

The Pragmatics of Focus-Association with *only*

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A standard view (Jackendoff 1972, Rooth 1985, König 1991) is that there are grammatical rules that associate differences in meaning with differences in placement of focal accent in English sentences containing *only*, as in (1).

- (1) a. John *only* introduced BILL to Sue.
- b. John *only* introduced Bill to SUE.

According to this view, (1a) and (1b) differ in that the placement of focal accent reflects a syntactic feature which is associated by grammatical rule with the apparent difference in meaning, the standard view being that (1a) has the meaning in (2a), while (1b) has the meaning in (2b).

- (2) a. John introduced nobody other than Bill to Sue.
- b. John introduced Bill to nobody other than Sue.

I argue in this paper that this view is mistaken, that the placement of focal accent and the identity of the constituent (or constituents) associated with *only* are not related by grammatical rule. I argue that (1a) and (1b) do not differ in meaning, but rather that both (1a) and (1b) are actually ambiguous between these two readings, but that the semantics of *only* is such that in typical discourse contexts - and out of context - the more obvious readings of (1a) and (1b) are precisely those generally assumed to be the sole readings of these sentences.

Since beginning work on this paper, I have become aware of two other recent works arguing for conclusions similar to that of this paper, Vallduví (1992) and Schwarzschild (1994). At this writing, I have not had access to more than an abstract of Schwarzschild's paper. I will cite some of Vallduví's examples below.

1. The Standard View

A very common view, and one that I shall refer to as the standard view, is that there are two types of focus phenomena. One of these, which I will refer to as *free focus*, involves differences in "meaning" that are not truth-conditional, but which have been described in different ways by various people, for example in terms of presupposition and focus (by Jackendoff 1972 and Chomsky 1972 inter alia), though I have argued in Dryer (1992) that the notion of presupposition, at least in the sense of shared beliefs, is not relevant to the phenomenon. The sentences in (3) illustrate differences in free focus.

- (3) a. John introduced BILL to Sue.
- b. John introduced Bill to SUE.

While there exist a number of unresolved issues surrounding differences in free focus, a fairly uncontroversial way to describe the sentences in (3) is to say that they are truth-

conditionally equivalent, expressing the same proposition, but differing in how this proposition is expressed or “packaged”. Using lambda abstraction in a fairly informal way, we can say that in (3a) the property in (4a) is under discussion and that the effect of (3a) is to assert that Bill has this property, as stated in (4b), while in (3b), it is the property in (5a) that is under discussion, the effect of (3b) being to assert that Sue has this property, as in (5b).

- (4) a. $(\lambda x)(\text{John introduced } x \text{ to Sue})$
 b. $(\lambda x)(\text{John introduced } x \text{ to Sue})(\text{Bill})$
- (5) a. $(\lambda x)(\text{John introduced Bill to } x)$
 b. $(\lambda x)(\text{John introduced Bill to } x)(\text{Sue})$

It is often assumed that there is a second type of focus distinct from free focus, often called *bound focus*, associated with what are often called *focus words* or *focus particles*, like *only* and *even*, which, unlike free focus, involve differences in truth-conditional meaning. Thus the two sentences in (1) are assumed to differ in meaning in that while both (1a) and (1b) presuppose that John introduced Bill to Sue, (1a) asserts that John did not introduce anybody other than Bill to Sue while (1b) asserts that John did not introduce Bill to anybody other than Sue. On this assumption, (1a) and (1b) are truth-conditionally distinct, since in a situation in which the only introductions made by John were one introducing Bill to Sue and a second one introducing Tom to Sue, (1a) is false while (1b) is true. On the standard view, the focal accent identifies the constituent which is associated with the focus particle *only*.

In section 2, I will argue that the standard view is incorrect, that there is no grammatical link between focal accent and the constituent which is associated semantically with *only*. In section 3, I will offer an alternative account, arguing that focal accent in clauses with *only* is determined by the same pragmatic principles that determine focal accent in general. In section 4, I will extend the account to *even* and *also*. In section 5, I will discuss cases with VP-focus or S-focus (broad focus), for which the situation is somewhat different from the cases already discussed, which involve narrow focus. In section 6, I will discuss the implications of the thesis I have developed to the phenomenon of multiple focus.

2. Problems with the standard view

The standard view assumes that the position of focal accent identifies the constituent associated with *only*. An alternative view, and the one I argue for in this paper, is that the sentences in (1) are really no different from those in (3), that they differ in the position of focal accent, the focal accent indicating free focus in the same way it does in (3). Under this view, both (1a) and (1b) are actually ambiguous between the two readings that on the standard view are associated individually with these two sentences. Consider the example in (6).

- (6) John only gave a book to MANY PEOPLE.

Out of context, (6) sounds unacceptable, *only ... many people* apparently being inconsistent. However, (6) is perfectly acceptable in appropriate contexts, as in (7).

- (7) A: I hear that John only gave A BOOK to Mary.
 B: True, but John only gave [a book] to MANY PEOPLE.

The square brackets in (7B) and in similar examples below indicate the element associated semantically with *only*, while the capital letters indicate focus. In (7B), the *only* is associated semantically with *a book* : (7B) has the meaning in (8a) rather than the apparently nonsensical (8b). The focal accent, however, falls on *many people* .

- (8) a. John gave only [a book] to many people.
b. John gave a book to only [many people].

(7B) can be treated a standard example of free focus, where the property stated in (9a) is under discussion and focal accent is associated with the element this is predicated of, as indicated informally in (9b).

