, and the resulting trivalent proposition is evaluated in one piece. This analysis does not account for the potential exhaustivity inference, since PAI is only applicable if the presupposition and the assertion are considered separate layers of information, and they update the common ground in a sequential manner.

Besides negated clefts, other types of cleft sentences are infelicitous when the exhaustivity presupposition is contextually equivalent to the first disjunct (which happens in situations where the second disjunct, which is responsible for the exhaustivity inference, contradicts the common ground). As previously discussed in Section 2, clefts embedded under possibility modals and in questions are infelicitous in these situations. Furthermore, even an unembedded cleft cannot be used in this situation.

Consider the infelicity of (32). Suppose once again that the common ground entails that there were several people at the party. The exhaustivity presupposition triggered by the cleft is contextually equivalent to "Mary wasn't at the party", contradicting the asserted content ("Mary came to the party"). Thus, the infelicity of (32) arguably stems from a contextual contradiction.

(32) Usually, almost everyone shows up to Jane's parties. # But this time, it is [Mary]$_F$ who came.

Another way of looking at it, which might be more aligned with our intuitions, is that (32) is infelicitous because it attempts to sneak in surprising information—namely, that nobody else came to the party—in the form of a presupposition instead of putting it on the table as an assertion. According to von Fintel (2008) and Singh, Fedorenko, Mahowald & Gibson (2016), among others, presupposed information that is either controversial or at odds with the common ground tends to resist accommodation. As illustrated in (33), controversial information is preferably asserted, not presupposed. From this perspective, the problem in (32) is not necessarily that it is contextually contradictory, but rather that the exhaustivity presupposition resists accommodation because it is surprising in this context.

(33) A: Don't lie to me! I know for a fact that you don't have a sister.
B: But I do. In fact, I have to pick her up at the airport.
B': # I have to pick her up at the airport. (von Fintel 2008)

This view is supported by the contrast between clefts and *only*. Unlike clefts, the focus particle *only* asserts exhaustivity (Horn 1972). Consequently, (34) is felicitous, in contrast to (32), since an assertion can convey surprising information, potentially revising the common ground.

(34) Usually, almost everyone shows up to Jane's parties. But this time, only [Mary]$_F$ came.

A similar account can be made with respect to clefts embedded under possibility modals, such as (11): the embedded cleft *It might have been Mary who was at the party* triggers an exhaustivity presupposition contextually equivalent to "Mary wasn't at the party", which contradicts the assertion ("Mary might have been at the party"). Alternatively, the cleft can be taken to convey the surprising information that Mary might have been the only guest at the party in the form of a presupposition, again resulting in infelicity. The same applies, mutatis mutandis, to a question like *Is it Mary who was at the party?*, uttered within a context where it is mutually assumed that several people were there.

In sum, clefts are only felicitous when the second disjunct in the exhaustivity presupposition, as in (26-27), is considered a viable possibility. In other words, there must be worlds in the context set where the exhaustivity disjunct is true for a cleft to be felicitous. As a result, although clefts embedded under entailment-canceling operators do not trigger an *actual* exhaustivity inference, they produce a *potential* exhaustivity inference.

6 Is exhaustivity cancelable?

Experimental studies have challenged the prevailing assumption that exhaustivity is non-cancelable in unembedded clefts, thereby casting doubt on the presuppositional approach to cleft exhaustivity. Studies have shown that exhaustivity violations in clefts do not lead to strong unacceptability (DeVeaugh-Geiss, Zimmermann, Onea & Boell 2015; Washburn, Kaiser & Zubizarreta 2019). For instance, DeVeaugh-Geiss et al. (2015) found that participants give sentences like (35), in German, relatively higher acceptability ratings compared to similar sentences involving definite descriptions, such as (36). If cleft exhaustivity is a presupposition just like the uniqueness presupposition of definite descriptions, it is not obvious why there should be a difference in how participants react to presupposition failures (although see Križ (2017: 48) on this point). Other studies found that some participants tend to accept clefts as true in verification tasks despite an exhaustivity violation (De Veaugh-Geiss et al. 2018).

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

(36) # The one who visited the zoo is Sabine, and Anna visited the zoo

It has also been suggested that cleft exhaustivity is context-dependent, emerging only when clefts have specific discourse functions. Pollard & Yasavul (2016) argue that clefts trigger an exhaustivity inference when addressing *wh*-questions, whereas corrective clefts do not imply exhaustivity. This is demonstrated in (37), where B's initial statement does not imply that no one else received an NSF, as evidenced by the absence of contradiction in the subsequent continuation. Thus, there is apparently no exhaustivity inference in this case.

(37) 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 & Yasavul 2016)

However, I argue that the felicity of (37) is better explained by implicit domain restriction. Arguably, the context is enriched so that Bob and Rob are seen as alternatives to each other, whereas Mike is not considered part of the same alternative set. For instance, speaker B might assume that speaker A has mistaken Bob for Rob due to the similarity of their names. Alternatively, it could be that Bob and Rob are both semanticists, whereas Mike is a phonologist; thus, A could be wrong about the identity of the semanticist who got an NSF grant. From this perspective, there is no exhaustivity violation in (37): the assertion is exhaustive with respect to the relevant set of alternatives.

