

Focus and Condition C

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1. Introduction

Binding Condition C, as originally formulated in Chomsky (1981), states that R-expressions must be free. That is, in contrast to pronouns and anaphors, R-expressions must not be A-bound by any element, where binding is defined as in (1).

- (1) A binds B iff
- a. A c-commands B, and
 - b. A and B are co-indexed.

Condition C rules out all of the ungrammatical sentences in (2); in each case, there is an R-expression, *John*, which is bound by a co-referent nominal, either a pronoun or another R-expression.

- (2)
- a. **He* likes *John*.
 - b. **John* likes *John*.
 - c. **He*/**John* thinks that Sally knows that you like *John*.

Notice that here, and throughout, I depart from the traditional convention of denoting co-reference with co-indexation, instead using italics to represent co-reference, following Safir (2004). While the traditional formulation of Condition C from Chomsky (1981) accounts for the basic data, it still leaves much room for improvement. First, the traditional formulation of binding theory merely stipulates the three binding conditions. Ideally, a theory of binding would provide an explanatory account of the binding conditions, and perhaps also reduce the three conditions to a single principle or set of principles. Second, there is a great deal of data which is not accounted for by the traditional formulation of Condition C. In this paper, I discuss a subset of this data involving focus constructions, which have sometimes been treated as exceptions to Condition C. Section 2 introduces the specific theoretical framework I will be adopting – a competition-based syntactic theory of binding proposed by Safir (2004). Section 3 introduces the focus constructions which are problematic for a traditional approach to binding theory, and shows that, although focus constructions are not considered in detail by Safir (2004), their properties can be explained naturally in Safir’s framework by incorporating certain assumptions.

2. The framework: Safir (2004)

Safir adopts a competition-based approach to binding, building on the intuition that Condition B effects can be derived by assuming that anaphors are obligatory when they are available, and Condition C effects can be similarly derived by assuming that pronouns are obligatory when they are available (see Burzio 1989, 1991, 1996 for a similar approach). The centerpiece of Safir’s theory is a principle he calls the Form-to-Interpretation Principle (FTIP), given below (Safir 2004:74).

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- (3) Form-to-Interpretation Principle (FTIP):
 If a) X c-commands Y,
 b) z is the lexical form or string that fills Y,
 c) w is a single form more dependent than z, and
 d) both w and z could support the same identity dependent interpretation if Y were exhaustively dependent on X,
 Then (the referential value for) Y cannot be interpreted as identity dependent on X.

Some definitions are in order. A is identity dependent on B if the identity of A is a function of the value of B (in other words, if A gets its reference from B). For example, in (4a-b) the pronoun and anaphor, respectively, are identity dependent on the R-expression, assuming that they are bound by the R-expression. Notice that, if *him* is accidentally co-referent with *John* in (4a) because they are assigned their reference independently, then *him* is not identity dependent on *John*. Safir's system allows accidental co-reference, a point to which I will return below.

- (4) a. *John* thinks that Sally likes *him*.
 b. *John* likes *himself*.

Another important point to note is that I consider the identity dependent interpretation to be the same, for the purposes of (3d), only if the interpretation of the entire sentence is the same – that is, it is not enough for the interpretation of the nominal to be the same. In most cases, the distinction doesn't matter, since the FTIP only considers the effect of changing the nominal, while keeping the rest of the sentence constant. However, in the discussion of focus constructions in Section 3, we will see cases where the distinction matters.

A is exhaustively dependent on B if A is a string, the entirety of which is dependent on B. In (5), for example, *his doctor* is dependent on *every patient*, but not exhaustively dependent, since only *his* is directly dependent on *every patient*.

- (5) *Every patient* loves *his* doctor.

Finally, the use of the term “more dependent” in (3) implies that there is a scale of dependency, such that some elements are inherently more dependent than others. Safir gives the dependency scale for English as in (6):

- (6) pronoun-SELF >> pronoun >> R-expression (Safir 2004:76)

See Safir (2004) for details on the motivation of the dependency scale, and how it varies cross-linguistically.

Notice that Safir must assume some form of Condition A. He formalizes Condition A as a principle which he calls Local Antecedent Licensing (LAL), given in (7).

