1. Introduction

This paper discusses two scopal phenomena in Japanese in that certain scope bearing elements in object position obligatorily take wide scope over sentential negation. The first case concerns elements with focus particles given in (1):

(1) -mo ‘also’, -dake ‘only’, -sae ‘even’, etc.

When the focus particle in (1) is attached to an object NP, the object must take wide scope with respect to sentential negation as in (2):

(2) a. Taroo-wa pan-mo tabe-nakat-ta.  
   Taro-TOP bread-also eat-NEG-PAST
   ‘lit. Taro didn’t eat also bread.’ (also>>¬;*¬>>also)

   Taro-TOP bread-only eat-NEG-PAST
   ‘lit. Taro didn’t eat only bread.’ (only>>¬;*¬>>only)

c. Taroo-wa pan-sae tabe-nakat-ta.  
   Taro-TOP bread-even eat-NEG-PAST
   ‘lit. Taro didn’t eat even bread.’ (even>>¬;*¬>>even)

In (2), the object phrases cannot be interpreted within the scope of the negation.

A similar phenomenon is observed with disjunctive phrases. When a disjunctive phrase appears in object position, it necessarily takes wide scope over sentential negation as in (3):

(3) Taroo-wa pan-ka-kome-o tabe-nakat-ta.  
   Taro-TOP bread-or-rice-ACC eat-NEG-PAST
   ‘lit. Taro didn’t eat bread or rice.’ (or>>¬;*¬>>or)

In (3), again, the object phrase disallows the narrow scope reading with respect to the negation. Thus, the sentence is infelicitous if Taro ate neither bread nor rice (note that the sentence should be felicitous under this situation if the object could take scope below the negation). This is in contrast to “normal” quantifier phrases (QPs) like universal or numeral

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1 The particle -dake can and -sae (marginally) can appear inside a Case particle or a postposition in the form of ‘NP-dake/sae-Case/P’ in addition to appearing in the rightmost position in a phrase as in (2). In this paper, I put aside this form since it does not behave as a standard scope bearer. For more detailed discussions of the scopal peculiarity of the form, see Hayashishita (2008) and Shibata (2012b).
phrases; they allow either wide or narrow scope with respect to sentential negation in Japanese as in (4):

(4)  a. Taroo-wa subete-no hon-o yom-anakat-ta.
    Taro-TOP all-GEN book-ACC read-NEG-PAST
    ‘lit. Taro didn’t read all books.’
    (\forall \gg \neg; \neg \gg \forall)

    b. Taroo-wa san-satu-izyoo-no hon-o yom-anakat-ta.
    Taro-TOP 3-cl-or.more-GEN book-ACC read-NEG-PAST
    ‘lit. Taro didn’t read more than three books.’
    (3 or more \gg \neg; \neg \gg \exists 3 or more)

In this study, I argue that the two phenomena from (2) and (3) are essentially the same, providing a unified account for why the elements in question have to take wide scope over sentential negation. The paper is organized as follow: in section 2, I will review the literature on these two cases, pointing out potential problems for the proposed approaches. In section 3, I claim that these two phenomena can be unified as ‘anti-reconstruction effects’ once we assume that Japanese objects obligatorily undergo object shift above negation. In section 4, I will show that the current analysis has several desirable consequences for scope phenomena in Japanese. Section 5 is the conclusion.

2. Previous Approaches

2.1. Focus Movement Analysis

The first account of the obligatory wide scope phenomenon illustrated above is the focus movement approach (Hasegawa 1994, Aoyagi, 1999, Hoshi 2006, Miyagawa 2010, among others). In this approach, focused phrases are assumed to undergo obligatory movement to some projection above NegP for the licensing reason. This is shown schematically in (5), where the focused phrase moves to FP to check its focus feature:

(5) \[
\begin{array}{c}
\text{TP} \\
\text{\uparrow} \\
\text{[FP \ F [NegP Neg [\_P ... focused.Obj. ... ]]]}
\end{array}
\]

In (5), the focused object moves to [Spec, FP] to license its focus feature, and as a result, it ends up in a position outside of the scope of the negation.

