

Reconstruction and the Checking Theory*

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In this paper, I propose an alternative analysis to Belletti and Rizzi's (1986) treatment of Principle A as an anywhere principle. The fact that properly contained anaphors show connectivity effect regardless of the type of movement (A or A'), I argue, follows from the proposed Reconstruction theory. The proposed analysis does not pose a fundamental asymmetry in the application level of Principle A and Principles B/C. Rather I suggest that conditions of interpretation, whether it is Principle A or Principles B/C, uniformly apply only at the interface level LF (cf. Chomsky 1992). The proposed analysis also gives a unified explanation for the Reconstruction effect and Negative Polarity Item Licensing.

1. Introduction

A fundamental asymmetry in the application level of Condition A and Conditions B/C has been assumed in the literature (Belletti and Rizzi (henceforth, B&R) 1986, 1988, Clark 1992). One of the crucial motivations for this assumption is the observation that constructions of A-movement exhibit Condition A type RECONSTRUCTION effects,¹ while they do not exhibit Condition B/C type RECONSTRUCTION effects. In this paper, I show that the apparent asymmetry between Condition A and Conditions B/C in constructions of A-movement, in fact, follows from the interaction between the Checking Theory (Chomsky 1992, Chomsky and Lasnik 1991) and the nature of lowering movement. This analysis is extended to a problem for the c-command restriction on N(egative) P(olarity) I(tem) in English. The fact that the c-command restriction on anaphors/NPIs does not hold in the case of scrambled phrases in Korean/Japanese is also shown to

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¹ If dislocated items behave as if they were in their DS positions, I call this effect RECONSTRUCTION effect.

follow from the interaction between the Checking Theory and lowering movement. To the extent that my analysis goes through and conditions of interpretation, including Condition A, Conditions B/C, and NPI Licensing Condition, can be argued to uniformly apply only at the interface level LF (cf. Chomsky 1992).

2. Asymmetry between Condition A and the Other Binding Conditions in A-Movement Constructions

In this section, I illustrate the data which show that constructions of A-movement exhibit RECONSTRUCTION effects with respect to Condition A, but not with respect to Conditions B/C. I show that B&R's (1986, 1988) account for these facts.

2.1. Anti-RECONSTRUCTION Effects and Conditions B/C

As has been often discussed in the literature (Barss 1986, Lebeaux 1988, Deprez 1990), constructions of A'-movement exhibit Condition B/C type RECONSTRUCTION effects.

- (1) *Him_i, John_i likes t_i.
- (2) *Him_i, Mary thinks that John_i admires t_i.
- (3) *Which pictures of John_i does he_i like t.
- (4) *Near Ben_i's box, he_i put his cigars t.

In the examples (1) and (2), the dislocated items behave as if they were in their base-generated positions, i.e., the positions of the traces, with respect to Condition B. If they were in these positions, the pronouns would be bound in their governing category, violating Condition B in (5).

- (5) A pronominal must be A-free in its governing category (Chomsky 1981).

(1) and (2) are correctly ruled out. On the other hand, with the dislocated items in their current positions, there would be no violations of Condition B, since none of the pronouns are bound.² (1) and (2) would be incorrectly predicted to be good. Likewise, in the examples (3) and (4), the dislocated items behave as if they were in their original positions with respect to

Condition C. If they were in these positions, the pronouns would bind the R-expressions, violating Condition C in (6).

(6) An R-expression must be A-free (Chomsky 1981).

(3) and (4) are correctly ruled out. With the dislocated items in their current positions, there would be no violations of Condition C, since none of the R-expressions are bound. (3) and (4) would be incorrectly predicted to be good.

On the other hand, constructions of A-movement do not exhibit Condition B/C type RECONSTRUCTION effects, as observed in B & R (1986), Uriagereka (1988), Deprez (1990).

(7) He₁ pleased t₁ himself₁.

(8) He₁ seems to himself₁ t₁ to be intelligent.

(9) They₁ seem to each other₁ t₁ to be nice.

In the examples (7)–(9), if the subject phrases were in the base-generated positions, the pronouns would be bound in their governing category, violating Condition B. (7–9) are incorrectly ruled out. In contrast, with the subject phrases in their current positions, there would be no violation of Condition B, since none of the pronouns are bound. (7–9) are correctly predicted to be good.

(10) Hemingway₁ seems to himself₁ t₁ to be damn good.

(11) These pictures of John₁ seem to him₁ t to be ridiculous.

(12) These pictures of John₁ annoy t him₁.

In the examples (10–12), if the subject phrases were in the base-generated positions, violation of Condition C would result. (10–12) are incorrectly ruled out. In contrast, with the subject phrases in their current positions, there would be no violation of Condition C. (10–12) are correctly predicted to be good.

²Condition C does not rule out (1) and (2), either. I assume that a trace of a topicalized *pronoun* behaves like a pronominal (Barss 1986, Lasnik and Uriagereka 1988). If the trace of the topicalized pronoun behaves as an R-expression, the sentence *him₁, John₁, thinks that Mary loves t₁*, would be incorrectly ruled out.