- (7) a. Local Antecedent Licensing: An anaphor must be c-anteceded in Domain D.
 b. If X is a c-antecedent of Y then X c-commands Y and either Y is dependent on X, or X is dependent on Z and Y is dependent on Z.
 c. Domain D: The domain for X is the minimal maximal extended projection containing X and a sister to X.

(Safir 2004:77)

By “extended projection,” Safir means a projection dominating a lexical head – V, N, A, C or P. Specifically, following Grimshaw (1991), an extended projection consists of a lexical head and its projection, as well as all the functional projections directly above the lexical projection. Dependency is defined the same as identity dependency in (3).

Now we have enough background to see how Safir derives Conditions B and C. The intuition is that anaphors are used whenever possible, because they are the most dependent form. However, their occurrence is restricted by LAL. Where an anaphor is disallowed by LAL, a pronoun must be used whenever possible, since it is more dependent than an R-expression. R-expressions can never be c-

antedeceded at all, since they can always be replaced by a more dependent form (either an anaphor or a pronominal) without affecting the interpretation.

Strictly speaking, we have not ruled out Condition C violations. The FTIP disallows R-expressions from being identity dependent on nominals which c-command them, but it does not prevent them from being accidentally co-referent, since, as mentioned above, the definition of identity dependency does not include accidental co-reference. Thus, Safir introduces a second principle, which he calls Pragmatic Obviation (Safir 2004:50).

- (8) Pragmatic Obviation: If FTIP does not permit *y* to be interpreted as dependent on *x*, then *x* and *y* form an obviative pair.

By “obviative pair,” Safir means that *x* and *y* cannot have the same reference. In combination with the FTIP, then, Pragmatic Obviation ensures that Condition C violations are ruled out. Accidental co-reference is no longer permitted in cases where the FTIP rules out an identity dependent interpretation. Safir calls it Pragmatic Obviation because he argues that it can be overruled by pragmatic considerations in certain situations (we will see one such situation in Section 3).

Let us see how the FTIP and Pragmatic Obviation account for the basic data in (2). In (2a-c), the c-commanded R-expression *John* can be replaced by another nominal without affecting the interpretation – in (2a-b), it can be replaced by an anaphor, while in (2c), it can be replaced by a pronoun, since the LAL disallows an anaphor in that position. In each case, the c-commanded nominal can be identity dependent on the subject. Since both pronouns and anaphors are higher on the dependency scale than R-expressions, the FTIP disallows the c-commanded R-expression from being identity dependent on the subject. In each case, Pragmatic Obviation then mandates that the two nominals form an obviative pair, so accidental co-reference is disallowed, and there is no way for the nominals to co-refer.

3. Focus constructions

As has frequently been observed, focused NPs seem to be exceptions to Condition C, both as binders and as bindees. In (9a-c), the R-expression *John* is bound by a focused R-expression. (I denote focused constituents using all caps.)

- (9) a. Only *JOHN* likes *John*.
 b. Even *JOHN* hates *John*.
 c. (Nobody thinks *John* is polite.) *JOHN* thinks *John* is polite.

In (10a-c), the focused R-expression *John* is bound by an unfocused R-expression.

- (10) a. *John* only likes *JOHN*.
 b. *John* even likes *JOHN*.
 c. (*John* doesn't like anybody.) *John* likes *JOHN*.

Safir argues that the sentences in (9) and (10) are grammatical because Pragmatic Obviation is overruled. Specifically, he argues that Pragmatic Obviation can be overruled when what is typically unexpected is taken to be expected. For instance, in (9b), the focus operator *even* indicates that John would normally be among the least likely individuals to hate John; nonetheless, (9b) is asserting that John in fact does hate himself.

It is not clear, though, how this argument extends to the other focus cases. In (9a), for example, the opposite situation seems to hold. Normally, John would be among the most likely individuals to like John, so the assertion that John likes himself does not require any adjustment of expectations. I deal with focus cases in a different way than Safir. I argue that the cases in (9) can be accounted for without stipulating that Pragmatic Obviation is overruled, and in fact that the data in (9) actually follows straightforwardly from Safir's account with minimal additional assumptions. My approach to the cases in (10), on the other hand, relies on the overruling of Pragmatic Obviation.