A potential problem with this approach is that adding a focus marker normally does not affect scope relations among arguments. For instance, in (6), the focused accusative object does not take scope over the dative object:

(6) Dative object and focused accusative object:

\[
\text{Taroo-ga [san-nin-izyoo-no sensee-ni] [yo-nin-izyoo-no dansi gakusee-mo/sae]} \\
\text{Taro-NOM 3-cl-or.more-GEN teacher-DAT 4-cl-or.more-GEN male student-also/even} \\
\text{syookaisi-ta.} \\
\text{introduce-PAST} \\
\text{(Dat.\gg Acc.;*?Acc.\gg Dat.)}
\]

Note that Japanese is known to be a so-called ‘scope-rigid’ language, so in the dative>>accusative order as in (i), the allowed scope relation is only ‘Dat>>Ace’, not ‘Acc>>Dat’.

(i) Taroo-wa [san-nin-no otoko-ni] [yo-nin-no onna-o] syookaishi-ta.
  Taro-TOP 3-cl-gen man-DAT 4-cl-gen woman-ACC introduce-PAST
  ‘Taro introduced four women to three men.’
  (Dat.\gg Acc.;*?Acc.\gg Dat)

\^ Miyagawa (2010) assumes that focus is in T, hence the focused phrase is assumed to move to [Spec, TP] for focus licensing.

\^ Note that Japanese is known to be a so-called ‘scope-rigid’ language, so in the dative>>accusative order as in (i), the allowed scope relation is only ‘Dat>>Ace’, not ‘Acc>>Dat’.
‘lit. Taro introduced also/even four or more male students to three or more students.’

Likewise, the focused dative object does not take scope over the subject:

(7) Subject and focused dative object:
[San-nin-izyoo-no sensee-ga] [yo-nin-izyoo-no dansi gakusee-ni-mo/sae]
3-CL-or.more-GEN teacher-NOM 4-CL-or.more-GEN male student-DAT-also/even
John-o syookaisi-ta
John-ACC introduce-PAST (Subj.>>Dat.;*?Dat>>Subj.)
‘lit. Three or more teachers introduced John to also/even four or more students.’

This indicates that the alleged focus movement would have to be very short. Furthermore, since a focus particle can also be attached to a subject NP, the focus movement approach in fact requires several distinct licensing heads for those focused phrases, and each movement has to be very local, not crossing a higher argument:

(8) [FP1 F [ Foc.Subj. [FP2 F [ Foc.Dat. [FP3 F [ Foc.Acc. ...]

Thus, if one is to argue for this approach, the existence of the type of movements in (8) needs to be proven independently.

Furthermore, it is unclear how the focus movement approach can capture the similarity between focused phrases and disjunctive phrases regarding the scope relation with respect to negation. It might be possible to argue that a particle -ka in disjunction of the form ‘NP-ka-NP’ is focus-related, and in fact, this is what Miyagawa (2010) claims. However, this does not seem to be on the right track, for the crucial factor in the obligatory wide scope phenomenon in the disjunction case is whether the expression in question is disjunction or not, and not whether the expression involves a particular particle. In fact, when another disjunctive expression matawa, which is equivalent to -ka, is used, the disjunctive phrase still only allows the wide scope reading over the negation as in (9):

(9) Taroo-wa [yasai matawa kudamono-o] tabe-nakat-ta.
Taro-TOP vegetable or fruit-ACC eat-NEG-PAST (or>¬;*¬>or)
‘Taro didn’t eat vegetables, or didn’t eat fruits.’ (Shimoyama 2011: 440)

In (9), again, the only possible reading is the one where the object takes scope over the negation. Thus, even Miyagawa (2010) cannot capture the scope pattern in (9).

2.2. Positive Polarity Item (PPI) Analysis

The second account to be reviewed assumes that the elements in question are positive polarity items (PPIs). Hasegawa (1991) argues that a particle -mo ‘also’ is a PPI4 and Goro (2007) argues that disjunction is a PPI, hence those phrases must move outside the scope of the negation.5 Goro (2007) maintains that the impossibility of Japanese disjunction taking

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4 Hasegawa (1994) revises the analysis in Hasegawa (1991) and argues that focus phrases move to [Spec, FocP], which is located between CP and NegP.
5 Goro (2007) also discusses conjunction of the form ‘NP-mo NP-mo’ (= NP-also NP-also) in Japanese, and claims that this phrase too is a PPI. In fact, this conjunctive form scopally behaves in the same way as the disjunction of the form ‘NP-ka-NP’. I assume that since this expression involves a focus particle -mo, it can be treated on a par with expressions with a focus particle -mo as in (2a).
narrow scope below the negation can be accounted for by assuming that this phrase is a PPI like English *some*. It is well known that *some* cannot take scope below the local negation even though the negation c-commands it in the surface structure (cf. Szabolcsi 2002, 2004):

(10)  
John didn’t call someone. (*¬>> some)

Since PPIs cannot appear within the scope of negation as in (10), it is assumed that they have to move outside the scope of the negation. Thus, Hasegawa (1991) and Goro (2007) analyze a focus particle *-mo* and disjunction, respectively, as PPIs like *some*. If they are indeed PPIs, it is not surprising at all that they cannot take scope below the negation.