- (9) a. (λx)(John only gave [a book] to x)
b. (λx)(John only gave [a book] to x)(many people)

Similar examples are given in (10) and (11).

- (10) A: Is it true that John only introduced [BILL] to Mary.
B: I don't know. John only introduced [Bill] to SOMEBODY, but I don't know if it was Mary.
- (11) A: I hear that John only introduced BILL to Mary.
B: No. John only introduced [Bill] to NOBODY.

Consider as a further example the sentence in (12).

- (12) John only introduced Bill to SUE and he only introduced Bill to CATHY.

Out of context, (12) sounds like a contradiction, the first clause implying that John did not introduce Bill to anyone other than Sue, the second clause implying that he did not introduce Bill to anyone other than Cathy. Again, however, (12) is felicitous in the appropriate context, as in (13).

- (13) A: Is it true that there is nobody that John introduced only [BILL] to, that he introduced someone other than Bill to everybody?
B: No, John only introduced [Bill] to SUE and he only introduced [Bill] to CATHY.

In (13B), *only* is associated with *Bill* : (13B) entails that John did not introduce anyone other than Bill to Sue; it does not entail that John did not introduce Bill to anyone other than Sue. Again, this illustrates the possibility of the focus not coinciding with the constituent associated with *only* . And again, (13B) can be described in terms of free focus: what is under discussion in (13) is the property listed in (14).

- (14) (λx)(John only introduced [Bill] to x).

Examples like those in (7B) and (13B) are inconsistent with the assumption that the element bearing focal accent in a clause containing *only* is associated semantically with *only*. They provide the basis of an argument that sentences like those in (1) are actually ambiguous as to which element the *only* is associated with. Sentence (1b) clearly has a reading in which *only* is associated semantically with *Sue*, but (13B) shows that is also has a reading in which *only* is associated with *Bill*.

A similar argument can be given for (1a).

(1a) John only introduced BILL to Sue.

In (15) is given an example analogous to (13).

(15) A: Is it true that there is nobody that John introduced only to SUE, that he introduced everybody to somebody other than Sue?

B: No, John only introduced BILL to [Sue] and he only introduced TOM to [Sue].

While I find the example in (15B) slightly less natural than that in (13B), I assume that it is acceptable and that if it is slightly less natural, this is only because it involves a focus in a marked position, not in final position. In both clauses in (15B), the property in (16) is under discussion, and this property is attributed first to Bill and then to Tom.

(16) (λx)(John only introduced x to [Sue])

Examples analogous to the ones cited here are cited by Vallduví (1992: 142-151) in support of the same conclusion. Some of Vallduví's examples are cited in (17) to (19).

(17) John and Mary know the Amazon quite well, but only [John] has been to the CITIES in Brazil. (Vallduví 1992)

(18) It's JOHN that only eats [rice].

(19) LIVER, I would only eat [if I had to].

What I have illustrated is that both sentences in (1) can, given appropriate contexts, be interpreted with either of the two readings which on the standard view are associated individually with (1a) and (1b). There is thus no evidence to support the standard view that there are grammatical rules that define what is associated semantically with *only* on the basis of the placement of focal accent. The focal accent is always associated with free focus. It is only because of the particular semantics of *only* that the element with which it is associated semantically (or more accurately the word *only* plus the element with which it is associated semantically) is generally also the free focus, with the side effect that out of context examples with *only* seem unambiguous. This explanation for the preference out of context to interpret sentences with *only* as having the interpretation by which the free focus corresponds to the element associated semantically with *only* assumes that a good explanation can be given for why there should be such a preference. What I will do in the next section is offer some somewhat informal suggestions directed towards that end.¹

3. Accounting for focus in *only*-clauses in terms of free focus

It is clear that the location of focal accent in examples like those discussed in the preceding section cannot be accounted for in terms of what element is associated semantically with *only*. In this section, I will offer an informal account of how we can account for the distribution of focal accent in clauses with *only* in terms of the general pragmatic principles determining free focus. But it is perhaps less obvious that principles of free focus also determine the location of focal accent in examples like (20), in which the element associated semantically with *only* is also the focus.

¹ The abstract to Schwarzschild (1994) suggests that he also attempts to explain why there is a preference for the element associated with *only* to coincide with the focus. See Vallduvi (1992: 142-151) for another account of this.

(20) John only introduced Bill to [SUE].

First, let us consider the presuppositional structure of *only*. Suppose we apply the standard analysis (cf. Horn 1969) of *only* to (20) as in (21), assuming initially the interpretation of (20) whereby *Sue* is associated semantically with *only*.

(21) Presupposition: John introduced Bill to Sue.
 Assertion: John introduced Bill to nobody other than Sue.

One might be tempted to try to explain the fact that *Sue* is focus in (20) in terms of the fact that it corresponds to the position that distinguishes the assertion from the presupposition. This is particularly tempting given the tradition dating back to Jackendoff (1972) that employs the term *presupposition* as a label for the complement of focus. But such a move would be an equivocation based on the term *presupposition*. The use of this term in the literature on focus should not be confused with the standard use of this term in the semantics literature, where the term denotes something that is realized pragmatically in terms of shared beliefs by speaker and hearer. In order to avoid possible confusion I will use the term *presupposition* only in the latter sense. As various people have shown (e.g. Chafe 1974, 1976; Dryer 1992; Rochemont 1986: 41-46; and Vallduví 1992: 38), and as is illustrated by examples like (22) (originally cited by Jackendoff 1972), the complement of focus need not involve any shared belief by speaker and hearer.

(22) NOBODY likes Bill.