To illustrate this point, consider a corrective cleft used within a context that does not readily allow for implicit domain restriction. In (38), B's response is odd because of an exhaustivity violation.

(38) *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 in (38), the domain needs to restricted to just Nathan and Kevin, such that nobody other than Kevin, among the relevant set of alternatives, passed the exam. However, this is not supported by the context. Nothing in the given context implies that A is more likely to have mixed Nathan with Kevin rather than Jared. Their names aren't similar, and all the alternatives are made salient by being explicitly mentioned. Consequently, the exhaustivity violation is jarring. Unless, for instance, it is common knowledge that Nathan and Kevin are twins, in which case (38) becomes perfectly acceptable.

The contrast between (37) and (38) suggests that the exhaustivity inference can be contextually relativized to a specific set of alternatives, but not eliminated. The same applies to the potential exhaustivity inference triggered by negated clefts. In contrast to the infelicity of (8), example (39) is acceptable, even though Mary couldn't have been the only guest. The reason is that in this particular context, the rejected alternative "Mary was at the party last night" was under consideration as exhaustive with respect to the relevant set of alternatives; unlike in (8), we are not interested in a list of people who were at the party, but specifically in the identity of the person at the party who was (mis)identified as Mary.

(39) A: Did you hear, even Mary was at the party last night!
B: Well, actually, it wasn't $[\text{Mary}]_F$ (who was at the party)—it was $[\text{her sister}]_F$.

It remains to be seen, however, whether implicit domain restriction might also account, at least in part, for the experimental results regarding the acceptability of exhaustivity-violating clefts. Hence, I believe that the presuppositional approach to cleft exhaustivity is still tenable.

7 Beyond exhaustivity

Previous studies have noted that the felicity conditions of clefts are not solely determined by the existential and exhaustivity inferences. First, unembedded clefts are usually odd as answers to explicit questions (Destruel & Velleman 2014), as

demonstrated in (40), where the canonical sentence is much more natural than the cleft construction as a direct answer.

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

Second, corrective clefts are slightly odd when the addressee is not strongly committed to the contrary alternative (Zimmermann 2011; Destruel, Beaver & Coppock 2019). For instance, (41) is not as good as (42), because in the former case the cleft does not reject an alternative that the other speaker expressed certainty about.

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

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

Two approaches come to mind to account for these tendencies. The first posits that the semantics of clefts is actually richer than commonly assumed. Perhaps, alongside the existential and exhaustivity presuppositions, clefts also trigger an additional presupposition that explains the data in (40-42). However, this would be too baroque, probably. An alternative approach suggests that the clefts in (40-41) are slightly odd because they are used in contexts that deviate from the typical discourse function of clefts, which is not semantically encoded.

If the second approach outlined above is on the right track, could it be the case that exhaustivity likewise arises from the discourse function of clefts? My answer will be no, as this approach does not account for the differences between the exhaustivity inferences triggered by clefts and prosodic focus.

Tönnis (2021) proposes that clefts in written German typically address unexpected questions. For instance, Tönnis & Tonhauser (2022) show that participants consider examples like (43a) as more natural than examples like (43b). They argue that the question "Who parked in front of Benni's bicycle?" is more expected in the latter case because of the discourse structure, making this particular context less suitable for clefts.

(43) a. When Benni came into the shed his bicycle was blocked. He couldn't get it out quickly enough. So he set off on the scooter. **It was Lilly who had parked in front of Benni's bicycle.**

b. When Benni came into the shed his bicycle was blocked. **It was Lilly who had parked in front of Benni's bicycle.**

The notion of unexpectedness is also applicable to the other cases discussed above. In direct answers to explicit questions, as in (40), the question is as expected as it can be. In corrections, if the addressee is not strongly committed to the contrary alternative, the question remains somewhat expected. For instance, in (41) A's statement does not settle the question "Who cooked the beans?", so this question may be further discussed. In (42), on the other hand, A's statement supposedly settles this question, and it is unexpected that this question should be reopened.

According to DeVeaugh-Geiss et al. (2015), the primary function of clefts is to disambiguate focus placement. Tönnis (2024) proposes that in contexts where the QUD (and, hence, the focus) is relatively unexpected, clefts reduce information density through a division of labor: the functional words that form the cleft structure mark the focus, whereas the lexical words that constitute the cleft phrase only need to convey the semantic content. If the QUD is highly expected, on the other hand, there is less uncertainty regarding focus placement, and so the benefit of using a cleft construction decreases.[4]

Could it be, then, that exhaustivity is likewise non-conventionalized? For the sake of the argument, suppose that clefts do not encode exhaustivity. Instead, exhaustivity arises through the same mechanism that generates exhaustivity inferences in canonical sentences with prosodic focus. The presuppositional exhaustivity operator PEX proposed by Bassi, Del Pinal & Sauerland (2021) is a suitable candidate for this, as it has a similar denotation to that of the cleft operator proposed by Velleman et al. (2012), as noted in Footnote 4 in Bassi et al. (2021). In this approach, there is no semantic difference between the two sentences in (44); they differ solely in whether certain focus alternatives can be ignored, which allows for non-exhaustive interpretations.

