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Focus and Binding*

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ABSTRACT

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This study explores the possibility of providing a principled account for the effects of focus on binding. There is a consensus that focused phrases do not conform to Binding Condition C, but there is variation among speakers as to whether they do not obey Binding Condition B. The major claim made here is two-fold: (i) the suppression of Binding Condition C follows from the fact that focus can be syntactically realized as the head of a focus phrase, and (ii) the speaker variation with respect to the suppression of Binding Condition B arises from a Gricean implicature.

KEYWORDS

focus, binding condition A, binding condition B, Gricean implicature

1. Introduction

There is a consensus that focused phrases violate Binding Condition C (Evans 1980, Reinhart 1983b, Bruening 2021, among many others). For instance, (1) is well-formed, even though *Goofy* is c-commanded by the focused phrase *hé*.

(1) Even hé$_i$ knows that Goofy$_i$ is an idiot. (Bruening 2021: (8))

By contrast, it is controversial as to whether focused phrases also violate Condition B. Reinhart (1983b) claims that Condition B can be suppressed in (2a-c), where the R-expressions locally c-commanding the pronouns are forced to be focused. Roelofsen (2010) assumes that Reinhart's claim is by and large correct, although he admits that many speakers find (2a-c) marginally acceptable. However, many linguists (Schlenker 2005, Heim 2007, Jacobson 2007) point out that sentences of this form are not acceptable for many speakers. Furthermore, McKillen (2016) and Bruening (2021) report that they are unacceptable for most speakers.[1]

(2) a. Only Max$_i$ himself voted for him$_i$.
     b. I know what John and Mary have in common. John hates Mary and Mary$_i$ hates her$_i$ too.
     c. If everyone voted for Oscar, then certainly Oscar$_i$ voted for him$_i$.
         (Roelofsen 2010: 118)

This squib explores the possibility of providing a principled account for the effects of focus on binding. The major claim made in this squib is that the peculiar pattern in (1) follows from the fact that focus can be syntactically realized as the head of a Focus Phrase, and the contrast between (1) and (2a-c) arises from a Gricean implicature.

2. Previous Approaches

Reinhart (1983a, b) proposes that the binding conditions regulate only binding and not coreference. Sentence (1) can be interpreted as either the bound reading in (3a) or the coreferential reading in (3b). The two readings are distinguishable: the former would be roughly paraphrased as 'alternatives to Goofy know that they themselves are idiots' and the latter as 'alternatives to Goofy know that Goofy is an idiot'.

(3) a.*even he λx.x knows that Goofy$_x$ is an idiot. (Bound Reading)
    b. even he knows that Goofy is an idiot. (he = Goofy) (Coreferential Reading)

Reinhart's claim is that only the bound reading is ruled out by Binding Condition C, and (1) is therefore well-formed when it is construed as (3b).[2] There are many problems with Reinhart's approach, as pointed out by Bruening (2021). One of them is that it fails to explain the asymmetry between Condition B and Condition C

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[1] McKillen's (2016) generalization is based on experimental results.

[2] If *even he* is replaced with unstressed *he* in (1), the bound reading and the coreferential reading are not distinguishable. The bound reading in (ia) is ill-formed, as binding of an R-expression is ruled out. The coreferential reading in (ib) would be allowed. However, Reinhart argues that (ib) is also excluded because it is not distinguishable from (ia).

(i) a.*He λx.x knows that Goofy$_x$ is an idiot.   b. *He knows that Goofy is an idiot. (he = Goofy)

violations. If the binding conditions do not regulate coreference, it is predicted that Condition B violations as well as Condition C violations must be allowed under focus. However, it is not the case. As mentioned above, the status of (2a), repeated as (4), is controversial.

(4) %Only Max himself voted for him. (Roelofsen 2010: 4)

With an eye into explaining the effects of focus on the binding conditions, Bruening (2021) proposes a presuppositional approach on the basis of Sauerland (2013) and Heim (2007). Sauerland proposes that Condition A effects come from a presupposition of SELF anaphors. SELF anaphors add the following presupposition: the predicate of the clause they occur in has two identical arguments. After generalizing the presuppositional approach to Binding Conditions B and C, Bruening attempts to elaborate McKillen's (2016) claim that presuppositions can be absent from focus alternatives. His proposal is based on the structured meaning approach proposed by von Stechow (1991) and Krifka (1992). In the structured meaning approach to focus, if there is a focus phrase in a clause, the logical form of the clause is split into two parts: a background part (B) and a focus part (F). For instance, (5a) has the logical form in (5b).[3]

(5) a. Even hé$_i$ knows that Goofy$_i$ is an idiot.
    b. <u>λx [x knows that Goofy is an idiot]</u>, <u>he$_i$</u>>
        Background part (B)   Focus part (F)

In (5b) *Goofy* carries the presupposition of anti-covaluation. Bruening argues that if the variable x can be the target of anti-covaluation, the presupposition may not be satisfied by the constituent in the focus part—*he*.[4] Therefore, (5a) is acceptable. The intuition behind this proposal is that it is not *he* but x that *Goofy* is disjoint from.