It clearly will not do to say that (22) presupposes that somebody likes Bill. Exactly how to characterize the complement of focus is a complex issue that I will not discuss here (though see Dryer 1992). For current purposes, I will assume what I have assumed previously in this paper, that we can say that a lambda-expression formed from an open sentence based on the complement of the focus corresponds to what is under discussion. Under this view, we can analyse (22) roughly as in (23), ignoring a more detailed analysis of *nobody*. In other words, what is under discussion in (22) is the property of liking Bill, and what (23) asserts is that this property holds of nobody. If we loosely define the focus as what distinguishes the assertion from what is under discussion, then this accounts for the fact that *nobody* is focus in (22).

(23) Under discussion: $(\lambda x)(x \text{ likes Bill})$
 Assertion: $(\lambda x)(x \text{ likes Bill})(\text{nobody})$

In order to further illustrate the problems surrounding what characterizes the complement of focus, it is worth drawing attention to apparent problems with the account of Vallduví (1992), since his is the only published work that I am aware of to discuss the issues in this paper and to argue for a conclusion similar to mine. Vallduví claims that free focus sentences do not involve a shared belief in the existential proposition corresponding to the complement of the focus but just a belief by the speaker that the hearer believes this proposition. It is true that this will account for cases like (22) if they occur in contexts like that in (24).

(24) A: Who likes Bill?
 B: NOBODY likes Bill.

However, it fails to account for many other cases of focus, such as that in (25).

- (25) A: Does anyone like Bill?
B: NOBODY likes Bill.

Here, it is clear from the question in (25A) that the hearer of (25B) does not have a belief that someone likes Bill. Further examples illustrating the same point are given in (26) and (27).

- (26) A: Does anyone like Bill?
B: MARY likes Bill.

- (27) A: Is it true that nobody likes Bill?
B: MARY likes Bill.

However, despite a certain vagueness, we can say of all of these examples that the property expressed in (28) is under discussion.

- (28) $\hat{\lambda}x(x \text{ likes Bill})$

Returning to discussion of (20) above (repeated here), what this means is that we can account for the fact that *Sue* occurs with focal accent if the property in (29) is under discussion.

- (20) John only introduced Bill to SUE.

- (29) $\hat{\lambda}x(\text{John introduced Bill to } x)$

In fact, what distinguishes (20) from (29) is not just *Sue*, but *only Sue*. In other words, (20) does not assert that Sue has the property in (29); it asserts that *only Sue* has this property. We can therefore represent the assertion in (20) as in (30)².

- (30) $\hat{\lambda}x(\text{John introduced Bill to } x)(\text{only Sue})$

That the focus in (20) is not just *Sue*, but *only Sue* is illustrated by examples like (31).

- (31) A: Did John introduce Bill to anyone other than Sue?
B: No, he ONLY introduced Bill to [SUE].

It is also made clearer by examples like those in (32), where the *only* immediately precedes the phrase it is associated with semantically.

- (32) a. John introduced ONLY BILL to Sue.
b. John introduced Bill to ONLY SUE.

It is clear in these sentences that the focus includes the word *only*, that what is under discussion in (32a) is (33a) and that this property is asserted to hold of only Bill, as expressed in (33b), while what is under discussion in (32b) is (34a) and that this property is asserted to hold of only Sue, as expressed in (34b).

- (33) a. $\hat{\lambda}x(\text{John introduced } x \text{ to Sue})$
b. $\hat{\lambda}x(\text{John introduced } x \text{ to Sue})(\text{only Bill})$

² See Krifka (1992) for how a compositional semantics can be given for representations roughly analogous to (e3).

- (34) a. $(\lambda x)(\text{John introduced Bill to } x)$
 b. $(\lambda x)(\text{John introduced Bill to } x)(\text{only Sue})$

While the comments I have made here are at most suggestive, what they suggest is that a theory of simple focus can account for the location of focus in sentences in which the focus coincides with what element is associated with *only*.

Consider now cases, like those discussed in the section 2, in which the element associated semantically with *only* and the focus do not coincide, as in (35B).

- (35) A: Is there anyone that John only introduced [BILL] to?
 B: John only introduced [Bill] to SUE

As discussed above, what is under discussion in (35) is the property in (36a), and hence we can represent what is asserted as in (36b).

- (36) a. $(\lambda x)(\text{John only introduced [Bill] to } x)$
 b. $(\lambda x)(\text{John only introduced [Bill] to } x)(\text{Sue})$

Similar comments apply to examples like (37), parallel to (7) above.

- (37) A: I hear that John only introduced BILL to Sue
 B: True, but John only introduced Bill to MANY PEOPLE.

Because of the previous context provided by (37A), the property in (36a) is under discussion, and it is asserted by (37B) that many people have this property.

One question that I have not directly addressed is that of why there is a tendency to assign sentences out of context with *only* the interpretation whereby the focus coincides with the element associated semantically with *only*. Two factors seem to be relevant to this. First, note that with the preferred interpretation, the *only* is itself part of the focus, while with the dispreferred interpretation it is part of the complement of focus, what I have been characterizing as what is under discussion. In the latter case, the property that is under discussion is a more complex property, since it contains the meaning of *only*. In other words, while what is under discussion in (38a) is (38b), what is under discussion in (39a) is the more complex (39b).

- (38) a. John ONLY introduced Bill to [SUE].
 b. $(\lambda x)(\text{John introduced Bill to } x)$

- (39) a. John only introduced [Bill] to SUE.
 b. $(\lambda x)(\text{John only introduced Bill to } x)$

The situation is actually a bit more complex than this. Namely, the sentence in (40), with focal accent on *Sue*, and with Sue associated semantically with *only*, is actually ambiguous between a reading in which the focus is *only ... Sue*, and a reading in which the focus is just *Sue*.³

- (40) John only introduced Bill to [SUE].