3.1. Focused binders

My account of focused binders relies on the idea that sentences like those in (9) are not in true competition with any other sentences for the purposes of binding theory, since replacing the c-commanded R-expression with an anaphor or pronoun would not yield the same interpretation. The basic observation behind this approach goes back at least to Reinhart (2006).

To see how this works, consider (9a). Semantically, the basic purpose of focus is to construct a set of propositions with which the proposition containing the focus is to be contrasted. In (9a), “John likes John” is being contrasted with “Mary likes John,” “Andrew likes John,” and so forth. Rooth (1992) formalizes this as what he calls the focus semantic value, which is the set of propositions being contrasted with the proposition containing the focus. In the case of (9a), the focus semantic value is the set of propositions of the form “x likes John,” where x is an individual. The focus semantic value is taken to be another dimension of meaning, in addition to the ordinary semantic value, which in this case is “John likes John.” (Rooth takes the focus semantic value to include the ordinary semantic value, but I differ from him in this particular. For me, x can only be an individual other than John.)

Now consider what happens when the c-commanded R-expression in (9a) is replaced with a pronoun or anaphor. In fact, we only need to consider the anaphor case, since if a pronoun is available in that position with a dependent interpretation, then an anaphor will also be available, and the FTIP will rule out the pronoun. If we replace the R-expression with an anaphor, we get (11).

(11) Only *JOHN* likes *himself*.

The ordinary semantic value of (11) is equivalent to that of (9a), but they differ in their focus semantic value. The focus semantic value of (9a) is the set of propositions of the form “x likes John,” while the focus semantic value of (11) is the set of propositions of the form “x likes himself.” Therefore, replacing the R-expression with an anaphor does not result in the same interpretation, and the FTIP does not rule out (9a).

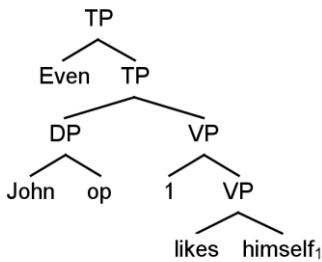
There are some complications with this account. First, it is possible for (12a) to have the same reading as (12b), where the c-commanded R-expression has been replaced with an anaphor. If this is the case, then we would expect (12a) to be ungrammatical by the FTIP.

- (12) a. Nobody likes *John*. Not even *JOHN* likes *John*.
 b. Nobody likes *John*. Not even *JOHN* likes *himself*.

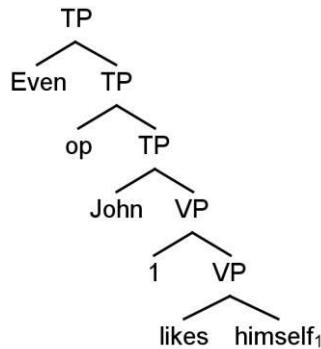
It is certainly possible for “Not even *JOHN* likes *himself*” to have the focus semantic value of the set of propositions of the form “x likes himself,” analogous to (11), but the fact that it is felicitous when preceded by “Nobody likes John” indicates that it can also have the focus semantic value of the set of propositions of the form “x likes John.” Thus, the FTIP should rule out (12a).

However, suppose that sentences with the focus operator *even* are systematically ambiguous with regards to how their meaning is computed at LF, unlike sentences with the focus operator *only*. This ambiguity must be subtle: no matter what the preceding context, “Not even *JOHN* likes *himself*” has the same scope (over the proposition “John likes John”) and the same focus (over “John”). Under standard accounts of *even* (e.g. Karttunen and Peters 1979), (12b) introduces a presupposition that “John likes John” is the least likely of a set of similar propositions under consideration, where the set of propositions under consideration is essentially the same as the focus semantic value. The difference between the two possible readings of “Not even *JOHN* likes *himself*” appears to be one of rule-ordering. I posit an operator, independent of focus and scope, which I will call the range, indicated by “op” in the trees below. Ignoring the negation, (12b) can have the two (simplified) structures given below.

