SCOPE OF FOCUS PARTICLES: ABSTRACT ONLY IN KOREAN[1]

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Abstract

The focus particle *man* 'only' in Korean shows different scopal behavior depending upon its syntactic environment. This non-uniform scope pattern cannot be accounted for if the particle is a scope-bearing element. This paper argues that the particle *man* is not a scope-bearing element, but an agreement morpheme that indicates the presence of a null head ONLY. Under this proposal, the particle *man* does not carry the exhaustive meaning of *only*, but the null head does. Therefore, it is the position of the ONLY head, not that of the particle, that determines the scope relation with respect to other quantificational elements. This paper also claims that there is a strong correlation between syntax and morphology (cf. Baker's Mirror Principle). Thus, the relative order among the particle, case marker, and postposition reflects the hierarchy of corresponding functional heads. This helps detect the position of the ONLY head. The proposed analysis accounts for the scope patterns without making special stipulations about *man*-phrases.

1 Introduction

The focus particle *man* 'only' in Korean shows different scopal behavior depending upon the syntactic environment it appears in. Interestingly, the scope of a *man*-phrase varies with its morphological marking.[2] If a *man*-phrase is case-marked, its scope is fixed to its case position no matter where it appears in the sentence. By contrast, if it is marked by a postposition, its surface position affects scope relations.

This non-uniform scope pattern cannot be accounted for if the particle is a scope-bearing element. Thus, I argue that, despite appearances, the particle *man* is not a scope-bearing element. Specifically, I argue that the particle *man* is actually an agreement morpheme that indicates the presence of a null head ONLY. This null head carries the exhaustive meaning of English *only*, and the particle has no meaning of its own. Therefore, it is the position of the ONLY head, not that of the particle, that determines the scope relation with respect to other quantificational elements. I also argue for a strong correlation between syntax and morphology, as claimed by Baker (1985) in the name of the Mirror Principle: the relative order among the particle, case marker, and postposition reflects the hierarchy of corresponding functional heads. Thus we can infer the position of the ONLY head from the order of nominal affixes. The proposed analysis accounts for the peculiar scope patterns without making special stipulations about *man*-phrases, unlike the commonly held view that takes the particle to be a quantificational element.

This paper is organized as follows. After presenting the scope puzzle in section 2, I put forward the main proposal and analysis in section 3. Section 4 enumerates and confirms predictions of the null head analysis. Finally, section 5 concludes the paper.

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[2] Throughout the paper, the term '*man*-phrase' refers to an XP that is accompanied by *man*.

2   The scope puzzle

This section presents the scopal behavior of *man*-phrases in scrambling contexts. The discussion will lead to the conclusion that we cannot account for the scope pattern of *man*-phrases if the particle *man* is a scope-bearing element.

Let us start with case-marked *man*-phrases. Case-marked *man*-phrases appear to obligatorily reconstruct when scrambled clause-internally. That is, clause-internal scrambling does not induce ambiguity. The relevant examples are illustrated below.

(1) a. **Motun**-salam-i   John-**man-ul**   salanghanta.
       every-person-NOM   John-only- ACC   love
       'Everyone loves only John.'
       (i) Everyone loves John and no one else.   (every > only)
       (ii) *John is the only one whom everyone loves.   (*only > every)

   b. John-**man-ul**$_1$ [**motun**-salam-i t_1 salanghanta].
       John-only-ACC   every-person-NOM   love
       'Only John, everyone loves *t*.'
       (i) Everyone loves John and no one else.   (every > only)
       (ii) *John is the only one whom everyone loves.   (*only > every)

The sequence of a universal quantifier and a *man*-phrase in (1a) only allows a surface scope reading whereby *everyone* takes scope over *only John*. So (1a) is true iff each person loves John and no one else. The other reading, where John is the only one whom everyone loves, is not available. In (1b), the *man*-phrase is scrambled across the subject quantifier *everyone*. Here the scope relation remains the same as in (1a). Wide scope for *man* is still not possible.[3] Notice that the particle *man* precedes the case marker.

Now we turn to *man*-phrases marked by a postposition. Postposition-marked *man*-phrases show different scopal behavior from case-marked ones. The scrambled PP-*man* phrase can take scope in the surface position, thus creating ambiguity, as shown in (2).