³ The sentence in (40) also has readings where what is focus is the VP with which *only* combines, where the entire VP including *only*, and where the entire S is focus. But these are irrelevant for current purposes.

These two readings can be contrasted in the contexts provided in (31) above and (41).

- (41) A: John only introduced Bill to one person, but I don't recall who it was.
 B: He only introduced Bill to [SUE].

What is under discussion in (31) is (42a), and what (31B) asserts is expressed in (42b).

- (42) a. $(\lambda x)(\text{John introduced Bill to } x)$
 b. $(\lambda x)(\text{John introduced Bill to } x)(\text{only Sue})$

In (41), however, the *only* is part of what is under discussion, as indicated in (43a), so what is asserted in (41B) is (43b).

- (43) a. $(\lambda x)(\text{John only introduced Bill to } [x])$
 b. $(\lambda x)(\text{John only introduced Bill to } [x])(\text{Sue})$

Note that unlike the other examples discussed above in which the *only* is part of what is under discussion, the element associated semantically with *only* in (43a) is the variable x rather than *Bill*. Thus, strictly speaking, there are two dispreferred readings, differing in what is associated semantically with *only*, but sharing the characteristic that the *only* is part of what is under discussion and not part of the focus. The preferred reading is one in which *only* is part of the focus, and one reason that it is apparently preferred is that it can occur in a simpler class of contexts, ones in which simple properties (i.e. ones not involving *only*) are under discussion.

A second factor apparently underlying the preferred interpretation of sentences with *only* is brought out if we note that (35B) and (37B) above violate the normal presuppositional requirements of *only*, in that it is clear in these contexts that the speaker does not assume that the hearer already believes the propositions that are normally presuppositions. For example, it is clear that the speaker of (35B) does not assume that the hearer already believes that John introduced Bill to Sue. We can apparently account for this in terms of the notion of accommodation (cf. Lewis 1979, Heim 1983).⁴ This in fact appears to be a general property of sentences in which the element associated with *only* is not the focus. The fact that these sentences require accommodation of the presupposition associated with *only* provides a natural explanation for why we tend to interpret sentences with *only* out of context as having the interpretation that treats the focus as the element associated semantically with *only*.⁵

⁴ I must confess to some uneasiness with this move. Without constraints, accommodation is a dangerously powerful way of explaining away apparent exceptions to claims regarding presuppositions. What is needed is a constrained theory of accommodation and an argument that the appeal to accommodation made here is consistent with those constraints.

⁵ Note that it is also possible for accommodation to be required occasionally for instances of sentences in which the element associated semantically with *only* is the focus, and in which *only* is part of the focus, as in (i).

- (i) A: Did John introduce Bill to anyone?
 B: He ONLY introduced him to [SUE].

But there are other instances in which accommodation is not required, as in (i2).

It seems, therefore, that the pragmatic principles governing the distribution of free focus can account both for those cases in which the focus coincides with the element associated semantically with *only*, as well as those cases in which it does not. The tendency to interpret sentences with *only* out of context with the focus as the element associated semantically with *only* appears to be due to the fact that the discourse contexts in which the other reading occurs are in a number of ways more specialized.

4. Even and also

The word *only* is only one of a variety of words in English that have been widely referred to as *focus adverbs* or *focus particles* (cf. König 1991). The arguments in the earlier sections of this paper argue that applying this expression to the word *only* is a misnomer, if we take the definition of the term *focus* to include the property that it is inherently associated with focal accent. For this reason and for lack of a better term, I will refer to words like *only* as *so-called focus particles*. One question that arises is whether the situation is similar with other words that have been called focus particles, whether they too can associate with elements that are not focus. I will restrict attention here to two such words, *even* and *also*. I will argue that despite some significant differences, the same conclusion ultimately applies: there are no grammatical rules relating focal accent to the elements associated semantically with these words.

An initial observation that might at first cast doubt on this claim is the fact that it is very difficult to find examples with *even* and *also* analogous to the ones with *only* cited earlier in this paper in which the element associated semantically with these words is not the focus. Consider, for example cleft sentences. The example in (44) illustrates the possibility of forming cleft sentences with *only* in the subordinate clause.

(44) It was BILL that John only introduced to [Sue].

The sentence in (44) is apparently ambiguous, depending on whether *only* is associated with *Bill* or with *Sue*. The crucial point for present purposes is that it has a reading in which it is associated with *Sue*, by which it presupposes that there is some person *x* with the property that John only introduced *x* to [Sue], i.e. with the property that Sue is the only person that John introduced *x* to. This is clearer if we place (44) in an appropriate context like (45).

- (45) A: John introduced many people to Sue, but he also introduced all but one of these people to Cathy as well.
 B: Who was the person that he only introduced to Sue and not to Cathy?
 A: It was BILL that he only introduced to [Sue].

This illustrates the general point observed above that the element associated with *only* need not be the focus.

The situation is different, however, with *even*. Sentence (46) with *even* does not appear to be acceptable.

(46) *It was BILL that John even introduced to Sue.

And with *also*, we find a still different situation. While it is possible to have cleft sentences in which *also* occurs in the subordinate clause, as in (47), this sentence is apparently unambiguous, the only reading being one by which *also* is associated semantically with the focus element *Bill*.

(47) It was BILL that John also introduced to Sue.

Thus, (47) is possible in a context like (48).