(13a)



(13b)



When *even* has range only over John, as in (13a), the range operator does not c-command the index binding *himself*. When *even* has range over the entire atomic proposition, as in (13b), the range operator does c-command the index binding *himself*. Now assume that if the range operator c-commands the index binding *himself*, the focus semantic value is computed before the value of *himself* is computed. In (13a), then, the focus semantic value is computed by replacing *John* with a variable over individuals, *x*, resulting in the set of propositions of the form “*x* likes himself.” In (13b), the value of *himself* is computed as “John,” and then the focus semantic value is computed, resulting in the set of propositions of the form “*x* likes John.”

On this account, (12a) has the same structural ambiguity as (12b). However, unlike with (12b), it does not result in a semantic ambiguity, since the focus semantic value is the set of propositions of the form “*x* likes John” no matter what the range of *even* is. Crucially, though, there is one structure for (12a) which has the same interpretation when the c-commanded R-expression is replaced by an anaphor (when *even* has range over the atomic proposition), and one structure which has a different interpretation when the c-commanded R-expression is replaced by an anaphor (when *even* has range over the focused NP only). So, there is one structure for (30a) which is predicted to be grammatical according to the FTIP.

What, exactly, does the range operator represent? Notice that there are two (truth-conditionally equivalent) ways to paraphrase (12a): “It’s not even the case that John likes John,” or “John isn’t even among the people who like John.” In contrast, it would be decidedly odd to paraphrase (9a) as “It is only the case that John likes John,” though it is reasonable to paraphrase it as “John is the only one who likes John.” In other words, for *even*, it is possible to highlight the atomic proposition itself, or John’s participation in that proposition. I suggest that the range operator instantiates this distinction, and that it is similar to topicalization and left-dislocation, in that it highlights a particular element of the sentence without affecting its truth-conditional meaning. On this account, “John isn’t even among the people who like themselves” is a paraphrase of (13a), and “It’s not even the case that John likes himself” is a paraphrase of (13b). Though the distinction has no truth-conditional effect, its rule-ordering effects can be seen indirectly in (12b).

Note that additive focus operators, like *too* and *also*, pattern with *even* with respect to the data we have been considering. “*JOHN* likes *himself*, too” can felicitously follow either “Bill likes himself” or “Mary likes John.” Under the account just presented, this is to be expected, since *too* has the same pair of possible paraphrases as *even* (“It is also the case that John likes John” or “John is also among the people who like John”). Indeed, the restriction to a single possible type of paraphrase seems to be limited to *only*. This is a puzzling fact, and one which I have no explanation for, although it may plausibly be related to the fact that *only* is an exhaustive identification operator.

3.2. *Focused bindees*

A second empirical difficulty, of course, is that the account just presented cannot explain the grammaticality of the examples in (10), where the c-commanded R-expression is focused. In these cases, the R-expression can be replaced with an anaphor without affecting the interpretation, even when the focus semantic value is taken into account. Here, we need to appeal to Pragmatic Obviation, since the availability of the anaphor is not in question. I propose that this is a case where Pragmatic Obviation can be overruled, because a sentence like (10a) is structurally parallel to a discourse antecedent in a way that it would not be if the R-expression were replaced by an anaphor.

First, note that (10a) is only felicitous when it contains a discourse antecedent which is a member of the focus semantic value, such as in (14a). The same is true if the sentence were to contain a focused anaphor instead of an R-expression.

- (14) a. *John* doesn't like Mary or Andrew. In fact, *John* only likes *JOHN*.
 b. *John* doesn't like Mary or Andrew. In fact, *John* only likes *HIMSELF*.

(14a-b) are felicitous because in each case, the focus semantic value for the second sentence in the discourse is the set of propositions of the form “John likes x,” and the preceding discourse contains two atomic propositions which belong to that set (“John likes Mary” and “John likes Andrew”). This is the well-known parallelism condition on focus. Notice that the parallelism condition is quite weak. The antecedent need not be directly present, as noted by Rooth (1992) and Fox (1999).