A potential problem for this approach is that focused phrases and disjunction do not behave exactly in the same way as PPIs. Regarding this point, Goro (2007) himself notices that Japanese disjunction is different from PPIs like English *some* in that the former does not show a so-called ‘rescuing effect’ by another downward entailing (DE) operator. Szabolcsi (2002, 2004) observes that when there is another DE operator above PPIs, those PPIs can scope under the local negation:

(11)  
a. John didn’t call someone.  (*¬>> some)  
b. I don’t think that John didn’t call someone. (ok: ¬>>¬>>¬>>¬>>some)  
c. I am surprised that John didn’t call someone. (ok: surprised>>¬>>¬>>¬>>some)  

(Goro 2007: 265-266)

By contrast, Japanese focused phrases and disjunction are still unable to take scope under the local negation even after adding another DE operator:

(12)  
Taro-TOP Ziro-NOM apple-also eat-NEG-PAST C think-NEG-PAST  
‘Taro didn’t think Ziro didn’t eat an apple either.’ (¬>>¬>>¬>>¬>>¬>>¬>>¬>>also)

Taro-TOP Ziro-NOM apple-only eat-NEG-PAST C think-NEG-PAST  
‘Taro didn’t think that it is only an apple that Ziro didn’t eat.’ (¬>>¬>>¬>>¬>>¬>>¬>>¬>>only)

(13)  
John-wa [Taro-ga pizza ka pasuta-o tabe-nakat-ta to] omowa-nakat-ta  
John-TOP Taro-NOM pizza or pasta-ACC eat-NEG-PAST C think-NEG-PAST  
‘lit. John didn’t think that Taro didn’t eat pizza or pasta’ (*¬>>¬>>¬>>¬>>¬>>¬>>¬>>¬>>or / ok: ¬>>¬>>¬>>¬>>¬>>¬>

In (12) and (13), the existence of another DE operator in the matrix clause does not affect the impossibility of the embedded object taking scope below the local negation. Thus, if one is to claim that Japanese focused phrases and disjunction are PPIs, it must be accounted for why they behave differently from other PPIs like *some*.

3. **New Approach: Obligatory Wide Scope as Anti-reconstruction Effects**

As we have seen above, the previous approaches assume that some elements (i.e., focused phrases and disjunction) in object position have to move higher than sentential negation, and other elements do not undergo this movement. In this section, I will pursue another possibility that in fact, every object moves to a projection higher than negation in Japanese; however, focused phrases and disjunction lack reconstruction effects below negation, unlike other elements, which unifies the two obligatory wide scope phenomena.
Obligatory Wide Scope as Anti-reconstruction Effects (Y. Shibata)

3.1. Lack of Reconstruction Effects

So far, we have seen that focused phrases and disjunction in object position allow only wide scope over sentential negation in Japanese. This obligatory wide scope phenomenon is also observed when the elements in question appear in subject position as in (14):

(14) a. Taro-mo/dake/sae ko-nakat-ta.
    Taro-also/only/even come-NEG-PAST
    ‘lit. Also/Only/Even Taro didn’t come.’ (Subj.>> ¬;* ¬>>Subj.)

b. [Taro-ka Ziro]-ga ko-nakat-ta.
    Taro-or Ziro-NOM come-NEG-PAST
    ‘lit. Taro or Ziro didn’t come.’ (Subj.>> ¬;* ¬>>Subj.)

This contrast with cases where normal QPs appear in subject position; they can take either wide or narrow scope with respect to negation:

    all-GEN student-NOM come-NEG-PAST
    ‘All students didn’t come.’ (Subj.>> ¬; ¬,…>>Subj.)

b. Go-nin-izyoo-no gakuse-ga ko-nakat-ta
    5-CL-or more-GEN student-NOM come-NEG-PAST
    ‘5 or more students didn’t come.’ (Subj.>> ¬; ¬>>Subj.)

