SYNTACTIC ASSOCIATION WITH FOCUS
Christopher Tancredi
November 19, 1990

1 Introduction

In his 1985 dissertation, Mats Rooth proposes to derive the surface phenomenon of association with focus without depending on any direct syntactic or semantic representation of association. Typical examples of what has commonly been referred to as association with focus are given in (1). (Here and throughout this paper, I indicate focus with italics and give the intended intuitive association by co-superscripting.)

(1) a. John likes only Mary
    b. John only likes Mary

For Rooth, association between the operator only and the focused NP Mary is merely an epiphenomenon deriving from the independent semantic interpretations of focus and of the focus-sensitive operator only. On his analysis, focus makes a uniform contribution to the interpretation of a sentence, introducing into the semantic representation a set of relevant discourse alternatives. For our purposes, we can adopt Kratzer’s (1989) modification of Rooth’s original proposal and treat focused constituents as designated variables. A focused constituent on this analysis gives rise to parallel representations, one in which the focused constituent is given its normal interpretation, and the other in which it is substituted for by a designated variable. The examples in (1) will each have two distinct LF representations, then, one in which the focused constituent Mary occurs, and one in which it is replaced by a designated variable. Only on this analysis is treated semantically as an operator over such parallel representations. For the sentence in (1b), this interpretation will be roughly the following: likes Mary is true of John, and for any x if likes x is true of John then x = Mary.

While Rooth’s analysis is insightful and highly illuminating, I will argue in this paper that it is incorrect in one fundamental aspect — it denies the significance of the syntactic nature of the association between only and the focused phrase it is intuitively associated with. After presenting evidence that the association in question must be represented syntactically, I will go on to show that adopting this apparent complication allows for a simplification in the semantic interpretation of only. In specific, I will argue that only can be treated uniformly as a propositional modifier. Thus, while Rooth is forced to interpret only as a cross-categorial modifier, allowing both (1a&b) as licit LF representations, I will argue that only (1b), and not (1a), is a possible LF representation. That is, I will be arguing that only has distinct semantic and syntactic properties: syntactically, it must bind an associate (the NP
Mary in the above example); semantically, it must modify a category which is propositional (here, the VP likes Mary).

# 2 The Syntactic Nature of Association with Focus

## 2.1 S-structure c-command requirement

The first property of only which indicates that its association with some element in the sentence (normally a focused constituent) is syntactic is that only appears to have to c-command its associate at S-structure. This requirement can be seen to hold from consideration of the examples in (2).

(2) Only must c-command its associate at S-structure.

a. i. It only seems that John is crazy. (It doesn't seem that Bill is crazy.)
   ii. *John only seems to be crazy.

b. i. I only wonder what John saw. (I don't wonder who John saw.)
   ii. *I wonder what John only saw.
   iii. I wonder who only saw what

c. i. There only seems to be a man in the room. (There doesn't seem to be a woman in the room.)
   ii. *A man only seems to be in the room.

In (2a.i), only can be associated with a focused constituent in its c-command domain, but if that element is NP-raised across only as in (2a.ii) this association is no longer possible. In (2b.i), it is possible for only to be associated with a wh-phrase when that wh-phrase is c-commanded by only. If the wh-phrase is raised over only at S-structure, however, as in (2b.ii), we find that the association in question is no longer possible. These examples all show that only must c-command its associate at some level past D-structure. They do not yet show conclusively that c-command is required at S-structure, however — all four examples considered so far can equally well be handled with an LF c-command requirement. The example in (2b.iii) appears at first blush to argue in favor of requiring c-command at S-structure. However, this will only be the case if what is assumed to raise at LF, an assumption which has been called into question by Pesetsky (1987) and more recently by Aoun and Li (1990). If what can be interpreted in-situ at LF, then this example again does not strongly argue for an S-structure c-command requirement. In distinction to the examples in (a) and (b), those in (2c) cannot be easily handled by an LF c-command requirement. Assuming Chomsky's (1989) analysis of there as an LF affix, if
a man in (2c.i) raises at LF to the position occupied by there, the resulting LF structure will be identical in all relevant respects to the LF structure of (2c.ii) — in neither case will a man be c-commanded by only. Allowing lowering at LF does little to help the situation, since presumably lowering would be equally possible for both the (i) and the (ii) sentences. In essence, there appears to be no principled way of handling these sentences which will force them to have sufficiently different LF representations — if a man can be in a position in which it is c-commanded by only in the one example, it can be in such a position in the other example. Likewise, if it is prevented from occurring in a position in which it is c-commanded by only in one case, it will be prevented in both cases. Since the LF representations cannot be made sufficiently distinct to account for the possibility of association in the one case and the impossibility of association in the other, it follows that an LF constraint cannot be alone responsible for the grammaticality distinction observed. If only is required to c-command its associate at the level of S-structure, however, then the observed distinctions are accounted for straightforwardly.