2. 2. RECONSTRUCTION Effects and Condition A

Constructions of A'-movement but not those of A-movement show RECONSTRUCTION effects as far as Conditions B/C are concerned, as illustrated in section 2.1. On the other hand, not only constructions of A'-movement but also those of A-movement show Condition A type RECONSTRUCTION effects. Consider constructions of A'-movement, first.

(13) Which pictures of himself₁ does John₁ like t best?

(14) These pictures of himself₁, John₁ likes t best.

(15) Himself₁, John₁ likes t best.

In (13-15), the anaphors, or the A'-moved phrases containing them, behave as if they were in their base-generated positions with respect to Condition A. If they were in these positions, the anaphors would be bound in their governing category, satisfying Condition A in (16).

(16) An anaphor must be A-bound in its governing category
(Chomsky 1981).

(13-15) are correctly ruled in.

Constructions of A-movement are also noted to show Condition A type RECONSTRUCTION effects. Since Postal (1971) and Jakendoff (1972), it has been observed that in psych-verbal constructions, a theme subject behaves like a derived one in that an anaphor can show up within a theme subject, being interpreted as bound by an experiencer that does not c-command it.

(17) These pictures of himself₁ amuse t John₁.

(18) Each other₁'s pictures please t the boys₁.

Following Postal's proposal of psych movement, B&R (1986, 1988) claim that a theme subject of the relevant psych-verb is base-generated in a position lower than an experiencer object. They argue that A-movement of a theme NP to a subject position takes place in these constructions, suggesting that constructions of A-movement also exhibit RECONSTRUCTION effects, as far as Condition A is concerned. They present reconstruction effects found in raising constructions, to confirm this suggestion.

(19) Replicants of themselves₁ seemed to the boys₁ [e to be ugly].
(due to K. Johnson)

- (20) Friends of each other₁ seem to [John and Mary]_i t to be nice.
 (Langendoen & Battistella 1982)

In the examples (17–20), the anaphoric binding would be well accounted for if the phrases containing the anaphors are in the hypothesized base-generated positions.

2.3. Condition A as an Anywhere Condition

van Riemsdijk & Williams (1981) suggest that RECONSTRUCTION effects can be dealt with if the binding conditions apply at NP-structure, the output level of NP-movement, and the input level of wh-movement. However, Condition A RECONSTRUCTION effects in constructions of A-movement in (17–20) still remain unexplained. The reconstruction (undoing or lowering movement) approach (Chomsky 1976, B&R 1981, Langendoen & Battistella 1982, Cinque 1984, Gueron 1984) assumes that the binding conditions apply after the dislocated phrases move back to the base-generated positions. However, it has not been clear what principle or principles control reconstruction in different constructions. Especially, it was not clear why, in constructions of A-movement, reconstruction applies for Condition A, but not for Conditions B/C. At this point, it seems that B&R's (1986, 1988) claim that Condition A, as an anywhere condition, can be fulfilled at any level of representation, and solves the Condition A RECONSTRUCTION problem. (17–20), constructions of A-movement (as well as (13–15), constructions of A'-movement) are ruled in, since Condition A is fulfilled at D-structure, where anaphors are c-commanded by their antecedents.³

- (21) e [[amuse these pictures of himself₁] John₁]. (DS)
 (22) e [[please each other₁'s pictures] the boys₁]. (DS)
 (23) e seemed to the boys₁ [replicants of themselves₁ to be ugly]. (DS)
 (24) e seem to [John and Mary]_i [friends of each other₁ to be nice].
 (DS)

Satisfaction of Condition A at some point in the derivation is enough to rule in an anaphor. Once an anaphor is ruled in, whether or not the configuration required by Principle A is destroyed does not matter.

³ Following Reinhart (1976, 1983), I assume that the preposition in (23–24) does not count in c-command relations.

B&R (1986, 1988) further claim that Conditions B/C cannot be anywhere conditions, based on the examples (25–26).

(25) *Himself_i worries t_i him_i.

(26) *Himself_i seems to Harry_i t_i to be damn good.

Given the claim that Condition A is an anywhere condition, what rules out (25–26) cannot be Condition A, since Condition A is satisfied at D-structure in these examples, just as it is in (17–20). The deviance of (25–26), they argue, is due to a violation of Conditions B/C, which are conditions at S-Structure. That is, there is an asymmetry between Condition A and Conditions B/C. If Conditions B/C are also anywhere conditions, the sentences will be incorrectly ruled in, since in the D-structure representations of (25) and (26), Conditions B/C (as well as Condition A) are not violated. The deviance of (27–28), they argue, confirms the claimed asymmetry.

(27) *He_i seems to him_i t_i to be likely t_i to win.

(28) *He_i seems to Bill_i 's sister t_i to be the best.

If full symmetry between Condition A and Conditions B/C is assumed, (27–28) will be incorrectly ruled in, since at D-structure, Conditions B/C are not violated.⁴ (27–28) will be correctly ruled out, if Conditions B/C are S-structure conditions.