Significantly, the same phenomenon is also observed in English:

(16) All/A student(s) didn’t take the exam. (Subj.>> ¬; ¬>>Subj.)

(17) Only/John or Tom didn’t take the exam. (Subj.>> ¬;* ¬>>Subj.)

Since the subjects in (16) are located in [Spec, TP], that is, outside the scope of the negation, the narrow scope reading of the subject is obtained by some form of reconstruction effects below negation. This means that the obligatory wide scope over the negation as in (14) and (17) can be regarded as ‘the lack of reconstruction effects’ or ‘anti-reconstruction effects’.

3.2. Surface Scope Effects

In the previous section, we have seen that focused phrases and disjunction lack reconstruction effects even in English. Then, why do the elements in question exhibit anti-reconstruction effects?

To answer the question, I adopt two crucial assumptions. First, I assume A-movement does not reconstruct in syntax, as argued by, e.g., Chomsky (1995), Lasnik (1998, 1999)\(^6\)\(^7\):

(18) Assumption I: A-movement does not reconstruct in syntax.

Lechner (1998) observes that in German, the A-scrambled accusative object in (19) does not reconstruct in the syntax, which accounts for the impossibility of the bound variable reading of the pronoun within the scrambled phrase:

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\(^6\) Though Chomsky (2001) and Lasnik (2010) have different views from their works cited above.

\(^7\) Bobaljik and Wurmbrand (2012) also argue that A-scrambling in German and Japanese does not reconstruct in syntax, though they do not exclude the possibility of A-movement ‘syntactic’ reconstruction in general.
In (19), the pronoun in the scrambled accusative object cannot be bound by the dative object, which should be possible if the accusative object could reconstruct to the trace position in covert syntax. Yamashita (2009) observes the same phenomenon in Japanese:

(19) weil sie [ein Bild von seinem-τ Auftritt] [jedem Kandidaten]-t ACC zeigte since she [a ACC picture of his appearance] [every DAT candidate] t ACC showed ‘since she showed a picture of his appearance to every candidate’ (∃>>∀; ∀>>∃) (Lechner 1998: 299)

In (19), the pronoun in the scrambled accusative object cannot be bound by the dative object. If this scrambled phrase could reconstruct in the syntax, the sentence should be fine since the non-scrambled counterpart of the sentence is grammatical as shown below:

(20) *Taro-ga otagai-ο_i [Mari-to Hanako]-ni t syookaisita. Taro-NOM each.other-ACC Mari-and Hanako-DAT introduced ‘lit. Taro introduced each other to Mari and Hanako.’ (Yamashita 2009)

In (20), the A-scrambled anaphor cannot be bound by the dative object. If this scrambled phrase could reconstruct in the syntax, the sentence should be fine since the non-scrambled counterpart of the sentence is grammatical as shown below:

(21) Taroo-ga [Mari-to Hanako]-ni otagai-o syookaisi-ta. Taro-NOM Mari-and Hanako-DAT each.other-ACC introduce-PAST

These data can be taken to indicate that A-movement does not reconstruct in the syntax (at least in these languages).  

---

8 Fox (2000) argues that A-movement can reconstruct in syntax if the reconstruction creates a new scope reading which is unavailable before reconstruction (i.e., ‘Scope Economy’). He provides (i):

(i) a. [Someone from his class] seems to every professor, [t to be genius].
   b. [His father] seems to every boy, [t to be a genius]. (Fox 2000: 147)

He claims that if the subjects do not syntactically reconstruct, there should be a Weak Crossover (WCO) violation in (i), but the sentences are fine, which indicates that the subjects can syntactically reconstruct to a position below the quantifiers and pronouns can be bound without a WCO violation.

I argue in Shibata (2012a) that the data above is not decisive, and that (i) is not relevant to the availability of reconstruction. Consider (ii):

(ii) a. Someone seems to be sick. (∃>>seem; seem>>∃)
   b. Someone seems sick. (∃>>seem;*seem>>∃) (Williams 1983: 293)

Williams (1983) points out that if the subject moves from the small clause complement as in (iib), the reconstructed reading is unavailable, unlike the infinitival complement case in (iia). Then, if the acceptable status of (i) is indeed due to the availability of reconstruction, the change of the complement in (i) into a small clause should make the sentence worse, while if the grammatical status comes from something other than reconstruction, the change should not necessarily make the sentence worse. (iii) below shows that the latter seems correct. Thus, (i) does not necessarily demonstrate the existence of syntactic A-reconstruction.