There are exceptions to this proposal. The logical form of the second sentence in (6a) is (6b), where the presupposition of argument identity is triggered by *himself*, and x can be the target of covaluation. Accordingly, the presupposition may not be satisfied by *Brandon*, which means that it is predicted that the second sentence of (6a) is grammatical, contrary to fact.

(6) a. Everybody laughed at James$_i$. *Even Brandon$_j$ laughed at himself$_i$.
    b. <<u>λx [x laughed at himself]</u>, <u>Brandon$_i$</u>>

In order to fix this problem, Bruening generalizes that if a DP cannot refer directly to an individual in the discourse, the presupposition regarding covaluation cannot be violated under focus. The anaphor *himself* in (6a) cannot refer directly to an individual, so it is required that the presupposition of covaluation be met by *Brandon*. However, (6a) does not meet this requirement. It is therefore ungrammatical. Bruening extends this proposal to speaker variation in Condition B violations. According to him, third person pronouns typically are not used to refer directly to an individual in a local context. Hence, most speakers reject sentence (4), which is repeated as (7).

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[3] What is meant by 'logical form' here is different from LF. Logical forms are semantic, not syntactic constructs. By contrast, LF representations are the syntactic structures that undergo semantic interpretation.

[4] This is an informal introduction of Bruening's proposal. The following is the condition he originally proposes.

(i) In a focus meaning $\langle B, F \rangle$ where B has the form $\lambda x[...x...]$, presuppositions must be met only if they are triggered by an element of B and make no reference to x.

(7) %Only Max himself voted for him.

There arise many questions regarding the presuppositional approach. The immediate questions include (i) why presuppositions may be ignored under focus, (ii) why the presuppositions of the DPs with no independent referential force must be met even under focus, and (iii) why the binding relations are determined at logical form, not at LF. There seem to be no principled answers to the questions.

The remainder of this squib is devoted to showing that we can provide a syntactic account for the effects of focus on binding in a principled way, while maintaining the classical binding theory (Chomsky 1981, 1986, 1995, Chomsky and Lasnik 1993). It will be shown that focused phrases are not exceptions to the classical binding conditions.[5]

3. Movement of Interrogative Subjects

Let us briefly consider the syntax and semantics of focused phrases. Rooth (1992) claims that focus introduces a presupposed variable on the ground that (8a) and (9a) form a paraphrase relation with (8b) and (9b), respectively.

(8) a. A ú usually follows a q.
    b. If something follows a q, it is usually a u.
(9) a. A u usually follows a q́.
    b. If a u follows something, it is usually a q.

I propose that focus, which is semantically realized as a presupposed variable, can be syntactically realized in two different ways. It can be realized as either a head or an adjunct. For instance, if *John* is focused, it has the syntactic structure either in (10a) or (10b).

(10) a. $[_{\text{Foc(us)P}} \text{Foc}_x [\text{John}_i]]$
    b. $[_{\text{DP}} \text{Foc}_x [_{\text{DP}} \text{John}_i]]$

In this analysis, there are two indices associated with the focused phrase *Jóhn*: one is the inherent index of *John*, and the other is *x*, which is introduced by focus.

With this in mind, let us return to (1), rewritten here as (11). Sentence (11) is represented as either (12a) or (12b), given that focus can be either a head or an adjunct.

(11) Even hé$_i$ knows that Goofy$_i$ is an idiot.
(12) a. Even $[_{\text{FocP}} \text{Foc}_x [_{\text{DP}} \text{he}_i]]$ knows that Goofy$_i$ is an idiot
    b. Even $[_{\text{DP}} \text{Foc}_x [_{\text{DP}} \text{he}_i]]$ knows that Goofy$_i$ is an idiot

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[5] While assuming that the notion 'local domain' can be replaced by 'phase' (Quicoli 2009, Charnavel and Sportiche 2016, Saito 2017, 2018, Bruening 2021, among many others), this squib adopts the following version of binding conditions: (i) if α is an anaphor, it must be coindexed with a c-commanding phrase in the same phase (Condition A), (ii) if α is a pronominal, it must be disjoint from every c-commanding phrase in the same phase (Condition B), and if α is an r-expression, it must be disjoint from every c-commanding phrase (Condition C).