The above examples indicate, then, that c-command is required at S-structure, and that this requirement cannot be reduced to a similar restriction on LF representations. Since the semantic component does not have direct access to S-structure, it follows that the constraint in question is not semantic. The most natural assumption to make at this point, then, is that the constraint is syntactic.

2.2 Association with multiple foci

Further evidence that association between only and its associate must be directly represented in the syntax comes from consideration of sentences which contain multiple foci. It has been argued at least since Anderson (1972) that it is possible for only to associate with multiple foci. Rooth takes this to confirm his claim that association is not syntactic, citing the example in (3) as evidence of such apparent multiple association.

(3) John only introduced Mary to Bill.

= (possibly) The only pair x, y such that John introduced x to y

is the pair Mary, Bill

However, when we look more closely at sentences involving multiple foci, we find that it is not generally the case that multiple association is allowed. Thus, consider the sentences in (4).
(4) a. *I only invited Ann to the party because she's a linguist.
    = Only Ann is a person who I invited to the party because she's a linguist.
    = As for Ann, the only property she has for which I invited her to the party is the property of being a linguist.
    ≇ The only pair x,y such that I invited x to the party because x is a y is the pair Ann, linguist.

b. *I only ran quickly to catch Maria.

c. *I only insulted Tom at the reception.

In all three sentences, we find that it is possible for only to be associated with either focus individually. However, in none of these cases is it possible for only to be associated with both foci simultaneously. This is shown in detail for the sentence in (4a), but as the reader can verify, the same observation holds for the sentences in (4b&c) as well. If multiple association were in general allowed, we would expect all of these sentences to be grammatical on multiple association readings, contrary to fact. Similarly, if the appearance of association is a direct consequence of the uniform interpretation of focus and of the independent semantics for only, then we would again expect the multiple association readings not only to be possible but in fact to be necessary whenever only c-commands the foci at LF. The most natural way to prevent these undesirable readings is to assume that multiple association is impossible. Such an account, however, rests crucially on the ability to refer to the association in question, which can only be done if the association is explicitly present in the grammar.

At this point, the obvious objection to raise is that adopting such a constraint leaves us without any account for the cases which were originally taken to argue for the possibility of multiple association in the first place. Such an objection, however, can be easily handled. Looking first at the example of apparent multiple association from Rooth, given earlier in (3), we see immediately that this sentence involves focus on each of two objects in a double object construction. If we assume that such constructions necessarily involve raising of V out of a VP as Kayne (1987) and Larson (1988) have argued, then the two objects are part of a constituent which excludes the verb. We can assimilate this case of apparent multiple association to the cases considered in (4) above, then, if we assume that it is this inner constituent which constitutes the associate of only. The syntactic representation of (3) would then be that given schematically in (5a), not that given in (5b).

(5) a. John only introduced [Mary to Bill].

b. *John only introduced Mary to Bill.

Further evidence in support of such an analysis comes from considering what happens to the association possibilities of this sentence under Heavy NP Shift
(henceforth HNPS) as in (6).