3. Alternative Analysis

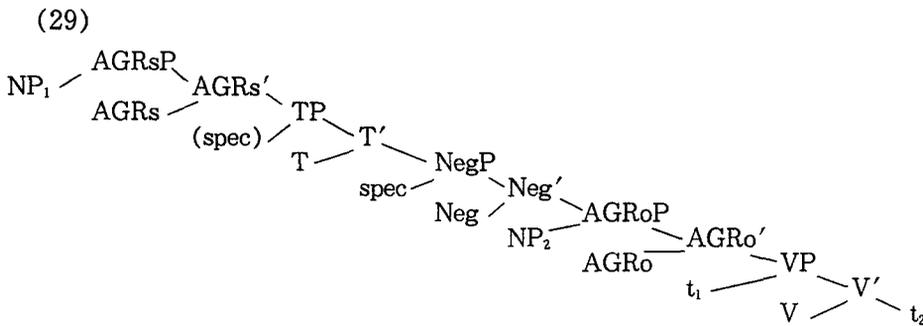
Even though the ‘anywhere’ view of Condition A might give the correct results, positing an asymmetry between Condition A and Conditions B/C is conceptually undesirable. If it is possible to deduce the asymmetry, which remains as a sort of principle in B&R’s (1986, 1988) account from independently motivated principles, it is desirable to pursue that possibility. In this section, assuming that conditions of interpretation, including Condition A and Conditions B/C, uniformly apply only at the interface level LF (Chomsky 1992), I argue that the apparent asymmetry reflects the interac-

⁴ However, in fact it is not clear whether at DS (27) with *he* in the base-generated position is not ruled out by Condition B. See discussion of (7–9).

tion between the Checking Theory and lowering movement. As a consequence of the proposed reconstruction theory, some problematic cases of NPI Licensing and anaphor-binding are also explained.

3.1. The Checking Theory

Chomsky (1992) and Chomsky & Lasnik (1991) argue that all morphological features must be checked somewhere, in order for a derivation to *converge*. For example, the Case Filter is an interface condition in which morphological Case/Agreement-features of NPs must be checked by those of Inflection in the Spec-Head configuration. The Nominative Case features of Subject NPs are checked by the [AGRs, T] amalgam (which is formed by raising of T to AGRs) in the spec of AGRs. The Accusative Case features are checked by the [AGRo, V] amalgam (which is formed by raising of V to AGRo) in the spec of AGRo. To satisfy the checking requirement, subject and object NPs generated under VP (adopting the VP-Internal Subject Hypothesis), must move to the spec of AGRsP and AGRoP respectively as in (29), somewhere in the derivation.



Likewise, *wh*-movement is a sub-case of the more general ‘checking-motivated’ movement. Operator features of *wh*-phrases and those of C must be checked by each other in the Spec-Head configuration. I conjecture that the checking requirement is a condition on representation rather than a condition on derivation, based on a sentence like (30).

(30) *Who do you wonder t left?

If the checking requirement is a condition on derivation, the sentence is incorrectly predicted to be grammatical, since *who* can move through a CP

spec of the embedded clause and so operator–feature checking requirement on *wh*-phrases and C is satisfied. On the other hand, if the checking requirement is a condition on representation, the sentence can be correctly ruled out. Even though *who* moves through an embedded CP spec, operator–feature checking requirement on C is not satisfied, since the trace of *who* is not [+wh] (Lasnik and Saito 1992).⁵

3.2. A-Movement and Optional Reconstruction Movement of Non-Checking Phrases

With this much background about the Checking Theory, I will now show that the apparent asymmetry between Condition A and Conditions B/C in constructions of A-movement reflects the interaction between lowering movement and the Checking Theory.

I propose that the application of lowering movement at LF is entirely free up to the Checking Theory (and Parameter–Value Preservation Principle⁶). Thus, a phrase in non-checking relation (e.g., part of the whole phrase or a scrambled phrase) can be freely lowered (to its base-generated position). However, a phrase in checking relation is prevented from being lowered. A trace of the lowered phrase is required to be present to satisfy the Checking requirement, i.e., a condition on representation, and this trace is subject to the ECP and/or the Proper Binding Condition (PBC). Given this, let us consider the contrast between (33) and (34).

(33) Pictures of himself₁ worry John₁/him₁.

(34) *Himself₁ worries John₁/him₁.

(33), in B&R's (1986, 1988) terms, shows that Condition A can be fulfilled at any level of representation (D-Structure in this case). Given this claim, the deviance of (34), which satisfies Condition A at D-Structure, in-

⁵ Alternatively, (30) is out by the 'self serving Last Resort Principle'. Once *who* checked its *wh*-features in the CP spec of the lower clause, it need not and must not move to the CP spec of the main clause, even though that movement might serve to check *wh*-features of the CP spec of the main clause.