(iii) a. Someone from his class seems to every professor, very tired.
   b. His father seems to every boy, very tired.

9 Romero (1997) and Fox (2000) provide data like (i) where the reconstruction in A-chains is blocked if the reconstruction creates a Binding Condition C violation (i.e., so-called ‘trapping effects’), which the authors regard as evidence for the syntactic A-reconstruction process:

(i) a. A student of his, seems to David, to be at the party. (ok:seem>>a student) (Fox 2000: 170)
   b. A student of David’s, seems to him, to be at the party. (*: seem>>a student) (Fox 2000: 170)

The existence of the effect is, however, unclear. The effect is subject to large speaker variations. Some speakers in fact show the opposite pattern from the reported one in (i) (i.e., ‘seem>>a student’ reading is easier to get in (ib) than (ia).) In addition, Anagnostopoulou and Fox (2007) report that the judgments they got regarding trapping effects with condition C did not confirm Fox’s (2000) prediction, so this again does not necessarily support the existence of syntactic A-reconstruction. For a more detailed discussion of this issue, see Shibata (2012a).
Then, a question arises here: how do we get the narrow scope reading of the scrambled accusative object in German example (19) if the reconstruction process does not happen in the syntax. In (19), the pronoun contained in the scrambled object cannot be bound by the dative object below, but still the scrambled object shows the scope ambiguity with the dative object. Here, I adopt the approaches in Cresti (1995) and Rullmann (1995) where the moved element may leave a higher trace of generalized quantifier and reconstruct to the trace position as a consequence of \( \lambda \)-conversion in semantics (i.e., Semantic Reconstruction). Schematically, this process is shown below:

(22) Subj. \[\text{[Acc.Obj.]}_{\langle \epsilon t>, t}\] \[[\lambda f \in D_{\langle \epsilon t>, t}. \text{Dat.Obj.} \ldots \text{[...]} \ldots \text{[...]} \ldots \text{[...]}\] = Subj. \[\text{[Dat.Obj.} \ldots \text{[Acc.Obj.]}_{\langle \epsilon t>, t}\ldots \text{[...]}\] = …

In (22), the A-scrambled accusative object leaves a trace of type \( \langle \epsilon t>, t\rangle \), and at the application of \( \lambda \)-conversion, this accusative object is plugged into the trace position, which yields the narrow scope reading of the accusative object below the dative object. In this way, A-moved elements can reconstruct to the original position, but crucially this happens in semantics, not in syntax. This accounts for why in (19), the narrow scope reading of the A-scrambled object is still possible even though the pronoun within the A-scrambled object cannot be bound by the dative object.

The second assumption concerns alternatives which are introduced by focus particles or disjunction. Focused phrases are known to introduce alternatives (Rooth 1985, 1992). As for disjunction, according to Chierchia, Fox, and Spector (to appear), ordinary scalar items including disjunction are typically interpreted with alternatives. For instance, (23a) only means (23b), not (23c). Chierchia et al. argue that this is due to the existence of a silent exhaustive operator as in (23d), which excludes its alternative (23c):

(23) a. John or Tom will come. b. John will come or Tom will come.
    b. Both John and Tom will come. d. Exh(John or Tom) will come.

Thus, the items showing anti-reconstruction effects can be regarded as elements interpreted with their alternatives. Then, regarding alternatives, I adopt the following assumption:

(24) Assumption II: Alternatives are calculated on the basis of LF structures.

When these two assumptions are combined, we can account for the anti-reconstruction effects observed from (14) and (17). Let us consider (14a) with a particle -mo as a sample case (repeated as (25)):

    Taro-also come-NEG-PAST
    ‘lit. Also Taro didn’t come’ (Subj.>>-;*\rightarrow>>Subj.)

In (25), assume that the subject position is higher than the negation, namely [Spec, TP] (cf. Takezawa 1987). Since the subject is outside the scope of the negation at LF, the alternatives are the set of the propositions of the form ‘[X [didn’t come]]’. This yields the presupposition that there is a person other than Taro ‘who didn’t come’ (i.e., the negation is necessarily included in this presupposition), which is compatible only with the wide scope reading of the subject. In order to obtain the presupposition that there is a person other than Taro ‘who came’ (i.e., the negation is not included in the presupposition), which is compatible with the narrow

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10 The unavailability of the reading (23c) for (23a) is often treated as a matter of implicature. Chierchia et al. try to capture the implicatures by grammatical devices like a silent operator as in (23d).
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scope reading of the subject, the subject must reconstruct below negation in the syntax, but such a process is excluded by the Assumption I. Thus, there is no way for the subject to be interpreted below the negation in (25).