(2) a. **Motun**-salam-i   John-**hako-man**   akswuhayssta.
       every-person-NOM   John-with-only   shook_hands
       'Everyone shook hands only with John.'
       (i) Everyone shook hands with John and with no one else.   (every > only)
       (ii) *John is the only one with whom everyone shook hands.   (*only > every)

   b. John-**hako-man**$_1$ [**motun**-salam-i t_1 akswuhayssta].
       John-with-only   every-person-NOM   shook_hands]
       'Only with John, everyone shook hands *t*.'
       (i) Everyone shook hands with John and with no one else.   (every > only)
       (ii) John is the only one with whom everyone shook hands.   (only > every)

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[3] In order for the *man*-phrase to take scope over the subject QP, the *man*-phrase must appear in the sentence initial position without any case marker, as shown in (i). The sentence also has the narrow scope reading of the *man*-phrase, thus allowing ambiguity. In the interest of space, I leave the analysis of (i) for another occasion.
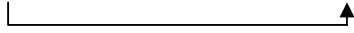
   (i)   John-**man**$_i$ [**motun**-salam-i e_i salanghanta].
            John-only   every-person-Nom   love
            'Only John, everyone loves *e*.'
            a. Everyone loves John and no one else.   (every > only)
            b. John is the only one whom everyone loves.   (only > every)

Without scrambling, the base order between the two elements determines the scope relation, as in (2a). If the PP is scrambled as in (2b), however, the *man*-phrase can take scope over the subject quantifier. Note also that the particle follows the postposition.

This non-uniform behavior of *man*-phrases contrasts with the scopal behavior of quantifier phrases (QPs). It is well known that scrambled QPs optionally reconstruct and induce ambiguity in so-called scope-rigid languages (See Hoji 1985 for Japanese, Ahn 1990, Sohn 1995 for Korean, among many others). The sentences in (3) exemplify the relevant facts for Korean.

(3) a. **Nwukwunka**-ka   **manhun**-salam-ul   salanghanta.
     someone-NOM   many-person-ACC   love
     'Someone loves many people.'
     (i) There is someone who loves many people.   (some > many).
     (ii) *There are many people who are loved by someone.   (*many > some).

   b. **Manhun**-salam-ul$_1$ [**nwukwunka**-ka t_1 salanghanta].
     many-person-ACC   someone-NOM   love
     'Many people, someone loves *t*.'
     (i) There is someone who loves many people.   (some > many).
     (ii) There are many people who are loved by someone.   (many > some).

When two quantifiers are in their base positions, as in (3a), the surface word order determines the scope relation between the two. When there is scrambling, however, the wide scope reading of the object QP becomes available, as in (3b). The scrambled QP can but need not undergo reconstruction, thus the sentence is ambiguous.[4] A schematic summary of the scope patterns is given in (4). The solid line indicates obligatory reconstruction, and the dotted line optional reconstruction.

(4) a. [$_{TP}$ **DP-man-Acc$_i$**   [$_{TP}$ QP t_i verb]]   (unambiguous: 1b)

   b. [$_{TP}$ **PP-man$_i$**   [$_{TP}$ QP t_i verb]]   (ambiguous: 2b)

   c. [$_{TP}$ **QP$_i$**   [$_{TP}$ QP t_i verb]]   (ambiguous: 3b)

Suppose that the *man*-phrase is a QP of type <et, t>, that is, the set of properties that no one other than John has (J.-W. Choe 1998). Then, the non-ambiguity in (4a) is puzzling. Apparently, it undergoes obligatory reconstruction when scrambled, unlike QPs. To solve this, one might stipulate that the *man*-phrase must reconstruct, e.g. that it is a special QP that can only undergo PF movement/scrambling (cf. Aoun and Benmamoun 1998, Sauerland and Elbourne 2002). However, this account lacks reasonable motivation, and faces empirical problems once we consider (4b). The stipulation does not hold for the case of PP-*man*, and we need another stipulation to distinguish the two cases. Any account that treats the *man*-

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[4] When the *man*-phrase occurs in the subject position and a QP occupies an object position (e.g. *Only Mary loves everyone*), scrambling of the object QP induces an ambiguity. This is because what moves is a QP, not a *man*-phrase, and the scrambled QP can optionally reconstruct as shown in (3). For this reason, all the *man*-phrases in this paper are accusative-marked.

phrase as a QP without further assumptions would fail to account for both the non-ambiguity of (4a) and the ambiguity of (4b).

3   Proposal and analysis

3.1   Proposal: *man* is an agreement morpheme
This section proposes that the particle *man* is an agreement morpheme. As the Nominative case marker is an indication of the T(ense) head under standard assumptions, *man* is an indication of a null ONLY head. Under this proposal, the null ONLY head, rather than the particle, carries the quantificational/exhaustive meaning of English *only*. Therefore, the position of the null head, not the surface position of the particle, determines the scope relation with respect to other quantificational elements in the sentence.[5][6]

I propose (5) as the lexical entry for the head ONLY, where ALT is the set of alternatives created by focus marking. It is the result of replacing the focused element by contextually plausible alternatives (see Rooth 1985).

(5) $[\![ONLY]\!] = \lambda P_{<e,t>}.\lambda x_e.P(x) = 1 \ \& \ \forall z_e \in ALT(x): P(z) = 1 \rightarrow z = x$

The ONLY head takes two arguments (a predicate and an individual), and asserts that the individual argument is the only element that satisfies the predicate argument. Since the individual argument is focused, ALT(x) is a set of individuals. Basically, it is a covert *only* (cf. Horn 1969).