(6) John only introduced to Bill Mary
    = It’s Mary that John introduced to only Bill.
    = As for Bill, the only person John introduced to him was Mary.
    ≠ The only pair \(x, y\) such that John introduced to \(x y\) is the pair Bill Mary

As in the examples in (4), we find that this sentence is grammatical if only is associated with either one of the focused constituents, as indicated in the readings given below the example. It is not grammatical, however, on a reading in which only is intuitively associated with both foci. This sentence contrasts minimally with the sentence in (3). This contrast cannot be accounted for on Rooth’s or Kratzer’s analyses as they stand. Given that association of only is possible with either of the NP’s Mary or Bill, it follows that both of these NP’s can be within the scope of only. If association derives from the interpretation of a focused constituent inside the scope of an operator like only, then the sentence in (6) should be identical in grammaticality to the sentence in (3), contrary to fact. If we assume that association with focus is directly represented in the grammar, however, and further assume that association is possible with at most a single constituent, then the contrast between (3) and (6) becomes readily explainable: in the former case, the two objects form a single constituent which can be the associate of only, while in the latter case this constituent is broken up, and the resulting structure contains no constituent which dominates both objects but which excludes the verb.³

If we look at small clause structures, we find that the facts are exactly parallel to those found to hold for the double object construction just considered. Thus, in (7a) it is possible to get a multiple association reading, while in the Heavy NP Shifted counterpart in (7b) it is not.

(7) a. I only consider John (to be) stupid.

b. I only consider (to be) stupid John.

Just as it was plausible to treat [Bill to Mary] as a single syntactic constituent, in (7a) as well it is plausible to treat [John (to be) stupid] as a constituent. Likewise, just as HNPS broke up the constituency of the two objects in the double object construction, HNPS can equally plausibly be assumed to break up the constituency of a small clause in the small clause construction as well. Thus, the explanation of the association possibilities in (7) is exactly the same as it was for the association possibilities in (3) and in (6). While it is a fairly straightforward matter to account for the data in these examples under the assumptions that (i) associations are syntactic and (ii) only must be associated with exactly one constituent, without these assumptions it would appear difficult if not impossible to account for the facts of apparent multiple association as well as for those of failed multiple association. I conclude, then, that these two assumptions are in fact correct.
2.3 Association without focus

One final piece of evidence which supports the claim that associations are directly represented in the syntax comes from consideration of cases in which the associate of only is not focused. On a theory like Rooth’s in which the appearance of association derives solely from the independent interpretation of focus within the scope of the operator only, it should be impossible to interpret only as being associated with a constituent which is not focused. However, we find in the following discourses that just such an association is possible.

(8)  
   a. Q: Who only\(^i\) saw Bill\(^i\)?  
      A: John only\(^i\) saw Bill\(^i\).
   b. Q: Did John only\(^i\) see Bill\(^i\)?  
      A: No, but I only\(^i\) saw Bill\(^i\).
   c. Q: Did you see Bill at the party?  
      A: I only\(^i\) saw Bill\(^i\) at the party.  
          By the time I arrived,  
          everyone else had left.

In (a) and (b), we find cases in which the associate of only in the response can be directly recovered from the preceding question. However, in neither case is the associate focused in the answer, and yet the interpretation of only is no different than it is when the associate is focused. This indicates that focus is not a necessary condition for association with the operator only. But if focus is not a necessary condition for association, it follows that association cannot be reduced to the independent interpretation of focus, i.e. a Rooth-type analysis cannot be correct.

It might be objected at this point that all that is needed to salvage Rooth’s proposed analysis of association with focus is a mechanism for assigning some feature, say [+F], to the NP Bill in sentences like the answers in (a), (b) and (c). However, it is difficult to see how assignment of such a feature could be properly constrained. Consideration of (a) and (b) alone might lead one to posit that assignment of such a feature is dependent on the associate’s being focused recently in the discourse. However, when we look at (c) we find that even this is not a necessary condition for determining the associate of only. In (c), the associate of only in the response is determined pragmatically (within the bounds of the syntactic constraints argued to hold in the previous sections). It would appear that in order to assign such a feature properly, the constraint for assigning it must be something like: ‘Assign [+F] to a constituent which is either (i) focused, or (ii) pragmatically determined to be the associate of (an operator like) only.’ Of course, if reference has to be made to ‘the associate of only’ the feature [+F] becomes superfluous. There is an additional reason to reject any solution to the problems posed by (8) which depends on assignment of some feature like [+F] to the associate of only, however. If such a feature were identified semantically with focus, then to adopt such a solution would be to abandon any link between semantic focus and phonetic stress, since phonetic stress is precisely what is lacking on the associate in the answers in (8). Thus, even if it is possible to make such an analysis go through, doing so would only
be possible at the expense of abandoning the correlation between semantic focus and phonetic stress which motivated the analysis of focus interpretation in the first place.