⁶ I suggest that lowering movement which is consistent with the parameter-value for a language is cost-free and optional, extending Fukui's (1993) idea. Therefore, reconstruction movement which maintains the canonical precedence relation between a verb and its object is cost-free and optional.

dicates that Conditions B/C must be satisfied at S-structure. So, the contrast between (33) and (34), in B&R's (1986, 1988) words, gives crucial evidence of an asymmetry in the application level of Condition A and Conditions B/C. But, assuming that conditions of interpretation uniformly apply only at the interface level LF (Chomsky 1992), I argue that the contrast between (33) and (34) comes from whether or not the relevant anaphor is embedded, rather than from asymmetry between Condition A and Conditions B/C. In (33), part of a subject, i.e., *t of himself* can be lowered as in (35).⁷

(35) $[_{AGRP} pictures_2 [_{TP} [_{AGROP} John_1/him_1 [_{VP} worry [t_2 \text{ of himself}_1] t_1]]]]]$

This lowering movement does not have to leave a trace, since Nominative Case-checking requirement can be satisfied by *pictures*. Condition A is satisfied, with the anaphor bound by its antecedent. (33) is correctly ruled in. In (34), suppose that the anaphor is lowered as in (36).

(36) $[_{AGRP} t'_1 [_{TP} [_{AGROP} John_1/him_1 [_{VP} worry [himself_1] t_1]]]]]$

This lowering movement has to leave a trace, to satisfy Nominative Case-checking requirement. A violation of the PBC or the ECP results, even though Condition A is satisfied. On the other hand, if the anaphor does not lower, a violation of Condition A (as well as condition B or C) results. (34) is correctly ruled out. Thus, in this way, the contrast between (33) and (34) can be explained, without posing an asymmetry between Condition A and Conditions B/C at the application level. Likewise, the contrast found in raising constructions can be captured.

(37) *Himself₁ seems to John₁ t to be ridiculous.

(38) Replicants of themselves₁ seemed to the boys₁ [e to be ugly].

The examples (27–28), in B&R's (1986, 1988) terms, confirm the claim that Conditions B/C are SS conditions. These examples, in our terms, confirm the claim that non-embedded NPs cannot lower at LF, without violating either the PBC, the ECP or the Checking requirement.

(27) *He₁ seems to him₁ t₁ to be likely t₁ to win.

⁷ Alternatively, *pictures of himself* is lowered and then *pictures* raises to the spec of AGRs.

(28) *He₁ seems to Bill₁'s sister t₁ to be the best.

With the subject NPs in the current positions, Conditions B/C are violated at LF.

Notice that this lowering movement is entirely free and is not required to apply. The grammaticality of (7–9), i.e., examples of Condition B type anti-RECONSTRUCTION effects and that of (10–12), i.e., examples of Condition C type anti-RECONSTRUCTION effects, are compatible with the optionality of reconstruction movement.

(7) He₁ pleased t₁ himself₁.

(8) He₁ seems to himself₁ t₁ to be intelligent.

(9) They₁ seem to each other₁ t₁ to be nice.

(10) Hemingway₁ seems to himself₁ t₁ to be damn good.

(11) These pictures of John₁ seem to him₁ t to be ridiculous.

(12) These pictures of John₁ annoy t him₁.

In all these examples, the subject NPs can stay at LF in their current positions and thus the whole Binding theory can be fulfilled.

In sum, in this section I showed that the apparent asymmetry between Condition A and Conditions B/C in the application level follows from the interaction between lowering movement and the Checking Theory. The optionality of reconstruction movement gives us the configuration required by Binding Theory in all A-movement constructions: The grammaticality of the examples of Condition A type RECONSTRUCTION effects follows since a phrase containing an anaphor can be lowered. The grammaticality of the examples of Condition B/C type anti-RECONSTRUCTION effects follows since a relevant phrase can stay in an SS-position. An exception occurs only in the case where an anaphor is not embedded. However, the optionality of lowering movement is limited to constructions of A-movement. Remember that constructions of A'-movement show only RECONSTRUCTION effects with respect to Conditions B/C. This seems to suggest that lowering movement is not just allowed but forced in constructions of A'-movement as far as Conditions B/C are concerned. I will return to this in Section 4. In the next two sub-sections, I will show consequences of my analysis.

3. 3. NPI Licensing

In the previous section, I argued that the contrast between (33) and (34) follows from whether anaphors are embedded or not, as an alternative account to B&R's (1986, 1988) asymmetry between Condition A and Conditions B/C in the application level.

(33) Pictures of himself_i worry John_i/him_i.

(34) *Himself_i worries John_i/him_i.

Significantly, the same sort of contrast shows up in NPI Licensing. The following examples, where a subject NPI in a root clause is not licensed, seem to indicate that NPIs must be c-commanded by negation to be licensed in English.

- (39) a. *Anyone did not meet Chomsky.
 b. *Anybody was not hit t by the car (passive).
 c. *Anybody did not seem t to be hit by that car (raising).
 d. *Anybody did not amuse t John (psych-verb).
 e. *Anybody did not arrive t (unaccusative).

However, the sentences are improved in the same configurations, if the NPIs are embedded within subject NPs.