I also claim that the ONLY head can occur in several distinct positions in the clause, as long as the semantic conditions imposed by (5) are satisfied. That is, there is no one fixed position for the null head. It can be above TP (high ONLY-P) or below TP (low ONLY-P). Now that the ONLY head can appear in various positions and it is phonologically null, a crucial task is to detect the position of this head. I argue that the position of ONLY can be detected, thanks to the strong correlation between morphology and syntax (cf. Baker's (1985) Mirror Principle). Specifically, I argue that the relative order among the focus particle, case marker, and postposition reflects the hierarchy of the corresponding functional heads.[7] Take for example *John-man-i* 'John-only-Nom'. Since the particle *man* precedes the case marker, we conclude by the Mirror Principle that the ONLY head is lower than the Nominative case checking/assigning head, namely T (since Korean is a head-final language).

Having said this, let us move to see how this works in interpreting sentences containing a *man*-phrase. We start with the simple sentence in (6).

(6) John-**man-i**   oassta.
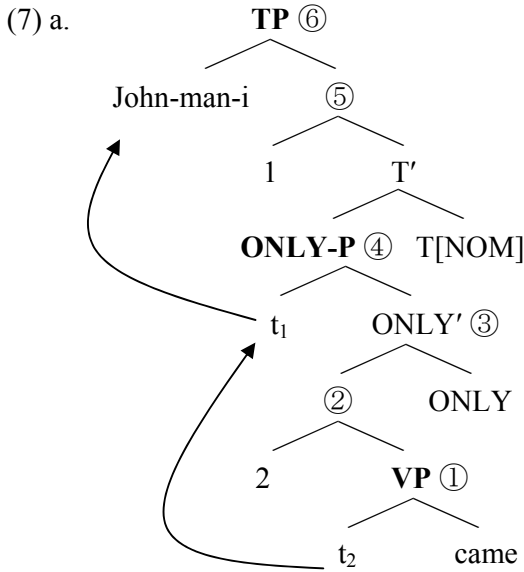   John-only-NOM   came
    'Only John came.'

In (6), the particle precedes the nominative marker, and the Mirror Principle tells us that ONLY-P is lower than TP. I claim that the subject, which is generated VP-internally, moves first to [Spec, ONLY-P], and then undergoes a second movement to [Spec, TP] to check the Nominative feature (Chomsky 1995, S. Cho 2000). The DP picks up the affixes through derivation, and the order of the affixes reflects the derivational steps. The derivation is

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[5] For the role of abstract heads in semantics literature, see Karttunen (1977) for question, and Laka (1990), Ladusaw (1992), von Stechow (1993), Beck & Kim (1997), Kelepir (2001), Penka (2002), and Ovalle & Guerzoni (2002) for negation.

[6] I will continue to gloss *man* as 'only' for the sake of convenience.

[7] This idea was suggested to me by Danny Fox.

illustrated in (7a) along with the semantic composition in (7b). As one can verify, the tree correctly derives the compositional meaning of the sentence.[8]

(7) a.

$$\text{TP } ⑥$$

John-man-i   ⑤

1   T′

ONLY-P ④   T[NOM]

t_1 ONLY′ ③

②   ONLY

2   **VP** ①

t_2 came

b.   ⟦ ① ⟧ = x came

⟦ ② ⟧ = λx.x came

⟦ ③ ⟧ = λy.y came & $\forall z_e \in ALT(y)$: z came → z = y

⟦ ④ ⟧ = u came and & $\forall z_e \in ALT(u)$: z came → z = u

⟦ ⑤ ⟧ = λu.u came and & $\forall z_e \in ALT(u)$: z came → z = u

⟦ ⑥ ⟧ = John came and $\forall z_e \in ALT(John)$: z came → z = John

The focused phrase *John* undergoes focus movement to [Spec, ONLY-P], creating a lambda-predicate.[9] This predicate is the first argument of ONLY, and the focused phrase in [Spec, ONLY-P] becomes the second argument of the ONLY head. This movement is obligatory although it sometimes applies string-vacuously, and thus has no effect on word order. One might wonder why we complicate the system by introducing the abstract ONLY head. When we look at simple cases like this, the motivation is not clear. Yet, this approach offers a non-stipulative account for the scope puzzle, as will be shown in the next section.

3.2   Deriving the compositional meaning
Based on the proposal made in the above section, this section solves the scope puzzle noted in section 2. I first discuss case-marked *man*-phrases, and then turn to PP-*man* cases.
The scope pattern of the case-marked *man*-phrase is repeated in (8). The point here is that clause-internal scrambling of the *man*-phrase does not affect scope interpretation. Sentence (8b) is not ambiguous.

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[8] Throughout this paper, I adopt Heim & Kratzer's (1998) framework for semantic representation, e.g. numerical index as the variable binder. I also assume for convenience that case heads (T and Agro) are semantically vacuous.

[9] The lambda-abstractor in the first movement in (7) is in an unusual place, not directly under the moved element, as also pointed out by von Fintel (2001). There are other possible implementations that do not involve this choice (e.g. late merge of the ONLY head or movement to the sister node of the ONLY head), but the analysis does not hinge on the choice on this issue.