It is of course no argument in favor of the present analysis to say simply that Rooth's analysis cannot handle the data in (8) unless it can be shown that the present analysis is capable of handling it without having to make any ad hoc stipulations. Here it becomes necessary to ask why it is that association is so often correlated with focus. Since focus is not taken to be a primitive notion on the present account, it must then be a derivative property. I claim that the sole purpose of focus in the present context is to pick out the associate of an operator like only when it is not otherwise possible to unambiguously determine what that associate is. hat is, focus is simply a disambiguating device. When the discourse context is sufficiently rich to determine the associate, focus no longer becomes necessary, as we have seen to be the case in (8).

I have argued so far that association with only must be syntactically represented. At this point, it is worth asking what the semantic interpretation of such an association is. The answer appears to be that the associate is treated in exactly the way that Kratzer argues focus must be treated — as a designated variable. The main difference between her approach and the approach taken here lies in the relation which is assumed to exist between focus on the one hand and interpretation as a designated variable on the other. For Kratzer, focus is a primitive semantic feature which is formally translated (in part) as a designated variable. On the present analysis, on the other hand, association with an operator like only is what accounts for the treatment of the associate as a designated variable. it is focus. For me, it is association with an operator like only. We have already seen several ways in which the approach taken here is superior to an approach like Kratzer's. First, it allows for a straightforward account of the syntactic restrictions on association — the restriction that the associate must be c-commanded by the operator at S-structure as well as the restriction that there be exactly one associate per operator. Second, if association is syntactic, then focus can be treated as a derivative property, one which is only necessary when it is not possible to determine the associate of an operator like only in any other way. Thus, the optionality of focusing the associate of only receives a natural explanation which would not be possible if association were not taken to be directly represented in the grammar.

3 Non-constituency of Only and its Associate at LF

Having determined that association between only and its associate must be represented in the grammar, it is now time to turn our attention to the precise nature of this association. Here, I will show that the association must be treated as an instance of (potentially unbounded) operator variable binding. In specific, I will show that only cannot be assumed to form a constituent
with its associate at the level of logical form. To see this, I will first show a clear case in which raising of the associate to *only* at LF would violate constraints on movement at this level. I will then show that lowering of *only* to its associate is also impossible in the same example, since such lowering would yield a reading which is in fact unavailable. I will further show that even in certain cases in which *only* forms a constituent with its associate at S-structure, it must be split from this associate at LF in order to generate the proper interpretation. Finally, I will show that a straightforward account can be given of certain scope fixing facts if we assume that *only* uniformly raises at LF to a category of propositional type, i.e. that raising of *only* from a non-propositional category is obligatory, not optional.

To see that the associate of *only* does not uniformly raise at LF to form a constituent with *only*, consider the following pair of sentences.

(9) a. *Who wonders whether you solved the problem* how incompletely?

b. I only know who wonders whether you solved the problem *incompletely*. (I don't know who wonders whether you solved the problem *incorrectly*.)

In order to account for the ungrammaticality of (9a), it appears to be necessary to appeal to an LF constraint which will disallow raising of the wh-phrase *how incompletely* from its S-structure position to the matrix COMP at LF (compare the grammatical *Who wonders whether you solved what incompletely?*). The constraint in question is more than likely some version of the Empty Category Principle, but for our present purposes it is only necessary to assume that the movement in question is disallowed — the exact principle which the movement violates is immaterial. What is important is that in (9b), the association between *only* and the adverb is perfectly possible, despite the fact that *only* in (9b) is structurally equally or more distant from the adverb *incompletely* than is the matrix COMP in (9a). Since raising of the adverb to the matrix COMP is impossible in (9a) as we have already seen, raising of the adverb to *only* in (9b) must be impossible as well. Thus, if *only* and its associate *incompletely* are to form a constituent at LF, it cannot be by raising of *incompletely* to *only* at this level of representation.