- (48) A: You've mentioned a lot of people that John introduced to Sue. Are you sure you've mentioned everyone? Isn't there one other person that John also introduced to Sue that you haven't mentioned? Do you know who it is?
 B: You're right. It was Bill that John also introduced to Sue.

But it does not appear possible to get an interpretation of (47) in which *also* is associated with the nonclefted element *Sue*.

While it may be difficult to find examples of cleft sentences with *also* or *even* in which the element associated semantically with these words is distinct from the focus element, the question is whether it is possible with simple focus sentences like (49) and (50).

(49) John also introduced [Bill] to SUE.

(50) John even introduced [Bill] to SUE.

By analogy with the cases we have seen with *only*, we need to find contexts with the properties in (51) and (52).

- (51) a. (λx)(John also introduced [Bill] to x)
 b. (λx)(John also introduced [Bill] to x)(Sue)

- (52) a. (λx)(John even introduced [Bill] to x)
 b. (λx)(John even introduced [Bill] to x)(Sue)

The examples in (53) and (54), with *also* and *even* respectively, seem to satisfy these conditions.

- (53) A: John introduced Tom to Sue, Cathy, and Mary. I don't know, however, whether he also introduced BILL to any of them.
 B: Sure. He also introduced [Bill] to SUE.

- (54) (Imagine a context in which the likelihood of John introducing Bill to Sue, Mary, or Cathy is less than that of his introducing David or Tom to any of Sue, Mary, or Cathy)
 A: John introduced David and Tom to Sue, Mary, and Cathy. He may even have introduced [BILL] to one of them, though I'm not sure.
 B: Yes. He even introduced [Bill] to SUE.

In (53B), the element associated semantically with *also* is distinct from the element receiving focal accent, namely *Sue*. (54B) is an analogous example with *even*.

While I find the examples in (53) and (54) somewhat marginal, especially compared to the analogous examples I have cited with *only*, there appears to be a straightforward explanation for this contrast. A superficial explanation is that the meaning of (53) and (54) can be conveyed equally well by sentences which are identical except without the *also* or *even*, as illustrated in (53') and (54').

- (53') A: John introduced Tom to Sue, Cathy, and Mary. I don't know, however, whether he also introduced [BILL] to any of them.
 B: Sure. He introduced Bill to SUE.

- (54') A: John introduced David and Tom to Sue, Mary, and Cathy. He may even have introduced [BILL] to one of them, though I'm not sure.
 B: Yes. He introduced Bill to SUE.

This is not the case with *only*. This can be seen by contrasting (13), repeated here, with (13'), in which the *only* has been removed from the last sentence.

- (13) A: Is it true that there is nobody that John introduced only BILL to, that he introduced somebody other than Bill to everybody?
 B: No, John only introduced [Bill] to SUE and he only introduced [Bill] to CATHY.

- (13') A: Is it true that there is nobody that John introduced only BILL to, that he introduced somebody other than Bill to everybody?
 B: #No, John introduced Bill to SUE and he only introduced Bill to CATHY.

The meaning of (13') is radically different from that in (13), in contrast to the fact that (53') and (54') are essentially equivalent to (53) and (54) respectively. This difference arises from a crucial difference between *only* on the one hand and *also* and *even* on the other. Namely, while differences in association with *even* and *also* correspond to differences in the presupposition while the assertions are the same, differences in association with *only* corresponds to differences in the assertion while the presuppositions are the same. This can be seen most clearly by spelling out the presuppositions and assertions for sentences with these so-called focus particles. This is done in (55) to (57).

- (55) a. John only introduced [Bill] to Sue.
 Presupposition: John introduced Bill to Sue
 Assertion: John introduced nobody other than Bill to Sue
- b. John only introduced Bill to [Sue].
 Presupposition: John introduced Bill to Sue
 Assertion: John introduced Bill to nobody other than Sue
- (56) a. John also introduced [Bill] to Sue.
 Presupposition: John introduced someone other than Bill to Sue
 Assertion: John introduced Bill to Sue
- b. John also introduced Bill to [Sue].
 Presupposition: John introduced Bill to someone other than Sue
 Assertion: John introduced Bill to Sue

- (57) a. John even introduced [Bill] to Sue.
 Presupposition: The likelihood of John's introducing Bill to Sue is less than the likelihood of John's introducing most people other than Bill to Sue.
 Assertion: John introduced Bill to Sue
- b. John even introduced Bill to [Sue].
 Presupposition: The likelihood of John's introducing Bill to Sue is less than the likelihood of John's introducing Bill to most people other than Sue.
 Assertion: John introduced Bill to Sue

Inspection of (55) to (57) reveals that while the two sentences with *only* in (55) differ in their assertions but not in their presuppositions, the opposite is true for the sentences with *also* and *even* in (56) and (57). Put differently, *also* and *even* do not affect the meaning or assertion of sentences containing them; they only affect the presuppositions. The word *only* radically affects the meaning, however, in that the assertion of a sentence with *only* is completely different from that of the assertion of the corresponding sentence without *only*, the assertion of the sentence without *only* being the presupposition of the sentence with *only* and the assertion of the sentence with *only* being the denial of the existence of other individuals with the property in question. This explains why the *also* and *even* can be left out of (53) and (54), as in (53') and (54'), without changing the meaning, while leaving out *only*, as in (13'), radically changes the meaning. What I am suggesting therefore is that the marginal acceptability of (53) and (54) is related to the existence of the simpler but semantically equivalent examples in (53') and (54'), but that (13) is fully acceptable because there is no variant of it that is simpler and semantically equivalent. I assume that this is also behind the absence of cleft sentences with *even* or *also* in the subordinate clause where the element associated semantically with these elements is distinct from the clefted (focus) element.