- (40) a. ?Students of any of the philosophy professors do not take this course (VP-internal subject raising, Enç 1990 (class lecture)).
 b. ?Pictures of anybody were not bought t by the visitor.
 (passive, Lasnik(p.c))
 c. ?Pictures of anybody did not seem t to be on sale.
 (raising, Lasnik(p.c))
 d. ?Pictures of anybody did not amuse t the visitor.
 (psych-verb, Lasnik(p.c))
 e. ?Pictures of anybody did not arrive t in the gallery at that time.
 (unaccusative, Lasnik(p.c))

Now, suppose that the c-command restriction on NPIs is an S-Structure condition as assumed in the literature (Kitagawa 1986, Progovac 1988, Laka 1990, Mahajan 1990, Ahn 1991) since Klima (1964). The sentences in (39) and in (40) are predicted to be equally bad, since the NPIs in both cases are not c-commanded by negation at S-Structure. The ungram-

maticity of the sentences in (39) can be explained, but the marginal acceptability of the sentences in (40) remains unexplained. On the other hand, suppose that the *c*-command restriction on NPIs is an anywhere condition. The sentences in (39) and in (40) are predicted to be equally good, since the NPIs in both cases are *c*-commanded by negation at D-Structure. The ungrammaticality of the sentences in (39) remains unexplained. In other words, even though the contrast in (33–34) can be captured by positing an asymmetry between Condition A and Conditions B/C, the same sort of contrast in (39–40) still remains to be explained, whether NPI licensing condition is an SS condition or an anywhere condition.

I argue that the contrast in (39–40) follows from whether the NPI is embedded or not, just as the contrast in (33–34) follows from whether the anaphor is embedded or not. First of all, I assume that the distribution of NPIs falls under the general morphological checking requirement introduced in 3.1. (Lee 1992, Kawashima & Kitahara 1992). Categories lexically specified for the morphological feature [+Neg] must move to a position where the feature can be checked off, i.e., the spec of NegP, at LF. The NPI in (41) is licensed with an intermediate trace in the spec of AGRoP satisfying the Case-checking requirement and with *anybody* in the spec of NegP satisfying the Neg-feature checking requirement as in (42).⁸

(41) Chomsky did not meet anybody yesterday.

(42) [_{AGRS}P Chomsky₁ [_{TP} [_{NegP} anybody₂ [_{Neg'} not [_{AGRoP} t'₂ [<sub>t₁ meet t₂]]]]]]]]]
(LF) (irrelevant portions omitted)</sub>

Now, consider the contrast in (39–40).

(39) d. *Anybody did not amuse t John.

(40) d. 'Pictures of anybody did not amuse t John.

In (40), part of a subject, i.e., *t* of *anybody* can be lowered to a spec of NegP at LF as in (43).

(43) [_{AGRS}P pictures₂ [_{TP} [_{NegP} [_{t₂ of anybody}]₁ [_{Neg'} not [_{AGRoP} [_{VP} amuse t₁] John]]]]]]

⁸ I assume that *anybody* in (41) can satisfy the Case-checking requirement through its trace, just as *what* can satisfy the Case-checking requirement through its trace in the sentence *What did you buy?* ([*what did you* [_{AGRoP} t' [*buy t*]]]).

This lowering movement does not have to leave a trace, since Nominative Case-checking requirement can be satisfied by *pictures*.⁹ Satisfying Neg-feature checking requirement in the spec of NegP, the NPI is licensed. In (40), suppose that the NPI is lowered as in (44).

(44) [_{AGRsP} t' ₁ [_{TP} [_{NegP} anybody₁ [_{Neg'} not [_{AGRoP} [_{VP} amuse t₁] John]]]]

This lowering movement has to leave a trace, to satisfy Nominative Case-checking requirement. A violation of the PBC or the ECP results, even though NPI Licensing Condition is met. On the other hand, if the NPI does not lower as in (45), NPI Licensing Condition is not met.¹⁰

(45) [_{AGRsP} [anybody]₁] [_{TP} [_{NegP} [_{Neg'} not [_{AGRoP} [_{VP} amuse t₁] John]]]]

3.4. Scrambling

In the previous section, I showed that the contrast between the sentences containing embedded NPIs and those containing non-embedded NPIs follows from the interaction between the Checking Theory and lowering movement, just as the contrast between the sentences containing embedded

⁹ Alternatively, *t* of *anybody* is lowered to the base-generated position and *anybody* moves from there to the spec of NegP.

(i) [_{AGRsP} pictures₂ [_{TP} [_{NegP} [anybody]₁] [_{NegP'} not [_{AGRoP} [_{VP} amuse [t₂ of t₁] the visitor]]]]

In the case of (43), a question might arise whether the Neg-feature of *anybody* can be percolated to [t of *anybody*]. The grammaticality of the sentence *John didn't believe that pictures of anybody amused John* suggests that it is the case. If it is not the case, the sentence would be ruled out, due to the subject condition effects, caused by the movement of *anybody* to a spec of NegP at LF (or to a spec of Neg Comp in the sense of Laka (1990)).

¹⁰ If t₁ moves to the spec of NegP as in (i), NPI Licensing Condition is met, with t₁ satisfying the Neg-feature checking requirement.