(8) a. **Motun**-salam-i   John-**man-ul**   salanghanta.
      every-person-NOM   John-only-ACC   love
      'Everyone loves only John.'
      (i) Everyone loves John and no one else.   (every > only)
      (ii) *John is the only one whom everyone loves.   (*only > every)

    b. John-**man-ul**$_1$ [**motun**-salam-i t_1 salanghanta].
      John-only-ACC   every-person-NOM   love
      'Only John, everyone loves *t*.'
      (i) Everyone loves John and no one else.   (every > only)
   (ii) *John is the only one whom everyone loves.   (*only > every)

Let us start with (8a). From the order *man-ul* 'man-acc', we conclude by the Mirror Principle that ONLY-P is lower than AgroP where Accusative is assigned/checked. The AgroP is in turn below TP that contains the universal quantifier in its spec position. Therefore, the universal quantifier takes scope over the ONLY head. The structure of (8a) is given in (9a) along with the semantic value of the top node in (9b).

(9) a.
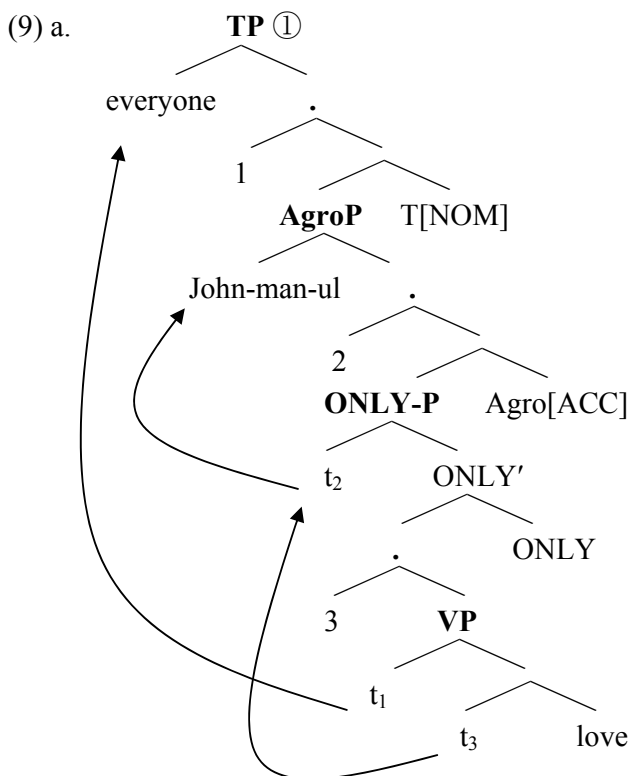
   b.   ⟦ ① ⟧ = For each person x, x loves John & $\forall w_e \in$ALT(John): x loves w → w = John

The reading in (9b) is the meaning we want: each person has the property of loving John and no one else. Note that we must not allow reconstruction of the subject QP to its θ-position (t_1), since it will produce the unattested reading (*only > every*). This is independently justified from the behavior of QPs in the scope-rigid languages. If the reconstruction were possible, sentences in the base order would be ambiguous, as in English (cf. (3a)).

Next, consider (8b) where *John-man-ul* 'John-only-Acc' is scrambled to the sentence initial position. Since *man* is a mere agreement morpheme, the *man*-phrase is a referential expression, not a QP. Given this, it is natural that scrambling of the *man*-phrase does not affect meaning, as is the case with referential expressions. The structure of (8b) is given in (10a), where the clausal structure remains the same as in (9a), except that the *man*-phrase is adjoined to TP via scrambling. The semantic value of the top node is given in (10b).

(10) a.
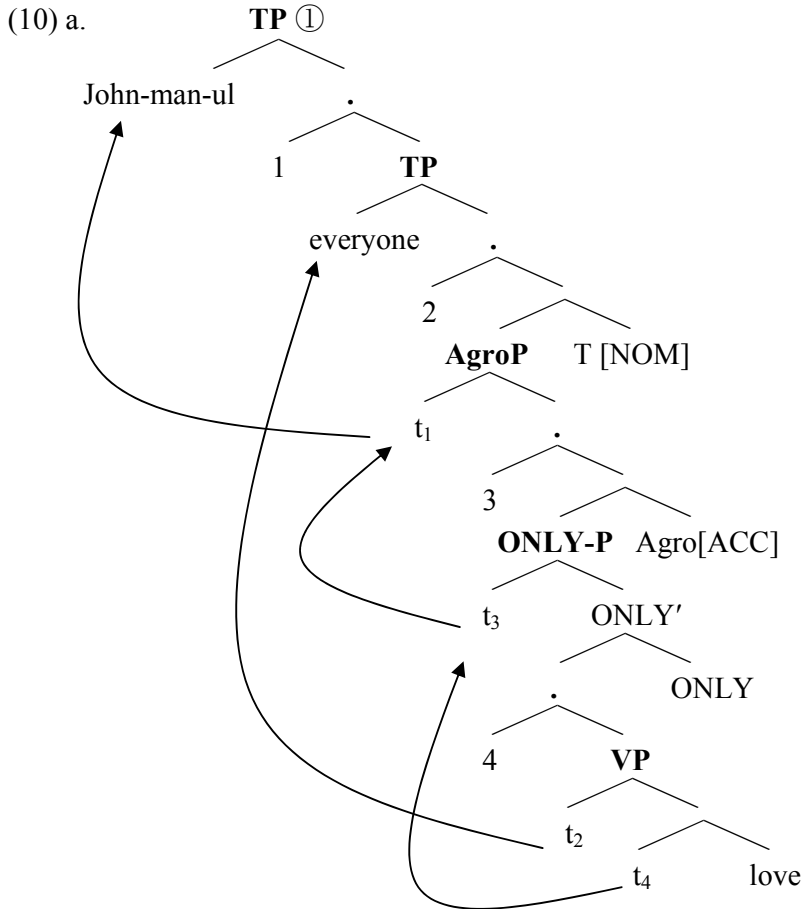
b. ⟦ ① ⟧ = For each person x, x loves John & $\forall w_e \in$ ALT(John): x loves w $\rightarrow$ w = John