We still of course have to consider the possibility of *only* lowering to *incompletely*. However, this too appears to be impossible for the following reason: if *only* were to lower to the position of *incompletely* at LF, then in all relevant respects the LF representation(s) of (9b) would be identical to that/those of (10), and we would expect the two sentences to have identical interpretations.

(10) I know who wonders whether you solved the problem only *incompletely*. 
However, (9) and (10) are not completely synonymous; (10) has at least one reading which is unavailable in (9b), specifically the reading in which only is interpreted within the most deeply embedded clause, as in I know who wonders whether you only solved the problem incompletely. The fact that this reading is completely unavailable for the sentence in (9b) is a strong piece of evidence against allowing only to lower to incompletely in (9b). If lowering of only to incompletely is disallowed, however, and if raising of incompletely to only is also disallowed, then it follows that only and incompletely do not form a single constituent at LF in this example.

The above analysis is of course dependent on the assumption that the associate of only is the phonetically stressed phrase incompletely, and not some higher constituent which contains this phrase. We saw earlier, however, that in the case of double object constructions, it is necessary to allow the associate of only to be a constituent which contains both of the objects. The situation is further complicated by the fact that the “multiple” association reading of (3) is possible even without stress on the first object — stress on a single subconstituent in this case suffices for the whole constituent Bill to Mary to count as the associate of only. In other words, the association index appears to be able under certain circumstances to percolate from a focused constituent to a higher constituent. The above argument can only go through, then, if we can show that such index percolation cannot occur in a sentence like (9b).

As Selkirk (1984) has shown rather convincingly, what I have just referred to as index percolation is a property associated with focus in general — it is often possible for a constituent to inherit focus from one of its subconstituents. However, while the precise conditions under which focus inheritance is allowed are not entirely clear, as Selkirk observes, it is not generally possible for a constituent to inherit focus from an adjunct contained within that constituent. This point is brought out clearly in the following discourse.

(11) A: What happened?
    B: #John solved a problem incompletely.
    John solved a problem incompletely

I assume with Selkirk that information newly introduced into a discourse must in general be focused. Thus, in the answer to such a general question as What happened?, every element must be contained in a focused constituent. If the verb phrase solved the problem incompletely could inherit focus from the adjunct incompletely, then we would expect B’s first response in (11) to be acceptable without any subsidiary stresses elsewhere in the VP. In fact, however, this response is infelicitous, indicating that the VP cannot inherit focus from the adjunct. B’s second response stands in stark contrast to the first. Here problem and incompletely are each independently focused, and the response is perfectly felicitous, indicating that the VP can inherit focus from the direct object argument problem. A VP, then, can inherit focus from a
direct object constituent, but not from an adjunct. Interestingly, it is also possible for an entire sentence to inherit focus from one of its constituents. This can be seen by embedding the responses in (8) inside a matrix sentence, like *Mary claimed that* .... In such a situation as well, again we find that focus solely on the adjunct *incompletely* is infelicitous, while focus on the object *problem* in addition to the adjunct is fine. From this we can conclude that neither a VP nor an S can inherit focus from an adjunct, while both can inherit focus from a direct object argument. It appears, then, that focus cannot be inherited from adjunctions quite generally. Now consider once again the sentence in (9b). As mentioned above, this sentence is grammatical with focus on *incompletely*. Significantly, on the most natural reading for this sentence, there is no other stressed constituent in the sentence (except optionally on the subject *I* and/or on *only*). Since the only phonological stress in the sentence is on an adjunct, and we have just seen that focus on an adjunct is not inherited by a dominating constituent, it follows that the only focused element in the sentence within the scope of *only* is the adjunct itself. If we assume that inheretability of focus and percolability of indices obey the same constraints, then the above observations suffice to establish the validity of the argument presented above that *only* and its associate need not form a constituent at LF.

Interestingly, the conclusion that *only* does not necessarily form a constituent with its associate at LF can be demonstrated equally well with a sentence in which the two do form a constituent at S-structure. The example is given in (12a).