(i) [_{AGRsP} [anybody]₁] [_{TP} [_{NegP} t₁] [_{NegP'} not [_{AGRoP} [_{VP} amuse t' ₁] John]]]]

However, the representation is still out, since (*anybody* t₁, t' ₁) forms an improper chain, which is ruled out by Condition C, with a variable t' ₁ A-bound (see Lee 1992, Kawashima & Kitahara 1992). The derivation, where *anybody* moves to a spec of AGRs through a spec of NegP, also forms an improper chain, even though the derivation itself will be blocked in consideration of the Procrastinate Principle: movement to AGRs is forced at SS, due to strong features of T but movement to NegP is not. So, movement to NegP will not occur until LF.

anaphors and those containing non-embedded anaphors does. In scrambling languages such as Korean/Japanese, scrambled anaphors and NPIs which are not c-commanded by their antecedents and by negation, respectively, are licensed, even when they are not embedded. I argue that this fact also follows from the interaction between the Checking Theory and lowering movement.

Consider the sentences in (46–49).

(46) *caki-casin₁-ul Mary-ka [_{IP} John₁-i t₁ miwoehanta-ko] mitnun_{ta}*
 self-Acc. M.-Nom. J.-Nom. hate-Comp believes
 ‘Self₁, Mary believes that John₁ hates t₁.’

(47) *caki-casin₁-ul John₁-i t₁ miwoehanta*
 self-Acc. J.-Nom. hate
 ‘Self₁, John₁ hates t₁.’

(48) *amwukesto₁ Mary-ka [_{IP} John-i t₁ ani sassta-ko] mitnun_{ta}*
 anything M.-Nom. J.-Nom. not bought-Comp believes
 ‘anything, Mary believes that John did not buy t.’

(49) *amwukesto₁ John-i t₁ ani sassta*
 anything J.-Nom. not bought
 ‘anything, John did not buy t.’

In (46–47), non-embedded anaphors are scrambled to the sentence initial position. If they remain in that position at LF, a violation of Condition A would result, since anaphors are not c-commanded by their antecedents. However, since scrambled phrases do not participate in checking, scrambled non-embedded anaphors in (46–47) can be freely lowered, without leaving traces. Then, Condition A can be satisfied, with anaphors in the base-generated position c-commanded by their antecedents. In (48–49), non-embedded NPIs are scrambled to the sentence initial position. If they remain in that position at LF, the NPIs are not licensed. However, scrambled non-embedded NPIs can be freely lowered, without leaving traces, which are not required to be present by the Checking Theory. Then, NPI Licensing Condition can be satisfied, with NPIs in a spec of NegP and Neg head checking each other’s Neg-features.

In this sub-section, I showed that the c-command restriction on anaphors/NPIs fails in the case of scrambled phrases, since scrambled phrases, i.e.,

non-checking phrases, can be freely lowered at LF. My analysis is in line with Saito (1989, 1992a), who, in consideration of the PBC, argues that scrambling can be freely undone at LF.

4. Speculations on Constructions of A'-Movement

4.1. Forced Reconstruction Movement of Non-Checking Phrases

In section 3.2., I argued that reconstruction movement is optional in constructions of A-movement. Hence, the grammaticality of the examples of Condition B/C type anti-RECONSTRUCTION effects as well as Condition A type RECONSTRUCTION effects. However, remember that constructions of A'-movement show only RECONSTRUCTION effects, but not anti-RECONSTRUCTION effects, as far as Conditions B/C are concerned.

- (1) *Him_i, John_i likes t_i.
 (3) *Which pictures of John_i does he_i like t?

The facts in (1)/(3) will be explained if, in A'-movement constructions, the dislocated phrases are not just allowed but forced to lower. I conjecture that this obligatoriness of lowering movement also reflects the Checking Theory. The operator-checking requirement that all and only operators check operator-features in the spec of wh-Comp, forces the non-operator phrase *t pictures of John* to lower in (3). After lowering movement, Condition C is violated in (3). Likewise, suppose that a Topic operator is in the spec of DP [_{DP} O_P him]. In accord with the operator-checking requirement, the Topic operator remains in the spec of TopP and [_{DP} t him] is lowered. Condition B is violated.

The apparent crossover effects (Chomsky 1976, Clark 1992) are also explained if non-operator-feature-checking phrases are forced to lower.

- (50) *To whom_i did he_i give book.
 (51) *Whose_i mother does he_i love.
 (52) *With whose_i friends does he_i talk.

Although these examples have the character of a crossover violation, the wh-operator does not c-command the pronoun, nor does the pronoun c-command a variable left by movement of the operator. In accord with the

operator-checking requirement above, lowering movement will take place as in (53–55).

(53) [_{CP} whom₁ [_{AGRS_P} he₁ [_{TP} [_{AGRo_P} the book [_{VP} give to t₁]]]]]]

(54) [_{CP} whose₁ [_{AGRS_P} he₁ [_{TP} [_{AGRo_P} t₁ mother [_{VP} love]]]]

(55) [_{CP} whose₁ [_{AGRS_P} he₁ [_{TP} [_{AGRo_P} [_{VP} talk with t₁ friends]]]]

The representations (53–55) are ruled out by Condition C, with the pronouns in subject positions A-binding the variables left by movement of *whom/whose*.¹¹

4.2. Preferred Lowering of Non-Checking Phrases

Even though Condition B/C type RECONSTRUCTION effects and the apparent crossover effects suggest that lowering movement is forced in constructions of A'-movement, the ambiguity of (56), where *himself* may take either *John* or *Bill* as antecedent, seems to indicate that lowering movement in constructions of A'-movement is optional as far as Condition A is concerned.