In (12a), unlike in (12b), *Goofy$_i$* is not c-commanded by *he$_i$*. Sentence (11) is therefore grammatical when it has the representation in (12a). In short, Condition C can be violated when focus is realized as the head of a focus phrase. The rest of this squib is concerned with some consequences of this proposal on Condition B and Condition A.

4. Focus and Condition B

If focused phrases can be analyzed as *[$_{FocP}$ Foc$_x$ [...]]*, it is predicted that they can violate Condition B as well as Condition C. This prediction seems to be partially correct. There is no controversy about the view that first person and second person pronouns can violate Condition B, as illustrated by (13a-b).

(13) a. *The whole town is angry with Bart and he's seen spray-painting "I hate Bart*
      Simpson" on a tower. He turns to the crowd below and says: See, [Í hate me too]!
      (The Simpsons, Series 18 Episode 18; cited in McKillen 2016)
   b. Mycroft: I got you out.   Sherlock: No, Í got me out.
      (Sherlock, Series 3 Episode 1; cited in McKillen 2016)

As noted above, however, it is controversial whether third person pronouns can disobey Condition B, as illustrated by (2a-c), repeated here as (14a-c).

(14) a. %Only Max himself voted for him.
   b. %I know what John and Mary have in common. John hates Mary and Mary hates her too.
   c. %If everyone voted for Oscar, then certainly Oscar voted for him.

It seems that first/second person pronouns pattern like R-expressions, whereas third person pronouns do not (Bruening 2021).

The controversial status of (14a-c) can be explained if we make use of a Gricean implicature. The binding conditions are not violated when the subject is focused, regardless of whether the object is a pronoun or an R-expression. Examples (14a) and (15a) do not violate Binding Conditions B and C, respectively, as shown by (16a-b).

(15) a. Only Max himself voted for Max.
   b. I know what John and Mary have in common. John hates Mary and Mary hates Mary too.
   c. If everyone voted for Oscar, then certainly Oscar voted for Oscar.
(16) a. [$_{DP}$ Foc$_x$ [$_{DP}$ Max$_i$]] voted for him.
   b. [$_{DP}$ Foc$_x$ [$_{DP}$ Max$_i$]] voted for Max.

It is syntactically possible to use either (14a) or (15a) when the speaker intends a coreferential reading. However, (14a) is excluded by a Gricean maxim—the second Maxim of Manner, which requires 'Avoid Ambiguity' (Grice 1975).[6] Sentence (15a) is clearer than (14a) in that the former is unambiguous, while the latter is ambiguous: *him*

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[6] While assuming that meaningful dialogue is characterized by cooperation, Grice (1975) proposes the following cooperative principle:
   • Make your conversation contribution such as required, at the stage at which it occurs, by the accepted purpose or direction

can be coreferential with or disjoint from *John*. Let us suppose that the speaker chose to utter (14a) when she could have used the clearer statement (15a). If so, she must have avoided the clearer statement because it is false. Thus, the use of (14a) implicates that *him* is not coreferential with *Max*.[7] According to Grice, it is not the case that all the people follow the maxims of conversation: that is, conversational implicature is subject to speaker variation. Hence, there is speaker variation concerning the status of (14a-c).

In this approach it is quite straightforward why Binding Condition B can be violated when the pronoun is first person or second person. Sentences (13a-b), repeated as (17a-b), are not ambiguous. Both *I* and *me* refer to the speaker.

(17) a. Í hate me too!
     b. Í got me out.

Therefore, they are syntactically and pragmatically well-formed.

5. Focus and Binding Condition A

Sentence (18) is not ambiguous: it gives the strict reading in (19a), but not the sloppy reading in (19b) (Bruening 2021).

(18) Even Í laughed at me. You did too.
(19) a. Strict Reading: I laughed at me, and you laughed at me
     b. Sloppy Reading: I laughed at myself and you laughed at yourself

This can be explained as follows. Let us recall that focus can be either an adjunct or a head: the focused phrase

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  of the talk exchange in which you are engaged.

The cooperative principle is further divided into four conversational maxims as follows:

  • Maxim of Quantity: 1 Make your contribution as informative as is required. 2. Do not make contribution more informative than is required.
  • Maxim of Quality: Try to make your contribution one that is true.
  • Maxim of Relation: Be relevant.
  • Maxim of Manner: Be perspicuous. 1. Avoid obscurity of expression. 2. Avoid ambiguity. 3. Be brief. 4. Be orderly.

This study claims that 'Avoid ambiguity', which is the second Maxim of Manner, plays an important role in understanding the controversial status of (14a-c).