On the basis of the above discussion, I propose the following scope effect:

(26) **The Surface Scope Effect of Alternative-introducing Elements**

An element construed with its alternatives allows only surface scope.

This surface scope effect accounts for why the attachment of focus elements suddenly eliminates the reconstructed readings in Japanese (14) and English (17); more importantly, the two cases in Japanese and English can be accounted for uniformly. In the next section, I will show that this scope effect is, in fact, very useful to investigate hierarchical relations among scope bearing elements, even in head-final languages like Japanese, where such relations cannot be read off from the surface order.

3.3. **Object Movement above Negation**

The surface scope effect proposed above provides us with an interesting implication for object NPs in Japanese. As we have already seen, Japanese objects allow either wide or narrow scope with respect to sentential negation as in (4) (repeated here as (27)):

(27) Taroo-wa [zen’in/go-nin-izzyoo-no gakusee]-o sikar-anakat-ta.

Taro-TOP all 5-CL-or.more-GEN student-ACC scold-NEG-PAST

‘lit. Taro didn’t scold all/five or more students.’ (Obj.>>; ¬>>Obj)

When objects are interpreted with their alternatives, the ‘Neg>Obj.’ reading becomes impossible as in (2) and (3) (repeated as (28) and (29))

(28) Taroo-wa pan-mo/dake/sae kaw-anat-ta.

Taro-TOP bread-also/only/even buy-NEG-PAST

‘lit. Taro didn’t buy also/only/even bread.’ (Obj.>> ¬; ¬>>Obj.)

(29) Taroo-wa pan-ka-kome-o kaw-anakat-ta.

Taro-TOP bread-or-rice-ACC buy-NEG-PAST

‘lit. Taro didn’t buy bread or rice.’ (Obj.>> ¬; ¬>>Obj.)

Based on the surface scope effect, these data indicate that object phrases in Japanese are in fact located in a position higher than the negation in the syntax. This contrasts with English examples, where focused or disjunctive object phrases can take scope below the negation:

(30) a. John didn’t buy only bread. (ok: ¬>> only)

b. John didn’t buy bread or rice. (ok: ¬>> or)

The English case is not surprising if the objects are located in a position below the negation, and in fact, there is plenty of evidence that this is indeed the case (e.g., negative polarity items, which need to be within the scope of negation, can appear in object position but not in subject position in simple negative sentences in English). What is significant is that Japanese focused
phrases and disjunction in object position behave in the same way as English subject phrases, not object phrases in this respect. Thus, I propose the following for Japanese:\footnote{See also Ochi (2009) and Bošković (2011) on Japanese object shift. For a more detailed discussion of the motivation for the movement in question, which is tied to the nature of Japanese Case particles, see Shibata (2013).}

\begin{equation}
\text{(31) Japanese objects must move to a projection above negation.}
\end{equation}

Due to this object movement process, Japanese object phrases are located outside the scope of negation in the syntax. Since the attachment of a focus particle traps them scopally in their position at LF, they disallow the narrow scope reading below the negation. This analysis is, in some sense, in the opposite side of the previous approaches. The previous approaches assume that only some elements must move to a higher position, while the current analysis assumes that only some elements may not reconstruct. In the next section, I will discuss phenomena that are captured under the current analysis, but not under the previous approaches.

4. Consequences

4.1. Scope Ambiguity between Object and Negation

The first consequence is that the object movement analysis accounts for why Japanese object QPs can take scope over sentential negation. As we have seen in (4) or (27), QPs in object position can take wide scope over negation in Japanese. According to the experimental study in Han et al. (2004), this wide scope reading of the object is, in fact, more prominent than the narrow scope reading. Note that this property of Japanese objects contrasts with English object QPs. In (32), the universal QP in object position cannot scope over negation:

\begin{equation}
\text{(32) John didn’t scold every student. \quad (*Obj.>> \lnot; \lnot>>Obj.)}
\end{equation}

Under the current analysis, this state of affairs is not surprising at all. Since object phrases undergo movement over negation, the ‘Obj.>>Neg’ reading is indeed just a surface scope reading. Since it is a surface scope reading, it is not surprising that the ‘Obj.>>Neg’ reading is more prominent than the ‘Neg>Obj.’ reading as the surface scope reading is often stronger than the inverse scope reading. By contrast, if one is to argue that Japanese objects stay within the scope of negation at LF, this difference between Japanese and English would be mysterious. On the other hand, under the current analysis, the issue above simply does not arise since the object is located in a position higher than the negation after object movement in Japanese.