(12)a. John played only* chess* after I taught him how to e. (relevant interpretation: After I taught him how to play chess, John played nothing but chess.)

b. John [played only chess] after I taught him how to [play only chess]

c. [only chess]; John [played ti] after I taught him how to [play ti]

d. John only [played chess] after I taught him how to [play chess]

This sentence is a VP-deletion sentence of the type discussed in Sag (1976) and in Williams (1977). Following their analysis, I will assume without argument that the LF representation of such sentences is derived via copying of a VP into the empty position marked by e. If *only chess* were forced to remain a constituent at LF, then it would be impossible to generate the reading indicated under (12a) for this sentence. If *only chess* remains within the VP, then the LF representation which results from reconstruction of this VP will be that given in (12b), the interpretation of which is straightforward. If *only chess* raises from the VP, perhaps via Quantifier Raising, then the resulting LF representation will be identical in all relevant respects to that given in (12c), yielding the interpretation *only chess is an x such that John played x after I taught*.
him how to play x. These options essentially exhaust the range of possibilities if only and chess are to form a single constituent at LF, and neither of these options can account for the most natural reading of the sentence in question. If only can be raised at LF from its associate chess, however, generating an LF representation with the desired interpretation becomes a straightforward matter: one need merely raise only outside the matrix VP and then reconstruct the VP into the position occupied by e, deriving the representation given in (12d).

4 Only as a Propositional Modifier

We have just seen two cases in which only could not form a constituent with its associate at LF. In the one case, we saw that only and its associate could not combine to form a constituent at LF without violating principles of movement which apply at this level, and in the other case we saw that the S-structure constituent comprised of only and its associate had to be broken up at LF in order to generate the most salient interpretation of a VP-deletion sentence. The obvious question to ask at this point is what motivates these derivations. The answer, I propose, is that semantically only uniformly modifies categories of propositional type. While the examples considered so far do not determine this analysis, adopting such an analysis not only allows for a straightforward account of all the sentences considered so far but also extends naturally to account for cases of scope fixing.

As has been noted elsewhere in the literature (cf. e.g. Jackendoff (1972), Taglicht (1984)), the scope of only is freer in some positions than it is in others. For example, in a multi-clause structure, when only occurs at S-structure adjoined to the object of the lower clause, the sentence is potentially ambiguous, while when only is adjoined at S-structure to the maximal projection of any of the predicates the sentence is unambiguous. These facts are exemplified in (13).

(13) (from Taglicht (1984))

a. I knew he had learned only\textsuperscript{i} Spanish\textsuperscript{i}. (ambiguous between (b.i) and (b.ii))

b. i. I knew he had only\textsuperscript{i} learned Spanish\textsuperscript{i}. (unambiguous\textsuperscript{5})

ii. I only\textsuperscript{i} knew he had learned Spanish\textsuperscript{i}. (unambiguous)

In (13a), only is adjoined at S-structure to the embedded object Spanish, and we find that only can have scope over either the matrix clause or the embedded clause. In contrast, in (13b.i), where only is adjoined at S-structure to the embedded VP, it can only have narrow scope. Likewise, in (13b.ii), where only is adjoined at S-structure to the matrix VP, it unambiguously has matrix scope.
These facts follow straightforwardly on the proposed analysis if we assume that derivation of LF representations is constrained by a principle similar in nature to Chomsky's (1989) notion of Economy of Derivation, such as that given below.

(14) A syntactic derivation is grammatical only if it is a least costly derivation of a well-formed LF representation from a given D-structure representation.

I assume following Chomsky (class lectures (1989)) that all instances of chain formation are equally costly, regardless of the length of the chain, but that two applications of chain formation are more costly than one. In the two examples in (13b), only is adjoined to a VP at S-structure. Since only is by hypothesis a propositional modifier, it is licensed in this position at LF (cf. note 1). The shortest derivations for these sentences, then, will be ones in which the S-structure representations in (13b) double as LF representations, i.e. ones in which no further cost is incurred. In contrast, in the S-structure representation in (13a) only is not in a position in which it is licensed at LF. Consequently, it will have to move from this position in order to derive a well-formed LF representation, the possible landing sites including minimally the two positions occupied by only in (13b). By treating only uniformly as a propositional modifier, these facts fall out without further stipulation.\footnote{I will be assuming throughout this paper that subjects are generated internal to the maximal projection of the main predicate of a sentence, and that consequently this maximal projection qualifies as propositional. The question will turn out to be largely one of terminology. However, as will be seen below, consideration of cases in which only occurs before the subject as in Only John likes Mary will raise some issues which will make the question become more of a substantive issue of whether or not to allow only to modify an IP.}

5 Conclusion

In summary, I have argued that only has the following properties:

i: It must be syntactically associated with a single constituent at S-structure;
ii: It must c-command its associate at S-structure;
iii: It does not necessarily form a constituent with its associate at LF; and
iv: It is semantically a propositional modifier.