(56) John₂ wondered [which picture of himself_{1/2}] [Bill₁ saw t]

(57) *John wondered [which picture of him₁] [Bill₁ took t]

¹¹ My argument that lowering movement in constructions of A'-movement is forced, faces a difficulty with respect to the PBC. Saito (1989, 1992) argues that reconstruction of wh-movement/topicalization constructions must not occur, considering the PBC.

(i) ?Who₁ do you wonder [[which picture of t₁]₂ [John likes t₂]]

(ii) *[Which picture of t₂]₁ do you wonder [who₂ [John likes t₁]]

In (i), *who*, although somewhat marginally, can be extracted out of another wh-phrase in a CP spec position. In (ii), *who* is extracted out of the wh-phrase in the matrix CP spec position and move to the embedded CP spec position. The contrast, Saito (1989, 1992) argues, follows from the PBC. Now, suppose that reconstruction of a wh-phrase occurs as in (iii).

(iii) Which₁ do you wonder who₂ John likes [t₁ picture of t₂]

There will be no violation of the PBC in (iii).

I suggest that the contrast between (i) and (ii) still follows from the PBC, if the PBC is a condition on derivation (the Generalized PBC, in Lasnik and Saito (1992)), even if reconstruction of A'-moved phrases is allowed (forced in my terms).

(58) *John wondered [which picture of Tom₁] [he₁ liked t]

Furthermore, the contrast between (56) and (57–58), where *him/Tom* cannot take *Bill/he* as an antecedent, respectively, indicates that there is still an asymmetry between Condition A and other Conditions in constructions of A'–movement, even though I eliminated an asymmetry in the application level (anywhere vs SS) of Condition A and Conditions B/C in A–movement constructions.

I temporarily, following Chomsky (1992), assume that the seeming optionality of lowering movement in (56) follows from LF anaphor movement, which distinguishes Condition A from Conditions B/C.¹² Suppose that lowering movement takes place before anaphor movement as in (59).

(59) [_{CP} John₂ wondered [_{CP} which₃ [_{IP} Bill₁ saw [_{AGROp} t₃ picture of himself]]]]

In this case, due to the locality condition on the chain(self, t), the anaphor will move to *Bill* but not to *John*. The lowered version (59) gives a reading where *himself* takes *Bill* as an antecedent. On the other hand, suppose that the anaphor in (56) moves before lowering movement takes place as in (60).

(60) John₂ self–wondered [which picture of t_{self}]₃ [Bill₁ saw t₃]

The locality condition on the chain (self, t) will block lowering of *picture of t* as in (61).

(61) John₂ self–wondered [which] [Bill₁ saw [picture of t_{self}]]

That is, I assume that the operator–feature checking requirement in the previous section is a preference principle in the sense of Chomsky (1992). All, and only, operators must check operator–features in a operator–spec position, if it is possible. This preference principle forces non–operator–feature checking phrases to lower, in the cases of (59), the Condition B/C type RECONSTRUCTION effects, the apparent crossover effects. On the other hand, this preference principle is overridden by the locality condition on chains in the case of (60). The preference principle is inapplicable since

¹² See Chomsky (1992) for discussion of this, under the copy theory of movement.

only the non-preferred case converges and I have the non-lowered version with a reading where *himself* takes *John* as an antecedent.

Note that even though I assume LF anaphor movement and thus I admit that there is an asymmetry between Condition A and Conditions B/C, I still keep the idea that Condition A as well as Condition B/C is an interface LF condition, i.e, the idea argued in the previous sections during discussion of A-movement constructions. Data of *wh*-in-situ and quantifier raising might indicate that Conditions A/C cannot be LF conditions (Chomsky 1981, Barss 1986).

- (62) *John_i thinks that Mary likes every picture of himself_i.
- (63) *John_i wonders who t showed which picture of himself_i to Susan.
- (64) *He_i likes everyone that John_i knows.
- (65) John_i thinks that every picture of himself_i, Mary likes t.
- (66) John_i wonders which picture of himself_i Mary showed t to Susan.
- (67) Everyone that John_i knows, he_i likes t.

The examples in (62–64) will have the same configurations as those in (65–67) after *wh*-movement and quantifier raising at LF. If Conditions A/C are LF conditions, (62–64) will be ambiguous, just as (65–67) are. I temporarily assume with Chomsky (1992) and Lasnik (class lectures) that at LF, *wh*-in-situ and/or quantifier phrases do not undergo *wh*-movement and/or quantifier raising.