(14a), however, satisfies a stricter parallelism requirement which is not satisfied by (14b). In (14a), the focused sentence itself is structurally parallel to the members of the focus semantic value: it is of the form “John likes x,” where x is an individual represented by an R-expression. Note that for every member of the focus semantic value, the individual denoted by x is representable by an R-expression (“John likes Mary,” “John likes Andrew,” etc.). On the other hand, (14b) is of the form “John likes x,” where x is an individual represented by an anaphor. None of the members of the focus semantic value include individuals which can be represented by anaphors; “John likes himself” is not a member of the focus semantic value, since *himself* by definition cannot refer to Mary, Andrew, or any other individual other than John. (14a) exhibits a parallelism that (14b) does not, in that its object is an R-expression, and the object in each member of the focus semantic value can be expressed as an R-expression. (14b) lacks this syntactic parallelism, because its object is an anaphor, and none of the members of the focus semantic value have objects which can be expressed as anaphors. I call this stricter form of parallelism syntactic parallelism, in contrast to the semantic parallelism which is required of focus constructions. Notice that the semantics of (14a) and (14b) are the same: in both cases, the focus semantic value is “John likes x” and the ordinary semantic value is “John likes John”; the difference arises because of the class of nominal used in the syntactic representation of the ordinary semantic value. (14b) is grammatical because it satisfies the FTIP, but (14a) is also grammatical if we assume that Pragmatic Obviation can be overruled for focus constructions which exhibit syntactic parallelism in addition to semantic parallelism. The assumption is a reasonable one to make, given that focus constructions are known to be sensitive to parallelism. Notice that it is specifically focus constructions which allow syntactic parallelism to overrule Pragmatic Obviation. As we would expect, non-focus constructions which exhibit syntactic parallelism still display Condition C effects; for instance, “*John* likes *John*” is not grammatical following the assertion “Mary likes Anne,” even though it is syntactically parallel to “Mary likes Anne” in a way that “John likes himself” is not.

To summarize, the grammaticality of bound R-expressions in focus constructions can be attributed to two factors. When the focused NP is the c-commanding NP, as in (9a-c), the FTIP is satisfied because replacing the c-commanded R-expression with an anaphor would not result in the same interpretation, taking into account the focus semantic value and certain assumptions about the behavior of *even* and *only*. When the focused NP is the c-commanded NP, the FTIP is violated, but Pragmatic Obviation is overruled because the use of an R-expression results in a structural parallelism which is not present if an anaphor is used.

4. Conclusion

In this paper, I have argued that the competition-based framework of Safir (2004) can incorporate data relating to focus constructions which has generally resisted incorporation into complete theories of binding. Safir's framework has an advantage over traditional theories, in that instead of stipulating the three binding conditions separately, it assumes Condition A and derives the other two conditions from it in a principled way. As we have seen, with the addition of a few key assumptions, it can also account for focus constructions, which seemingly present exceptions to Condition C.

References

- Burzio, Luigi. (1989). On the non-existence of disjoint reference principles. *Rivista di Grammatica Generativa* 14.
- Burzio, Luigi. (1991). The morphological basis of anaphora. *Journal of Linguistics* 27, 81-105.
- Burzio, Luigi. (1996). The role of the antecedent in anaphoric relations. In Robert Freidin (ed.), *Current Issues in Comparative Grammar*, 1-45. Dordrecht: Kluwer.
- Chomsky, Noam. (1981). *Lectures on Government and Binding*. Dordrecht: Foris.
- Fox, Danny. (1999). Focus, Parallelism and Accommodation. In Tanya Matthews and Devon Strolovitch (eds.), *SALT IX*, 70-90. Ithaca, NY: Cornell University.
- Grimshaw, Jane. (1991). *Extended Projection*. Unpublished manuscript, Brandeis University, Waltham, MA.
- Karttunen, Lauri and Stanley Peters. (1979). Conventional Implicature. In Choon-Kyu Oh and David Dinneen (eds.), *Syntax and Semantics 11: Presuppositions*, 1-55. New York: Academic Press.
- Reinhart, Tanya. (2006). *Interface Strategies*. Cambridge, MA: MIT Press.
- Rooth, Mats. (1992). A theory of focus interpretation. *Natural Language Semantics* 1, 75-116.
- Safir, Ken. (2004). *The Syntax of Anaphora*. Oxford: Oxford University Press.

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