[7] Grice (1975) describes the procedure of working out a conversational implicature as follows:

  1. The speaker (S) has said that p.
  2. The hearer (H) has no reason to suppose the S is not observing the conversational maxims or at least the CP
  3. (2) implies that S thinks that q.
  4. S knows that H knows that S knows that H understands that it is necessary to suppose that S thinks that q.
  5. S has done nothing to stop H to think that q.
  6. S wants H to think that q.
  7. Therefore, S has implicated that q.

I has the syntactic structure in either (20a) or (20b). If it is represented as (20a), as in (21), an ill-formed string is generated.

(20) a. [$_{DP}$ Foc$_x$ [$_{DP}$ I$_i$]]

  b. [$_{FocP}$ Foc$_x$ [$_{DP}$ I$_i$]]

(21) Even [$_{DP}$ Foc$_x$ [$_{DP}$ I$_i$]] laughed at me.

In (21) both *Foc$_x$* and *I$_i$* c-command *me*, which means that *me* must be disjoint from them. It does not make sense that *me* is disjoint from *I*. Therefore, (21) is ill-formed. Accordingly, (18) must be represented as (22), where *me* must be disjoint from *Foc$_x$* but can be coreferential with *I*.

(22) [$_{FocP}$ Foc$_x$ [$_{DP}$ I$_i$]] laughed at me

This means that the vPs of the first and second sentences in (18) cannot be interpreted as *[λx.x laughed at x]*, which in turn means that the sloppy reading in (23) is not available. As a result, (18) is unambiguously interpreted as (24).

(23) *I [λx.x laughed at x] and you [λx.x laughed at x]: Sloppy Reading

(24) I [λx.x laughed at me] and you [λx.x laughed at me]: Strict Reading

Let us now turn to (25), which can give rise to the strict reading in (26a) as well as the sloppy reading in (26b).

(25) Only Mary hates herself.

(26) a. Mary$_i$ hates herself$_i$, and the others do not hate her$_i$. (Strict Reading)

  b. Mary hates herself, and the others do not hate themselves. (Sloppy Reading)

If focus is adjoined to *Mary*, *herself* can be valued as either 'i' or 'x'. Accordingly, the vP of (25) is construed as either (28a) or (28b). The logical forms (28a) and (28b) give rise to a strict reading and a sloppy reading, respectively, as illustrated by (29a-b).

(27) a. [$_{DP}$ Foc$_x$ [$_{DP}$ Mary$_i$]] hate herself: Valuation

  b. [$_{DP}$ Foc$_x$ [$_{DP}$ Mary$_i$]] hate herself$_{x,i}$

(28) a. [λx.x hates i]

  b. [λx.x hates x]

(29) a. Mary. λx [x hates i] and the others. λx [x does not hate i]: Strict Reading

  b. Mary. λx [x hates x] and the others. λx [x does not hate x]: Sloppy Reading

If, on the other hand, focus is the head taking *Mary* as its complement, *herself* is valued as *x*, as shown in (30a-b), and (30b) gives rise to the sloppy reading in (29b).

(30) a. [$_{FocP}$ Foc$_x$ [$_{DP}$ Mary$_i$]] hate herself: Valuation

  b. [$_{FocP}$ Foc$_x$ [$_{DP}$ Mary$_i$]] hate herself$_x$

To sum up, anaphors, unlike pronominals, can produce both strict and sloppy readings when their antecedents are focused.

6. Summary and Conclusion

Let us summarize what has been claimed so far. Sentences (31a-b) can be represented as either (32a-b) or (33a-b) respectively, depending on how focus is syntactically realized.

(31) a. (Even) Tóm hates Tom.
    b. (Even) Tóm hates him.
(32) a. [$_{FocP}$ Foc$_x$ [$_{DP}$ Tom$_i$]] hates Tom$_i$
    b. [$_{FocP}$ Foc$_x$ [$_{DP}$ Tom$_i$]] hates him$_i$
(33) a. *[$_{DP}$ Foc$_x$ [$_{DP}$ Tom$_i$]] hates Tom$_i$
    b. *[$_{DP}$ Foc$_x$ [$_{DP}$ Tom$_i$]] hates him$_i$

The representations in (33a-b) are ruled out by Binding Conditions C and B, as *Tom* can c-command *Tom* and *him* in (33a-b), respectively. By contrast, (32a-b) are well-formed. Both representations produce strict readings only. Thus, it is syntactically possible to use either (31a) or (31b) when the speaker intends a strict reading. However, (31b) is pragmatically excluded by the second Maxim of Manner.

To conclude, focused phrases display a peculiar pattern with respect to the binding conditions because focus can be syntactically realized in two different ways, and the contrast between (31a) and (31b) arises from a Gricean implicature.

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Examples in: English
Applicable Languages: English
Applicable Level: All