4.2. Lack of Subject-Object Asymmetry with respect to NPI Licensing

The current analysis also accounts for why Japanese seems to lack NPIs licensed in object position but not in subject position. In English, this asymmetry is widely recognized:

\begin{equation}
\begin{align*}
\text{(33) a. *Anybody didn’t hit John.} & \quad \text{12} \\
\text{b. John didn’t hit anybody}
\end{align*}
\end{equation}

\footnote{It is well known that NPI itself cannot reconstruct below negation as in (33a), but when the NPI is embedded, the reconstruction of the whole phrase is possible:} 
\begin{equation}
\text{(i) Tickets to any of the afternoon concerts weren’t available. \quad (Linebarger 1980)}
\end{equation}

This anti-reconstruction effect of NPIs too is explained with the surface scope effect of alternative-introducing elements if we adopt Krifka (1995), where NPIs are assumed to introduce alternatives, and the reconstruction of the subject in (33a) is blocked by the surface scope effects.
Aihara (2007) reports that expressions of the form ‘universal+particle+universal’ in (35), which he calls ‘Double Universal Quantifiers (DUQs)’, behave in the same way as NPIs. They pass all the five criteria for NPIs from Watanabe (2004) in (34) (the criteria are originally proposed by Valluduví (1994) and Giannakidou (2000)):

(34) NPIs:
a. can appear in non-negative contexts;
b. cannot appear in pre-verbal position\(^{14}\);
c. cannot be modified by expressions like almost;
d. cannot be used as an elliptical answer;
e. can be licensed by superordinate negation.

(35) Double Universal Quantifiers (DUQs)
a. \textit{minna-ga-minna} \textit{minna-o-minna} \textit{minna-ni-minna} everyone-NOM-everyone everyone-ACC-everyone everyone-DAT-everyone
b. \textit{zenbu-ga-zenbu} \textit{zenbu-o-zenbu} \textit{zenbu-ni-zenbu} all-NOM-all all-ACC-all all-DAT-all

First, these expressions cannot appear in positive sentences:

(36) ?? Taro-ga gakkoo-de minna-o-minna mi-ta. Taro-NOM school-at everyone-ACC-everyone see-PAST ‘Taro saw everyone at the school.’

Then, these phrases exhibit the properties listed in (34):

(37) a. Minna-ga-minna \textit{(mosi) paatii-ni iku-nara}, watasi-mo iku-daro. everyone-NOM-everyone if party-to go-COND I-also go-will ‘If everyone goes to the party, I will go there too.’
b. *Minna-ga-minna daigaku-e ik-ana-i. everyone-NOM-everyone university-to go-NEG-PRES ‘Everyone does not go to a university.’
c. *[Taro-ga gakkoo-de \textit{hotondo} minna-o-minna mi-ta wake] Taro-NOM school-at almost everyone-ACC-everyone see-PAST reason de-wa na-i. COP-TOP NEG-PRES ‘It is not the case that Taro saw almost everyone at the school.’
e. *[Taro-ga gakkoo-de minna-o-minna mi-ta wake] de-wa na-i. Taro-NOM school-at everyone-ACC-everyone see-PAST reason COP-TOP NEG-PRES ‘It is not the case that Taro saw everyone at the school.’

\(^{13}\) Under these criteria, a polarity sensitive expression like \textit{dar emo} ‘anyone’, which is often treated as an NPI in the literature, is not classified as an NPI. Watanabe (2004) argues that it is a negative concord item.

\(^{14}\) This holds when the sentence is negative and without any other DE operator higher in the structure.

\(^{15}\) Aihara (2007) notes that some speakers marginally accept (36) when the phrase is interpreted as emphatic. The same holds for (37d).
These data show that DUQs behave as NPIs. Then, Aihara notes that DUQs are not licensed in object position in simple negative sentences:

(38) *Taro-ga gakkoo-de minna-o-minna mi-nakat-ta.
    Taro-NOM school-at everyone-ACC-everyone see-NEG-PAST
    ‘Taro didn’t see everyone at the school.’