Perhaps the most crucial point to be made about the marginal cases in (53) and (54) is that even if one concludes that they are not acceptable, such a conclusion does not affect the primary thesis of this paper, that there are not grammatical rules linking focal accent with the elements associated semantically with so-called focus particles. The reason that this thesis is unaffected even if one finds cases like those in (53) and (54) unacceptable is that these examples are constructed precisely to identify what happens in contexts in which the element associated with *also* or *even* is not the element that would be the free focus, the element that should receive focal accent according to general principles of free focus. In other words, the marginality of (53) and (54) simply illustrates the fact that the element associated semantically with *also* and *even* is almost always, if not always, the same element that will be focus according to general principles of free focus. This point can be illustrated by the example in (58) (restricting attention to *also*).

- (58) John introduced Tom, David, Peter, and George to Sue. In fact he also introduced [BILL] to Sue.

The second sentence in (58) illustrates, I claim, a typical sort of use of *also* in that the preceding discourse will establish as a topic of discussion the property that is asserted of the element associated with *also* or *even*, so that this element will also be the focus by principles of free focus. More specifically, we can say that what is under discussion in the second sentence of (58) is (59a), and thus that the assertion is (59b).

- (59) a. $(\lambda x)(\text{John introduced } x \text{ to Sue})$
 b. $(\lambda x)(\text{John introduced } x \text{ to Sue})(\text{also Bill})$

In addition, (59b) differs from (60) only in the addition of a presupposition; (59b) entails (60).

- (60) $(\lambda x)(\text{John introduced } x \text{ to Sue})(\text{Bill})$

Thus even if it is never possible for the element associated semantically with *also* or *even* to be distinct from the element that receives focal accent, this is only because the semantics of these words is such that the element associated with these words semantically always happens to be the element that is focus according to general pragmatic principles of free focus. Hence, even in such cases, the assignment of focal accent is predictable entirely on the basis of principles of free focus, and while grammatical rules linking focal accent in such sentences to the elements associated semantically with these words might be observationally adequate, it would involve unnecessary stipulation in the grammar to account for facts that are entirely predictable on the basis of extragrammatical pragmatic principles.

5. *Only* in VP-focus and S-focus contexts

The examples discussed so far, like examples most often discussed in the literature, mostly involve what is sometimes called *narrow focus*, in which a constituent smaller than the VP is focus. Valid questions can arise, however, as to how well the line of explanation I have offered here extends to instances in which, by principles of free focus, the entire VP or some constituent containing the VP is focus. In other words, I have discussed examples with *only* in which the element associated semantically with *only* is one proper subpart of the VP and the focus is another proper subpart of the VP, but I have not discussed examples where the element associated semantically with *only* is a proper subpart of the VP but the focus is the entire VP (or some constituent containing the entire VP).

As is widely known, a sentence in which the focal accent falls late in the sentence is generally ambiguous as to which constituent containing the focal accent is focus. For example, in (61), the focus might be the NP *Sue*, it might be the VP *introduced Bill to Sue*, or it might be the entire S *John introduced Bill to Sue*.

- (61) John introduced Bill to SUE.

In other words, (61) might occur as the answer to any of the questions in (62).

- (62) a. What happened?
 b. What did John do?
 c. Who did John introduce Bill to?

Similar remarks apply to a sentence with a so-called focus word like *only*, like (63), in which the element associated semantically with *only* might be either the NP *Sue* or the VP *introduced Bill to Sue*.

- (63) John *only* introduced Bill to SUE.

In other words, it might be interpreted either as in (64) or as in (65).

- (64) a. John only introduced Bill to [SUE].
 b. Presupposed: John introduced Bill to Sue.
 Asserted: John did not introduce Bill to anyone other than Sue.
- (65) a. John only [introduced Bill to SUE].
 b. Presupposed: John introduced Bill to Sue.
 Asserted: John did not do anything other than introducing Bill to Sue.

The question is: is it possible for the focus to be the entire VP while the element associated with *only* is some proper subpart of the VP? To take a more specific case, is it possible for the element associated with *only* in (63) to be *Bill*, while the focus is the entire VP *only introduced Bill to Sue*? And if it is possible, can we account for the focal accent entirely in terms of principles assigning focal accent on the basis of free focus?

In order to test the specific case described in the preceding paragraph, we need a discourse context in which the properties listed in (66) are satisfied.

- (66) a. Presupposition: John introduced Bill to Sue.
 Assertion: John did not introduce Bill to anyone other than Sue.
 b. Under discussion: John
 Assertion: John only introduced Bill to Sue.
 Focus: only introduced Bill to Sue

Consider the context in (67).

- (67) A: Did John do anything odd that I should know about?
 B: Yes, he only introduced BILL to SUE.

Even in the context provided, (67B) allows a variety of interpretations. And for all of these interpretations it is possible - perhaps even most natural - that the alleged presupposition associated with this sentence, that John introduced Bill to Sue, need not be literally pragmatically presupposed, since (67) is natural in a context in which A does not know that this happened. I assume that this is to be explained in terms of the principle of accommodation. Among the various interpretations possible for (67B), I will restrict attention to those that (67A) elicits, in which the focus is the entire VP *only introduced Bill to Sue*. The question is: which associations with *only* are possible for (67B)? As far as I can see, there (at least) three different associations with *only*, listed in (68).