The semantic values of (9b) and (10b) are the same: each person loves no one other than John. Even though *John* is interpreted in the scrambled position in (10a), the same reading results since the ONLY head is still below AgroP. This explains the apparent "reconstruction" effect, although there is no reconstruction of a QP in the real sense. What determines the scope relation is not the surface position of the particle, but the position of the ONLY head.

One might wonder at this point why ONLY-P should be below AgroP and if there is any principled reason to rule out ONLY-P above AgroP. In principle, the present analysis does not rule out such a configuration. What it rules out, however, is the form where the particle is preceded by an overt case marker, for example **Mary-lul-man*. We assume that the case marker is realized as a zero variant when it is followed by the particle *man* and some other particles such as *to* 'also', which disallows case marking in any position. Therefore, when case marking is covert, *DP-man* can be a spell-out of *DP-Case-man* or *DP-man-Case*. This

means, then, that if *DP-man* appears without case marking in the S-initial position, it does not guarantee the low ONLY-P and thus ambiguity is expected. This is indeed the case (cf. fn 3). Now we turn to the scope pattern of PP-*man* case. The *man*-phrase marked by a postposition does not have a fixed scope, unlike the case-marked one. Its scope seems to be affected by its surface structure. The data is repeated in (11).

(11) a. **Motun**-salam-i   John-**hako-man**   akswuhayssta.
       every-person-NOM   John-with-only   shook_hands
       'Everyone shook hands only with John.'
       (i) Everyone shook hands with John and with no one else.   (every > only)
       (ii) *John is the only one with whom everyone shook hands. (*only > every)

   b. John-**hako-man**$_1$ [**motun**-salam-i t_1 akswuhayssta].
       John-with-only   every-person-NOM   shook_hands]
       'Only with John, everyone shook hands *t*.'
       (i) Everyone shook hands with John and with no one else.   (every > only)
       (ii) John is the only one with whom everyone shook hands. (only > every)

Why are postpositions different from case markers? The ordering among affixes provides an answer to this question. Postpositions precede the particle *man*; this shows that ONLY-P is higher than VP, where PP is generated. But it does not tell us whether ONLY-P is higher than TP or lower than TP, whose spec position is occupied by the subject QP. By contrast, case markers explicitly specify that ONLY-P is lower than AgroP or TP since they always follow the particle.

With this contrast in mind, we derive the scope patterns in (11). First, in (11a), ONLY-P is positioned above VP (as inferred from the morpheme order *hako-man* 'with-only') but below TP. If the ONLY-P were located above TP, we expect the *man*-phrase to occur to the left of the subject QP since focused phrases move overtly to [Spec, ONLY-P]. The structure of (11a) is represented in (12).

(12) [$_{TP}$ **everyone** λx [$_{ONLY-P}$ with_John [λy [$_{VP}$ x y shake_hands]] $_{ONLY}$] $_T$]

Focus Movement

Since the subject QP is above ONLY-P in (12), the scope relation follows from this syntactic configuration: for each person x, x shook hands with John, and for all alternatives z to John, if x shook hands with z, z is John.[10]

Let us next see the case of the ambiguous sentence in (11b). I argue that the two readings are due to different positions of ONLY-P, not to the reconstruction of the *man*-phrase as a QP. On the first reading, where *everyone* takes scope over the *man*-phrase, ONLY-P is still below TP. The *man*-phrase undergoes scrambling after focus movement. Thus, the clausal structure is the same as the one in (12) except that the PP is adjoined to TP. The same interpretation obtains, even though the *man*-phrase is interpreted in the scrambled position.

(13) [$_{TP}$ with_John λz [$_{TP}$ **everyone** λx [$_{ONLY-P}$ z [λy [$_{VP}$ x y shake_hands]] $_{ONLY}$] $_T$]]

Scrambling   Focus Mvt.