(44) a. PEX [[My]$_F$ dog bit the mailman]

b. PEX [It was [my]$_F$ dog that bit the mailman]

It has been observed that exhaustivity inferences triggered by prosodic focus in canonical sentences are more easily cancelable than those generated by clefts (see Onea 2019: 410-413, and references within). Conceivably, employing a cleft construction—whose primary function is focus disambiguation—makes the QUD more salient, in some sense, than prosodic focus does. Consequently, it is more

4 This does not seem to be the whole picture, though. Sometimes clefts are natural even as answers to explicit questions. For instance, the cleft sentence in (40) becomes much more acceptable when construed as an accusation. Imagine that speaker A warned everyone not to cook the beans, intending to save them for a specific purpose. Later, upon discovering that someone has cooked them, he storms into the room, screaming in anger, "Who cooked the beans?!" In this context, the cleft version of B's answer in (40) feels entirely natural, even though the QUD is highly expected.

difficult to ignore certain alternatives in cleft sentences, and hence the exhaustivity inference is more robust.

What's missing in this analysis is an explanation of why unembedded clefts are incompatible with other interpretations of narrow focus apart from exhaustivity. For example, a cleft cannot answer a mention-some question, as shown in (45).[5]

(45) A: Who has a key to the office?
B: [John]$_F$ does / [John]$_F$ has one.
B': # It's [John]$_F$ (who has a key).

Similarly, an unembedded cleft cannot serve as a partial answer even in situations where the speaker is unable to provide a complete answer. For example, (46) is odd even with a rise-fall-rise intonation contour, which indicates a partial answer.

(46) A: Who passed the exam?
B: Well, [Mary]$_F$ passed, but I don't know if anyone else did.
B': # Well, it's [Mary]$_F$ who passed, but I don't know if anyone else did.

By contrast, negated clefts are felicitous as partial answers to explicit questions, as demonstrated in (47). Although the negated cleft is not an exhaustive answer to the QUD—something that a negated cleft can never be—the potential exhaustivity inference it triggers is congruous with the common ground.

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

However, even negated clefts cannot answer mention-some questions, as shown in (48). This is expected, since the negated cleft triggers a potential exhaustivity inference, which clashes with the assumption that several people have keys to the office.

(48) A: Who has a key to the office?
B: # I don't know, but it's not [John]$_F$ (who has a key).

What comes out of this discussion is that clefts are always associated with exhaustivity, and the question is why. If the cleft construction is only responsible for focus marking, why does focus in clefts differ from prosodic focus in the range of interpretations it allows? One can postulate that a cleft requires the presence of an exhaustivity operator, but this is not all that different from an analysis where the cleft itself introduces the exhaustivity presupposition.

5 Admittedly, the oddness of example (45) might also be due to the fact that it is an answer to an explicit question. However, this is not the main cause for the infelicity of (45), as even a cleft question, such as *Who is it that has a key to the office?*, cannot have a mention-some interpretation.

In sum, unembedded clefts must be *actually* exhaustive, not only *potentially* exhaustive, whereas negated clefts need to be *potentially* exhaustive. Furthermore, cleft exhaustivity does not seem to follow directly from the focus marking function of clefts. Therefore, exhaustivity is either semantically encoded by the cleft, or the cleft somehow imposes constraints on focus interpretation in a way that necessitates the presence of an exhaustivity operator and makes it difficult to ignore alternatives.

8 Conclusion

The key observation made in this paper is that a negated cleft like *It wasn't Mary who was at the party* is infelicitous within a context where it is mutually assumed that Mary's couldn't have been the only guest at the party (unless the domain is contextually restricted to just Mary and one other person). Although the informal judgments are relatively clear in this particular case, it would be worthwhile to investigate the effect of potential exhaustivity in an experimental setting, controlling for possible lexical factors. Specifically, the predicate *be at the party* is unlikely to be interpreted exhaustively in a neutral context, in contrast to a predicate like *bite the mailman*, which is much more likely to be interpreted exhaustively. Therefore, it is possible that these item-specific properties partly determine the difficulty of accommodating the exhaustivity presupposition.

For instance, in contrast to (8), example (49a) appears to be felicitous, even though the speaker's dog couldn't have been the only dog that bit the mailman. Notice that an unembedded cleft also seems to be felicitous in this context (49b).

(49) *Context: Yesterday, the neighborhood mailman was bitten by two off-leash dogs as he was walking past the local park.*

a. A: Whose dogs bit the mailman?
   B: I don't know, but it wasn't [my]$_F$ dog (that bit him).

b. A: It's so irresponsible of people to let their dogs run off-leash in the park!
   B: Yeah, actually, I have to admit that it was [my]$_F$ dog that bit the mailman.

It seems that the event of two dogs biting the mailman is divided into separate biting-the-mailman subevents, thus avoiding an exhaustivity violation. However, it remains an open question whether and why event descriptions differ in how readily they allow us to focus our attention on specific subevents in accommodating the exhaustivity presupposition.

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