- (68) a. Yes, he only introduced [BILL] to [SUE].
 b. Yes, he only [introduced BILL to SUE].
 c. Yes, he only introduced BILL to [SUE].

The assertions associated with each of these four readings are listed in (69).

- (69) a. He did not perform any introductions other than that of introducing Bill to Sue.
 b. He did nothing other than introducing Bill to Sue.
 c. He did not introduce Bill to anyone other than Sue.

The interpretation (68a/69a), in which the focus is the ordered pair consisting of *Bill* and *Sue*, is of little interest here, since it is one where the elements associated semantically with *only* coincide with the focal accent, and thus is apparently consistent both with the standard view and with the the alternative thesis argued for here. Similar comments apply to (68b/69b). The interesting interpretation is the last one, in which focal accent falls on both *Bill* and *Sue* but in which only *Sue* is associated semantically with *only*. This reading is

apparently problematic for the standard view that focal accent signals the element associated semantically with *only*.⁶ But it is apparently consistent with principles of free focus assignment: Selkirk (1984: 210) notes that within a focused VP, two NP arguments may receive focal accent when neither is salient (i.e. activated) in the preceding discourse.

In order to provide some further evidence that the reading in (68c/69c) *is* possible, it is useful to provide an elaborated context which elicits this specific reading. In order to preserve the interpretations in which the entire VP is free focus, I will elaborate the contexts by adding subsequent text, as in (70).

- (70) A: Did John do anything odd that I should know about?
 B: Yes, he only introduced BILL to SUE. I expected him to introduce Bill to other people, but for some reason he did not. He did introduce Tom and David to lots of other people, but not Bill.

While the possibility of the reading in (68c/69c) in which *only* is associated semantically just with *Sue* is consistent with the theory presented here, what might appear to be problematic is that this sentence does not have a fourth reading, indicated in (72a), in which the entire VP is focus, while *only* is specifically associated with *Bill*, yielding the reading in (71b).

- (71) a. He only introduced [BILL] to SUE.
 b. He did not introduce anyone other than Bill to Sue.

If we try to insert (71a) in an appropriate discourse context, as in (72), the result does not sound felicitous.

- (72) A: Did John do anything odd that I should know about?
 B: #Yes, he only introduced [BILL] to SUE. I expected him to introduce a number of other people to Sue, but for some reason he did not. He did introduce Bill, Tom and David to most of the other people, but for some reason not to Sue.

There is thus an apparent asymmetry in that such sentences can be interpreted with *Sue* as the element associated with *only*, but not *Bill*.

I must confess that I am not sure what the explanation for this asymmetry is. In general, it appears to be the case that when the entire VP is focus, *only* is associated with whatever is the last element in the VP. Thus, (73B) has a reading in which *only* is associated semantically with *at midnight*, but it apparently does not have a reading in which it is associated semantically with *Bill*, or a reading in which it is associated semantically with *Sue*.

- (73) A: Did John do anything odd that I should know about?
 B: Yes, he only introduced BILL to SUE [at MIDNIGHT].

Similarly, I find (74B) and (75B) unambiguous, the sole reading being the one that associates *only* with the last noun phrase.

⁶ This interpretation is apparently less problematic for a theory, like that of Lambrecht (in press), which recognize focal accents that code things other than focus. In the theory of Lambrecht (in press), for example, one might treat the focal accent on *Bill* in (68c) as an activation accent, rather than as one indicating the focus.

(74) A: Did John do anything odd that I should know about?
 B: Yes, he only gave A BOOK to [MARY].

(75) A: Did John do anything odd that I should know about?
 B: Yes, he only gave MARY [A BOOK].

While the thesis presented in this paper provides no explanation for the fact that *only* in VP-focus sentences seems to be associated only with the last constituent in the VP, this fact provides no reason to believe that there are grammatical rules associating focal accent with constituents associated semantically with *only*. For one thing, in the sentences in question, the sole reading that is possible does not vary with focal accent: multiple constituents within the VP can all receive focal accent, but it is only the last of them that is associated semantically with *only*. Second, there does not appear to be *any* assignment of focal accent to these sentences in which the focus is the entire VP and in which neither of the NPs is activated (salient) in the preceding discourse and which permits a reading in which the first NP is associated semantically with *only*. The only way to express the intended meaning is to employ a completely different syntactic structure, as in (76).

(76) A: Did John do anything odd that I should know about?
 B: Yes, the only person that he introduced to Sue was BILL.

The most crucial question, however, is whether this property is a property that is specific to the phenomenon of associating elements semantically with *only*, or whether it is true of free focus as well. It turns out that exactly the same phenomenon does occur with free focus as well. Compare the two exchanges in (77) and (78).

(77) A: Did John do anything odd that I should know about?
 B: Yes, he gave A BOOK to MARY.

(78) A: Did John do anything odd that I should know about?
 B: Yes, he gave MARY A BOOK.

There are a number of different ways in these sentences could be described, but there is a possible difference between (77B) and (78B) that is apparently a difference of focus, whereby *Mary* is focus in (77B), while *a book* is focus in (78B), despite the fact that focal accent falls on both noun phrases in both sentences. The difference can be described as a difference in contrast, although it should be noted that the term *contrast* is applied by different people to different phenomena. Nevertheless, (77B) appears to have a reading whereby the speaker is drawing attention to the fact that John gave a book to Mary instead of giving a book to someone else while with (78B) the speaker is drawing attention to the fact that John gave Mary a book rather than giving her something else. The last noun phrase in each of (77B) and (78B) is thus being used contrastively in the sense that the speaker is intending to contrast the referent of that noun phrase with other conceivable individuals or things that could have filled that semantic slot. And crucially, (77B) and (78B) cannot have the opposite readings; it must be the last noun phrase in each case that is the locus of contrast. Assuming that this difference is a difference of free focus, it illustrates that whatever the explanation for the fact that *only* must be associated semantically with the last element in the VP in VP-focus sentences, exactly the same phenomenon arises with free focus. Hence this apparently provides further support that the principles governing *only* are simply manifestations of general principles governing free focus.