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[10] I assume that the postposition moves along with the focused element in the overt syntax, but reconstructs at LF for semantic interpretation. Under this assumption, there is no need to adjust the entry of ONLY for the PP case. Thanks to Irene Heim for suggesting this possibility.

On the second reading of (11b) (*only > every*), the ONLY head takes scope over the subject QP. That is, ONLY-P is positioned above TP. The S-initial appearance of the *man*-phrase is due to focus movement, not to scrambling. The structure is represented in (14).

(14) [$_{ONLY-P}$ with_John [λy [$_{TP}$ **everyone** λx [$_{VP}$ x y shake_hands] $_T$]] $_{ONLY}$]
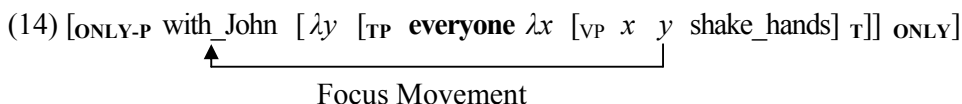
Focus Movement

Thus, the S-initial appearance of a *PP-man* could either be due to scrambling as in (13) or to focus movement as in (14), whereas that of a case-marked *man*-phrase could only be due to scrambling. The order of the postposition and the focus particle is compatible with both positions of ONLY-P (high ONLY-P above TP and low ONLY-P below TP), and the surface position does not distinguish focus movement from scrambling. This is why postpositions behave differently from case markers. Overt case marking rules out the high ONLY-P, and thus brings about the scope-fixing effect.

This section showed how the current proposal accounts for the scope patterns of the *man*-phrase. I showed that the apparent reconstruction of the *man*-phrase is not the reconstruction of a QP, and that the scope is determined by the position of the ONLY head. The difference between case markers and postpositions is correlated with the distribution of the particle with respect to case markers and postpositions. The current proposal derives this correlation without stipulations, unlike the QP approach under which the *man*-phrase is a QP that shows a non-uniform behavior.

4   Further predictions on scope

This section introduces further predictions of the null head analysis, and shows that each prediction is indeed borne out. The result provides further support to the proposed analysis.

4.1   Multiple Occurrences

The first prediction is that multiple occurrences of the particle *man* would be able to indicate the presence of a single instance of the ONLY head. Suppose that the ONLY head can host more than one focused phrase in its spec position. Then, the number of particles in a sentence would not necessarily match the number of ONLY heads in the syntactic tree. Interpretation would depend on the number of ONLY heads, not on the number of particles.[11]

This prediction is borne out. When the particle occurs twice in a sentence, the sentence is ambiguous between one ONLY and two ONLY's, as illustrated in (15).

(15) John-**man**   sakwa-**man**   mekesse.
     John-only   apple-only   ate
     'Only John ate only apples.'
     (i) John is the only one who ate only apples. Others ate other fruits as wells as apples.
     (ii) John is the only one who ate something, and John ate only apples (not other fruits).

The first reading involves two ONLY heads. It says John is the only one who has the property of eating only apples. By contrast, the second reading involves just one ONLY head, and says that the pair <John, apples> is the only element that satisfies the eating relation.[12] If it were

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[11] Thanks to Kai von Fintel and Danny Fox for bringing this prediction to my attention.
[12] Here the ONLY head takes a relation (of type <e, et>) and two individuals as arguments. The new entry would be the following:

   (i)   ⟦ ONLY⟧ = $\lambda R_{<e,<e,t>>}.\lambda x_e.\lambda y_e.R(x)(y) = 1$ & $\forall z_e \in ALT(x) \forall w_e \in ALT(y)$:

the particle *man* that carried the exclusive meaning, the second reading would not arise. This lends further support to the claim that *man* is a mere agreement morpheme.[13]

4.2 Scope splitting

The second prediction is that if the scrambled *man*-phrase contains a scope-bearing element, the scope of the new scope-bearing element can be dissociated from the ONLY head. This is so because the new scope-bearing element, contained in the *man*-phrase, can be interpreted in the scrambled position, while the ONLY head still can be lower than TP. Suppose there is a subject QP intervening between the scrambled *man*-phrase and the low ONLY head. Then, the subject QP would be able to take scope between the new scope-bearing element and the ONLY head. The present analysis predicts this dissociation to be possible, and this section confirms this prediction.[14]

For this, we introduce a conjoined DP as a new scope element. Consider the following sentences, where a *man*-phrase contains a conjoined DP.

(16) a. **Nwukwunka**-ka   John-**kwa**-Bill-**man**-ul   salanghanta.
     someone-NOM   John-and-Bill-only-ACC   love
     'Someone loves only John and Bill.'
     (i) There is someone who loves only John and Bill.   (some > only >and)
     (ii) *There is someone who loves only John and someone who loves only Bill.
                                       (*and > some > only)

     b. John-**kwa**-Bill-**man**-ul$_1$ [**nwukwunka**-ka t_1 salanhanta].
      John-and-Bill-only-ACCc   someone-NOM   love
      'Only John and Bill, someone loves *t*.'
      (i) There is someone who loves only John and Bill.   (some > only > and)
      (ii) There is someone who loves only John and someone who loves only Bill.
                                          (and > some > only)

Sentence (16a) is not ambiguous. It only allows a surface scope reading. For this reading to be true, there should be someone who loves John and Bill and loves no one else. Sentence (16b), by contrast, has two readings. In one reading, one and the same person loves only John and Bill, as in (16a). In the other reading, there must be two different people involved such that one person loves only John, and the other person loves only Bill.