5. Summary and Conclusion

In this paper I argued that the difference between Condition A type RECONSTRUCTION effects and Conditions B/C type RECONSTRUCTION effects in constructions of A-movement, follows from the interaction between the Checking Theory and lowering movement at LF, without positing an asymmetry in the application level of Condition A and Conditions B/C. I also showed that the difference between non-embedded NPIs and embedded NPIs also follows from the interaction between the Checking Theory and lowering movement at LF. Our analysis, if it is correct, gives a supporting evidence to the claim (68).

- (68) Conditions of interpretation uniformly apply only at the interface level LF (Chomsky 1992).

I speculated that RECONSTRUCTION effects in constructions of A'-movement also follow from the interaction between the Checking Theory and lowering movement at LF. I conjecture that the difference between Condition A type RECONSTRUCTION effects and Condition B/C type RECONSTRUCTION effects in constructions of A'-movement, follows from LF anaphor movement, still maintaining the claim (68). More research on constructions of A'-movement is in order in the future.

References

- Barss, A. (1984) 'Chain Binding,' ms., MIT, Cambridge, Massachusetts.
- Barss, A. (1986) 'Chains and Anaphoric Dependence: On Reconstruction and Its Implications,' Doctoral Dissertation, MIT.
- Belletti, A. and L. Rizzi (1988) 'Psych-Verbs and θ -Theory,' *Natural Language and Linguistic Theory* 6.
- Bickerton, D. (1986) 'Binding Parameters and Argument Structure,' ms., University of Hawaii at Manoa.
- Chomsky, N. (1976) 'Conditions of Rules of Grammar,' *Linguistic Analysis* 2, 303-351.
- Chomsky, N. (1981) *Lectures on Government and Binding*, Foris, Dordrecht.
- Chomsky, N. (1992) 'A Minimalist Program for Linguistic Theory,' ms., MIT.
- Chomsky, N. and H. Lasnik (1991) 'Principles and Parameter Theory,' to appear in J. Jacobs, A. van Stechow, W. Sternefeld, and T. Vennemann eds., *Syntax: An International Handbook of Contemporary Research*, Walter de Gruyter, Berlin.
- Clark, R. (1992) 'Scope Assignment and Modification,' *Linguistic Inquiry* 23, 1-28.
- Deprez, V. (1990) 'On the Typology of Syntactic Positions and the Nature of Chains: Move-Alpha to the Specifier of Functional Projections,' Doctoral Dissertation, MIT, Cambridge, Massachusetts.
- Fukui, (1993) 'Parameters and Optionality,' *Linguistic Inquiry* 24, 399-420.
- Gueron, J. (1984) 'Topicalization Structures and Constraints on Coreference,' *Lingua* 63, 139-174.

- Kawashima, R. and H. Kitahara (1992) 'Licensing of Negative Polarity Items and Checking Theory: A Comparative Study of English and Japanese,' to appear in *FLSM* 3.
- Klima, E. (1964) 'Negation in English' in *the Structure of Language*, Englewood Cliffs, NJ.
- Laka, I. (1990) 'Negation in Syntax: On the Nature of Functional Categories and Projections,' Doctoral Dissertation, MIT.
- Langendoen, T. and E. Battistella (1982) 'The Interpretation of Predicate Reflexive and Reciprocal Expressions in English,' *Nels* 12, 163–173.
- Lasnik and Saito (1992) *Move-alpha*. MIT Press, Cambridge, Massachusetts.
- Lebeaux, D. (1988) 'Language Acquisition and the Form of the Grammar,' Doctoral Dissertation, Univ. of Massachusetts at Amherst.
- Lee, E. J. (1992) 'On the Extended Projection Principle,' Doctoral Dissertation, Univ. of Connecticut.
- Lee, K. R. (1992) 'NPI Licensing and the Nature of Neg Projection,' ms., Univ. of Connecticut.
- Mahajan, A. (1990) 'LF Conditions on Negative Polarity Licensing,' *Lingua*, 80.4, 333–348.
- Postal, P. (1971) *Crossover Phenomena*, Holt, Rinehart, and Winston, New York.
- Progovac, L. (1988) 'A Binding Approach to Polarity Sensitivity,' Doctoral Dissertation, UCLA.
- Reinhart, T. (1976) 'The Syntactic Domain of Anaphora,' Doctoral Dissertation, MIT, Cambridge, Massachusetts.
- Reinhart, T. (1983) *Anaphora and Semantic Interpretation*, Croom Helm, London.
- Riemsdijk, H. van and E. Williams (1981) 'NP-Structure,' *The Linguistic Review* 1, 171–217.
- Saito, M. (1989a) 'Scrambling as Semantically Vacuous A'-Movement,' *Alternative Conceptions of Phrase Structure*.
- Saito, M. (1989b) 'Extraposition and Parasitic Gaps,' *Interdisciplinary Approaches to Language: Essays in Honor of S. Y. Kuroda*, Kluwer Academic Publishers, Dordrecht.
- Saito, M. (1992) 'Long Distance Scrambling in Japanese,' *Journal of East Asian Linguistics*. Vol. 1.

Uriagereka, J. (1988) 'On Government,' Doctoral Dissertation, Univ. of Connecticut at Storrs.

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