6. On so-called multiple foci

The literature on focus applies the term *multiple focus* to two different phenomena. One of these is illustrated by examples like (79) in which it is asserted that John only performed a single introduction, one which involved introducing Bill to Sue.

(79) John only introduced BILL to SUE.

Such cases can be described as associating the so-called focus word with an ordered n-tuple of elements. Similar cases occur with free focus, as in (80).

(80) A: Who did John introduce to who?
B: He introduced BILL to SUE.

The second phenomenon that has been referred to as multiple focus is one where more than one so-called focus operator is involved, as in (81).

(81) Even Bill saw only Sue.

To avoid confusion between these two phenomena, I will follow the suggestion of Krifka (1992) and refer to the first of these as *complex focus* and restrict use of the term *multiple focus* to the second of them. The question I wish to address in this section is what the implications are of the conclusions I have drawn in this paper to multiple focus.

Note that in so far as the expression multiple focus is applied to sentences like (81) in which there are multiple so-called focus operators, a more appropriate label would be *multiple so-called focus*. If we restrict the term *focus* to phenomena which are grammatically linked to prosodic focus, and if it is the case that focus is only grammatically linked to free focus, then it is not clear that there is such a thing as multiple focus. What then *can* we say about sentences like (81) that involve multiple so-called focus? Since we have seen that the phenomenon of focus is distinct from the phenomenon of so-called focus operators, it should come as no surprise that there can be more than one assignment of focus to sentences like (81) and that these assignments are independent of which elements are associated semantically with the so-called focus words *even* and *only*.

What I will argue is that many instances of what are discussed in the literature as multiple focus, are, from a pragmatic point of view, actually complex free focus. Since I will be arguing this, I should first say something more about complex free focus. We can describe (80B) by saying that (82a) is under discussion, so that what is asserted is (82b).

(82) a. ($\lambda\langle x,y \rangle$)(John introduced x to y)
b. ($\lambda\langle x,y \rangle$)(John introduced x to y)($\langle \text{Bill}, \text{Sue} \rangle$)

In other words, what is under discussion in (80B) is the complex property of John's introducing someone to someone, and it asserts is that this property holds of the ordered pair consisting of Bill and Sue.

Consider now examples of multiple so-called focus like (81). I will discuss two examples of possible free focus for this sentence. One possibility is that the two elements associated semantically with *even* and *only* coincide with the location of focal accents. This

is indicated in (83), subscripts F_i indicating that the element in square brackets marked by the subscript is to be associated semantically with the so-called focus operator i .⁷

(83) Even₁ [BILL]_{F1} saw only₂ [SUE]_{F2}.

I claim that (83) would be used in contexts in which what is under discussion is (84a) and thus what is asserted by (83) is thus (84b).

- (84) a. $(\lambda\langle x,y\rangle)(x \text{ saw } y)$
 b. $(\lambda\langle x,y\rangle)(x \text{ saw } y)(\langle \text{even Bill, only Sue}\rangle)$

Another possible assignment of focal accent to (81) is as given in (85), where the semantic associations for *even* and *only* remain the same, by where focal accent falls only on *Bill*, not on *Sue*.

(85) Even₁ [BILL]_{F1} saw only₂ [Sue]_{F2}.

This sentence would be appropriate in contexts like (86).

(86) I saw quite a few people, but many others only saw [SUE]. In fact, even₁ [BILL]_{F1} only₂ saw [Sue]_{F2}.

We can say that what is under discussion in (85) is the property in (87a), and that (85) asserts that this property holds of even Bill, as in (87b).

- (87) a. $(\lambda x)(x \text{ saw only Sue})$
 b. $(\lambda x)(x \text{ saw only Sue})(\text{even Bill})$

7. Conclusion

I have argued in this paper against the standard assumption that prosodic focus is linked by grammatical rule to which element is associated semantically with *only*, that the appearance of such a link is an illusion resulting from the fact that the meaning of *only* and the pragmatics of focus are such that in typical discourse contexts, and out of context, these two happen to coincide. A corollary of that conclusion is that if we are to apply the term *focus* to phenomena linked to prosodic focal accent, then it is a mistake to employ the term *focus* as a label for the semantic phenomena associated with words like *only*. If we use the expression *association with focus*, which Jackendoff (1972) and Rooth (1985) among others have employed to denote the semantic effects of prosodic focus found with words like *only* then, strictly speaking, what I have argued in this paper is that there is no such thing. It is important, nevertheless, not to confuse terminological issues with substantive ones. What I claim to have shown in this paper is that there are two essentially unrelated phenomena which linguists apply the term *focus* to. The term has only become associated with these two unrelated phenomena because of assumptions which I have shown here to be mistaken. Much of the semantic work done on words like *only* is apparently unaffected by this, even though much of what is said in the literature about the relevance of prosodic focus to the semantic phenomena discussed may be mistaken. To what extent the

⁷ The symbol ‘F’ should not, however, be considered an abbreviation for ‘focus’, given the arguments of this paper, but rather an abbreviation for ‘so-called focus’.

conclusions of this paper have implications for substantive issues in the syntax and semantics of words like *only* remains to be investigated.

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