The ambiguity of (16b) is interesting since scrambling of case-marked *man*-phrases has not induced ambiguity so far. This ambiguity, however, does not make a counterexample to our analysis. Compare the scope relations in the two readings. In (16a) and in the first reading of (16b), the subject QP takes scope over both the conjunction and the ONLY head. In the second reading of (16b), the conjunction takes scope over the subject QP, which in turn takes scope over the ONLY head. In both cases, the scope relation between the subject QP and the ONLY head remains the same. The former takes scope over the latter. What differentiates the

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$$R(z)(w) = 1 \rightarrow z = x \ \& \ w = y$$

[13] One can think of this in parallel to negation in negative concord languages, where multiple occurrences of negation can contribute a single instance of negation. For instance, in the following English and Italian sentences, the two negations do not cancel each other out. The interpretation involves only one negation.

   (i)   a. Maria **didn't** say **nothing** to **nobody**.   (Nonstandard English)
          b. Mario **non** ha parlato di **niente** con **nessuno**.   (Italian)
   'Mario hasn't spoken with anyone about anything.'   (Ladusaw 1992:237)

[14] I thank Danny Fox and Sabine Iatridou for bringing this question and prediction to my attention.

two cases is where the conjoined DP is interpreted. If the conjoined DP is interpreted in the scrambled position, the scope of the conjunction is split from the ONLY head (*and > some > only*).

Let me spell out how this reading is derived. In the interest of space, we focus on the scrambled sentence, but the interpretation of the non-scrambling case should be straightforward. Based on the morpheme order *man-ul* 'only-acc', we conclude that the ONLY head is positioned lower than Agro. Next, in order to interpret the conjunction, we introduce a D(istributivity) operator. Following Link (1983), Roberts (1987), and Beck (2000) among others, I assume the following lexical entry for the D-operator.

(17) $[\![D]\!] = \lambda f_{<e,t>}. \lambda X_e. \forall x \in X: f(x) = 1$

The D-operator takes two arguments, a predicate and a group individual, which is marked by a capital letter to be distinguished from an atomic individual. It asserts that the property f holds for all the atomic individuals that are parts of the group individual X. The structure of (16b) is illustrated in (18), where the scrambling of the conjoined DP *John & Bill* creates a new position for the D operator to apply.

(18)
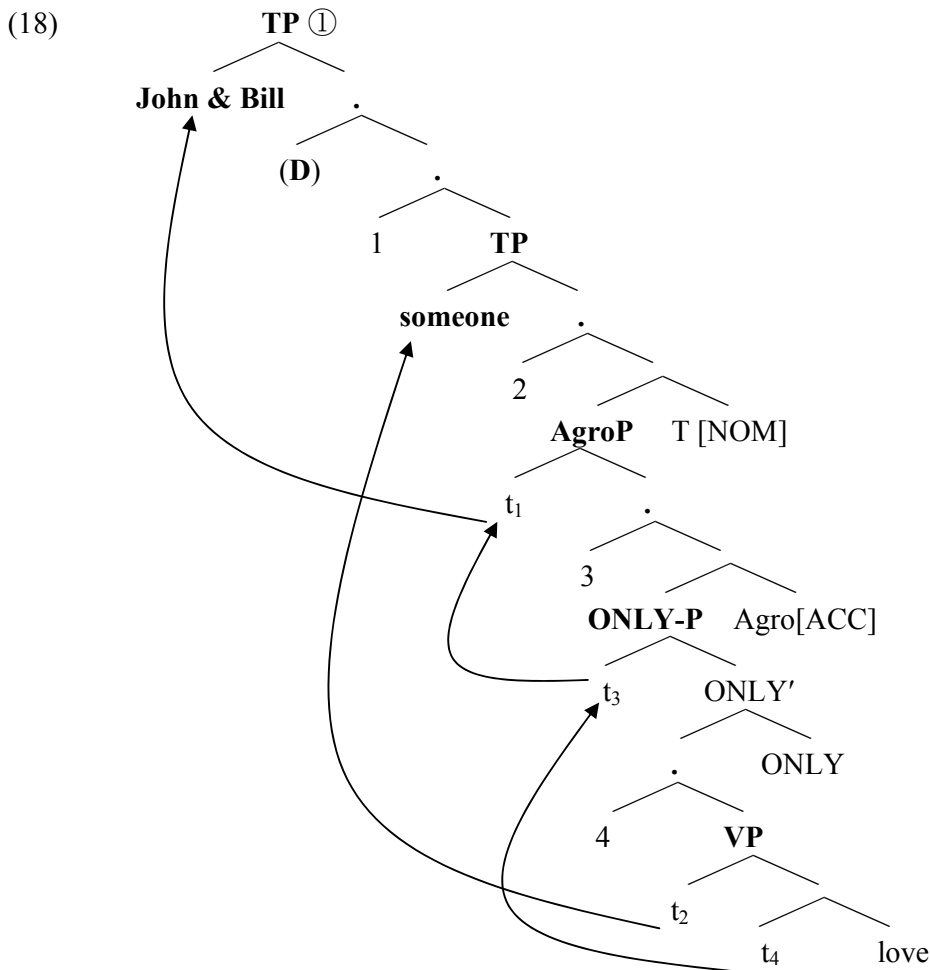
In the above structure, the readings diverge depending upon whether we apply the D-operator. Without the D-operator, the first reading in (16b) obtains (*some > only > and*). For this reading to be true, there should be someone who loves only John and Bill. That person