Based on this, Aihara (2007) argues for the structure of negative sentences proposed by Han et al. (2004), where NegP dominates only VP, not vP, and object NPs are located in [Spec, vP], that is, negative structure in Japanese is fundamentally different from the one in languages like English, where NegP is assumed to be above vP. Under the current analysis, the impossibility of DUQs in object position is not surprising since objects are outside of the scope of negation in the syntax, just like the subject in (37b), and the symmetric behavior of subject and object DUQs is predicted without any special assumptions for negative structure. Thus, the ungrammatical status of (38) can be captured as a natural consequence of the analysis.

4.3. Narrow Scope of Disjunctive Phrases

In Section 3.2, I adopted the approach by Chierchia, Fox, and Spector (to appear) that exhaustive implicatures of disjunctive phrases are obtained from a silent operator. Then, the current analysis predicts that when disjunctive phrases are interpreted without a silent exhaustive operator, they should be allowed to take scope below the local negation (note that the silent exhaustive operator is a grammatical device proposed by Chierchia, Fox, and Spector (to appear) to capture the implicature of those phrases). Thus, it should be possible for the disjunctive phrase to take narrow scope below the local negation in environments which typically cancel implicatures. This prediction is indeed borne out. Goro (2007) observes that when a disjunctive phrase is in the antecedent of a conditional clause, the narrow scope of the object under the negation becomes available:

    John-NOM English-or-German-ACC speak-NEG-PRES-COND I-PL-TOP in.trouble-PRES
    ‘If John doesn’t speak English or German, we will be in trouble.’ (ok: ¬>>or)

To account for this, Goro (2007) adopts the approach in Kato (1997), where negation in the antecedent of conditional clauses can optionally raise to a position above the subject. Under the current approach, such an additional assumption is not required. Since the if-clause cancels the implicature, which means that the disjunctive phrase is interpreted without a silent exhaustive operator, the object is free from the surface scope effect. As additional evidence, the same phenomenon is observed when we place those object phrases in one of the disjuncts, which is also an environment that cancels the implicature:

(40) (Wareware-ga koma-ru no wa) John-ga eego-ka-doitugo-o hanas-ana-i
    (ok: >>or)
    we-NOM in.trouble-PRES C TOP John-NOM English-or-German-ACC speak-NEG-PRES
    ka/matawa kaigi-no siryoo-ga maniaw-anakat-ta baai da.
    or meeting-GEN document-NOM in.time-NEG-PAST case COP
    ‘The case in which we are in trouble is either John doesn’t speak English or German or the documents for the meeting doesn’t reach us.’

Again, the disjunctive phrase eego-ka-doitugo ‘English or German’ can take scope below local negation. In this case, the sentence does not contain a conditional clause, hence the analysis by Kato (1997) cannot capture the narrow scope of the object in this case. By contrast,
under the current analysis, (40) can be treated on a par with (39) since implicatures are canceled in disjuncts. Thus, the surface scope effects + object movement analysis can account for these cases without any additional assumptions.

5. Conclusion

I discussed two obligatory wide scope phenomena with focused phrases and disjunction in Japanese: when the elements in question appear in object position, they must take wide scope with respect to sentential negation. I argued that the two are in fact the same phenomenon. Based on the observation that the similar expressions show anti-reconstruction effects even in English, I claimed that elements interpreted with their alternatives in principle allow only surface scope readings. Then, using this scope effect as a tool to investigate hierarchical relations among scope bearers, I argued that Japanese objects always move above the negation and that focused phrases and disjunction are unable to reconstruct by the surface scope effect. This analysis is, in a sense, opposite of the previous approaches where only some elements undergo obligatorily movement. I have shown that the current analysis has several desirable consequences that are not obtained from the previous approaches. First, the current approach accounts for why object QPs in general can take wide scope over sentential negation in Japanese. Since I assumed that object phrases in general undergo object shift above negation in Japanese, this availability of the wide scope is obtained as a natural consequence of the analysis. I also have shown that the current approach can capture the observation by Aihara (2007) that (true) NPIs cannot appear in object position in Japanese. Since objects are assumed to be outside of the scope of the negation under the current analysis, this is also obtained as a natural consequence of the analysis. Finally, I discussed one prediction of the current analysis: when disjunction is free from the exhaustive implicature, it should be able to take narrow scope under local negation. I have shown that this prediction is borne out. Thus, the current analysis not only unifies two scope phenomena but also captures other scope phenomena in Japanese as its natural consequences.

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