

A CASE STUDY OF WIDE SCOPE QUANTIFICATION IN ENGLISH: TOWARD A PROPER TREATMENT*

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1 INTRODUCTION

Since its introduction into W.V.O. Quine's pioneering work "Word and Object" (1960), the proper treatment of *any*, a prototypical case of wide scope quantification in the syntax and semantics of English, has been a matter of much dispute among linguists and philosophers, focusing in particular on the issue of how to LICENSE *any* properly as a putative instance of negative polarity items (NPIs) in English. The long-standing discussions over the last few decades have produced a great number of papers concerned primarily with this issue (Klima 1964; Baker 1970; Jackendoff 1969, 1972; Lasnik 1972; Kroch 1974; Fauconnier 1975; Ladusaw 1979, 1980; Linebarger 1980, 1987; Laka 1989, 1990; Mahajan 1990; among many others).

* This paper is a revised and expanded version of part of my paper read at the workshop entitled "Extraction and Specificity" in the Ninth National Conference of the English Linguistic Society of Japan, held at Doshisha University in November 23, 1991. I would like to thank the participants of the workshop, especially Takashi Imai, Jan Koster, and Atsuro Tsubomoto for helpful comments and suggestions. My thanks also go to Steve Clark for correcting stylistic errors. Needless to say, all remaining errors are solely mine.

The purpose of this paper is, then, to investigate two major analyses of *any*, one introducing the notion of *c-command* as a condition for licensing it and the other treating it as proper names, and to argue that neither analysis suffices to account for all distributional properties of *any*. In the course of discussion, a new treatment of *any* will be suggested, contrary to the traditionally held view.

2 THREE ESSENTIAL PROPERTIES OF ANY

Any adequate theory of this construction must at least explain a certain number of its essential properties, i.e. must answer the following questions:

First, there is, in English, a significant asymmetry between the subject NPI *any* and the object NPI *any* with respect to *not*, as in (1):

- (1) a. John doesn't love anyone.
 b. *Anyone doesn't love John.

However, no such asymmetry arises concerning universal quantifiers like *every*, as in (2):

- (2) a. John doesn't love everyone.
 b. Everyone doesn't love John.

Why is *any* restricted in the way it is? What is it that constrains the occurrence of *any* in its interaction with *not*?¹

¹ The first property is of great import in that it seems to pose a serious problem to Linebarger's (1980) analysis of NPI licensing, as noted by Safir (1985).

Second, *any* contrasts with *every* in that *any* must always have wide scope with respect to *not*, while *every* must be interpreted as having narrower scope than *not*, as shown in (3a)–(4a) vs. (3b)–(4b), whose LF representations are roughly given, as the output of the so-called Quantifier Raising (QR) proposed by May (1977, 1985), in (5a)–(6a) vs. (5b)–(6b), respectively:

- (3) a. No one loves anyone.
 b. No one loves everyone.
 (Aoun, Hornstein, and Sportiche 1981: 85)

- (4) a. John didn't believe that anyone had left.
 b. John didn't believe that everyone had left.
 (May 1977: 176)

- (5) a. $[_{IP} \text{ anyone}_j [_{IP} \text{ no one}_i [x_i \text{ loves } x_j]]]$
 b. $[_{IP} \text{ no one}_i [_{IP} \text{ everyone}_j [x_i \text{ loves } x_j]]]$

- (6) a. $[_{IP} \text{ anyone}_j [_{IP} \text{ John didn't believe that } [x_j \text{ had left}]]]$
 b. $[_{IP} \text{ John didn't believe that } [_{IP} \text{ everyone}_j [x_j \text{ had left}]]]$

This set of facts raises the following questions: Why is it that *any* is treated as an instance of universal quantifiers taking wide scope (cf. Quine 1960)? Why does it behave differently from *every*-type universal quantifiers?

Third, and most importantly, why does it seem that the relation holding between *any* and *not* obeys the Specificity Constraint (viz. 7a, b), the Complex NP Constraint (viz. 8a, b), and the *Wh*-island Constraint (viz. 9a, b)?

- (7) a. John didn't see pictures of any of the children.
 b. *John didn't see Mary's pictures of any of the children.
 (Brame 1981)

- (8) a. ?*We can't find books that have any missing pages.
 b. **We can't find the books that have any missing pages.
 (Chomsky 1977, May 1985)

- (9) a. ?I don't remember who bought anything.
 b. ?*I don't remember what anybody bought.
 (Stowell p. c.)