does not love Tom, for example. The reading we are interested in (*and > some > only*) arises when the D-operator is present. In this reading the one who loves only John does not love Bill and the one who loves only Bill does not love John. The two values of the top node are given below. The one in (19a) is without the D-operator, and the one in (19b) is with the D-operator in the tree.

(19) a. ⟦①⟧ = There is someone x such that x loves John and Bill & $\forall w_e \in$ ALT(J&B):

x loves w → w ∈ J & B[15]

b. ⟦①⟧ = $\forall z \in$J&B: there is someone who loves only z, i.e. there is someone

who loves only John and there is someone who loves only Bill.

The existence of this reading confirms our second prediction. The scope of a scope-bearing element within the *man*-phrase can be split from the scope of the ONLY head.[16] At the same time, it provides another argument against the QP approach to the *man*-phrase as discussed in section 2. If the *man*-phrase were a special QP that must reconstruct, scope splitting between the conjunction and the ONLY head would not be allowed, and no difference is predicted between (16a) and (16b).

5   Concluding Remarks

This paper presented a theory of the scope-taking properties of the Korean focus particle *man* 'only'. I argued that the particle is an agreement morpheme rather than a scope-bearing element. The particle merely indicates the presence of a head ONLY, which carries the quantificational meaning. I claimed that this null head can appear at various points in the tree,

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[15] I assume that the set of alternatives to a group individual still includes atomic individuals (for reasons that I cannot discuss here in the interest of space). Under this assumption, we need to adjust the entry so that we do not wrongly rule out some elements from the set of alternatives:

(i)   ⟦ONLY⟧ = $\lambda P_{<e,t>}.\lambda x_e.P(x) = 1$ & $\forall z_e \in$ALT(x): P(z) = 1 → [P(x) ⇒ P(z)]

(cf. von Fintel 1997)

The new entry says that if some alternative satisfies the predicate, the resulting proposition *P(z)* is entailed by the presupposed proposition *P(x)*. With respect to our example, this means that if x loves w among the alternatives, w is a part of *J&B*. That is, w is John, Bill, or John & Bill. I thank Danny Fox and Irene Heim for pointing this out to me.

[16] There is one problem here, which the present account is not equipped to deal with at this point. If the *man*-phrase contains a QP of type <et, t> rather than a conjoined DP, the sentence is still interpretable with our current entry for ONLY, but it leads to a wrong result:

(i)   Mary-ka   motun-[kyoswu]$_F$-man-ul   mannassta.
           Mary-Nom   every-professor-Acc   met
           'Mary met only every [professor]$_F$.

Judgments on this sentence vary among speakers (The same sentence in English seems controversial, too. See Bonomi & Casalegno (1993) and von Fintel (1997) for conflicting views). For most speakers, it means that Mary met no one other than professors. For some speakers, which are very few, it means that Mary met every professor, but she did not meet every student, for example. Thus, the second reading allows Mary to have met some students, as long as she did not meet all of them. The present account can derive the first reading, if *motun kyoswu* 'every professor' is assumed to denote the group individual that consists of all contextually relevant professors. In order to derive the second reading (if it is possible at all), however, we need to adjust the entry of the ONLY head. If *motun kyoswu* 'every professor' is interpreted as a QP of type <et, t>, the current semantics of ONLY wrongly predicts sentence (i) to mean that for all x, if x is a professor, Mary met only x. This is contradictory since it is not possible for Mary to meet only Professor A and meet only Professor B at the same time.

therefore its position (not that of the particle itself) determines the scope relation with respect to other quantificational elements. I also argued for a new correlation between the order of nominal affixes and the scope of focus particles, thus supporting Baker's Mirror Principle in a new area outside the verbal domain. Specifically I argued that the relative order among the particle, case marker, and postposition reflects the hierarchy of functional heads, which played a crucial role in identifying the position of the ONLY head. The proposed analysis accounted for the puzzling scope facts without stipulations, and also derived the correlation between the particle's distributional properties and its scopal behavior.

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