The first three of these properties are syntactic, all three of which are incompatible with analyses like Root's which deny the syntactic reality of association. The fourth property is a semantic property which, if ultimately tenable, will greatly simplify the semantics of only-type operators.

\footnote{I use the term 'Heavy NP Shift' merely as a label for a class of phenomena. I do not mean to imply that the proper analysis of these phenomena involves NP movement, though such an analysis is compatible with the facts considered here. For the}
present argument to go through, it is only necessary to assume that HNPS breaks up the constituent consisting of the two objects, and that in the resulting structure these two objects are not part of any constituent which excludes the verb.

The account offered here will hold regardless of whether or not a Larson (1988) style analysis of Heavy NP Shift as light predicate raising is correct. However, Kyle Johnson (personal communication) has pointed out a potential problem for the analysis presented here if Larson’s account of light predicate raising is correct. If it is light predicate raising which accounts for the word order in the sentence John only ate quickly his sandwich, then we would expect it to be possible for only to associate with the constituent [quickly his sandwich] when both quickly and (his) sandwich are focused. This prediction, however, is not borne out. If these analyses are both correct, then being a single syntactic constituent is a necessary but not sufficient condition for a constituent to be associated with only (or perhaps more generally for a constituent to inherit focus from its subconstituents — cf. Selkirk (1985) for further discussion).

Thanks to David Pesetsky (p.c.) for help in constructing these examples.

The strings in these two examples each give rise to several readings if one varies the associate of only. However, what is important for the discussion at hand is that each of these sentences is unambiguous when the associate of only is restricted to being the NP Spanish.

By calling only a propositional modifier, I intend to signify that it can modify any category whose semantic type is propositional, including VP, NP, AP, and PP when used predicatively (see note 1). I purposely allow for the possibility of only modifying an IP as well. Strictly speaking, this possibility allows for two additional LF representations for the sentence in (13a) beyond those given in (13b). I believe that this is a desirable consequence of the analysis in that allowing such a plethora of LF representations makes it possible carry the analysis over directly to scope ambiguities involving negation, as in the following examples:

a. i. John didn’t see only Bill
   ii. Nobody saw only Bill
b. i. John didn’t only see Bill
   ii. Nobody only saw Bill

Like (13a), the (a) sentences here are both ambiguous, with only taking either wide or narrow scope with respect to negation. The sentences in (b), however, are not ambiguous in this manner. In order for only to have wide scope with respect to negation, it must be allowed to be moved to some INFL projection at LF. To get scope over the subject in (a.ii), movement to a pre-IP position will have to be allowed. The fact that the additional LF representations allowed for (13a) do not give rise to interpretations which are distinct from those derived from representations in which only is adjoined to the VP will I assume fall out from the semantics. An additional reason for allowing only to adjoin to IP as well as to VP comes from consideration of the behavior of only when adjoined to and associated with a subject NP, as in a sentence like Only John doesn’t like Mary. Again, only must have wide scope with respect to negation. If we are to avoid having to provide a cross-categorial semantics for only, then our only alternative for such sentences is to
assume that only raises out of the specifier of IP to some node which is structurally higher than the subject. If only were restricted to modifying predicates instead of propositions, then sentences in which only is contained in the subject would be left without any account. The issues which arise when only modifies a subject are much broader than I have space to discuss here. I mention these complications since they puts restrictions on the extent to which one can hope to simplify the semantics of operators like only.

BIBLIOGRAPHY


Aoun, J. and A. Li. (1990) “Wh-elements in-situ: Syntax or LF?”, ms. USC.