To the best of my knowledge, no unified explanation for the three properties of *any* above, I hold, has been provided yet in a principled fashion. A careful examination of these essential properties and other relevant facts in what follows would demand a new treatment of *any*, arguing against two major analyses, one introducing the notion of *c-command* as a condition for licensing *any* and the other treating *any* as proper names.

3 A CRITIQUE OF THE C-COMMAND REQUIREMENT ACCOUNT

3.1 *Any* and C-Command

This section is concerned primarily with the first property above, namely why English *not* licenses object NPIs, but not subject NPIs. As a possible approach to this question, the notion of *c-command* is *prima facie* relevant to an explanation of the contrast between (1a) and (1b), as in the following:

(10) An NPI *any* must be licensed by its c-commanding licenser *not* at some level of representation.²

(10) requires that in order for *any* to be licensed by *not*, the former must be c-commanded by the latter. For ease of exposition, I will use the term ASSOCIATION to state that:

(11) An NPI X can be associated with a licenser Y only if Y c-commands X; hence X is licensed by Y.

Thus, (1a) is ruled grammatical because *anyone* is c-commanded by *not*, which means that the former can be associated with the latter; hence *anyone* is licensed by *not*. On the other hand, (1b) is ruled ungrammatical because *anyone* is not c-commanded by *not*, which means that the former cannot be associated with the latter; hence *anyone* is not licensed by *not*, as predicted by (10).

It must be understood that the *c-command requirement*, as stated in (10), holds (at least) at S-structure. To put it differently, if *any* must be c-commanded by *not* at D-structure (rather than S-structure)—if *any* must be associated with *not* at this level, then the contrast between (12a, b) and (12c, d) would

² Among those who essentially took this position are Klima (1964), Baker (1970), Lasnik (1972), Jackendoff (1972), among others, although they define the notion of *c-command* in a different way. Klima's notion of *in construction with* (rather than *c-command*) is defined in terms of "first branching node", while the notion of *command* assumed in Lasnik (1972) and Jackendoff (1972) is defined in terms of "minimal S-node". Alternatively, we may assume the definition of the relevant notion of *c-command* as follows:

- (i) α c-commands β iff α does not dominate β and every γ that dominates α dominates β .

Where γ may be viewed as "any branching category" (cf. Reinhart 1976) or as a "maximal projection" (cf. Chomsky 1986b).

not follow, whatever derivational process may be involved in (12) below:

- (12) a. I couldn't solve any of the problems.
 b. Not any of the problems could I solve.
 c. *Any of the problems I couldn't solve.
 d. *Any of the problems could not be solved.

(Lasnik 1972: chapter 2)

Another piece of evidence suggesting that *any* must be licensed by *not* in its c-command domain comes from an examination of such complex sentences as (13) and (14):

- (13) a. They didn't think that writers would accept any suggestions.
 b. They don't think that any rain fell anywhere else.

(Klima 1964)

- (14) a. I don't think that you believe that John loves anyone.
 b. I don't think that you believe that anyone loves John.

In each case, insofar as *anyone* is c-commanded at S-structure by *not*, the former in the lower (lowest) clause can be associated with the latter in the matrix (topmost) clause without incurring ungrammaticality, regardless of whether it occurs in the subject or object position (i.e. 13 and 14 vs. 1a, b); hence the licensing of *any* by *not*. This in effect amounts to saying that *anyone* can be interpreted as taking wide scope across the clause boundary, insofar as *c-command requirement* (10) is met.

However, there is an apparent case to the contrary that might arise in connection with (10). Compare (15a) with (15b):

- (15) a. Fathers [of few children] have any fun.
 b. *Fathers [with few children] have any fun.

(Jackendoff 1977: 60)

In neither (15a) nor (15b) is there any *c-command* relation between *any* and *few* (as its potential licenser) at S-structure, which in turn predicts that both (15a) and (15b) should be ruled out. But interestingly enough, only in (15a), in contrast to (15b), can *any* be licensed by *few*. This implies that *c-command requirement* (10) must be so revised as to capture the (15a)–(15b) contrast. Notice, in this connection, that (15a) differs from (15b) only in that the bracketed postnominal phrase in (15a) is the complement NP (\neq PP) of the head N *fathers*, but that in (15b) is the adjunct PP. (I assume that *of* in (15a), unlike *with* in (15b), is viewed as a Case-marking affix, not as a preposition, on the following NP.) Since (15a) contains QPs such as the complement $[_{NP} \text{ (of) few children}]$, but (15b) QPs such as the adjunct $[_{PP} \text{ with few children}]$, a natural candidate that can draw the desired distinction between (15a) and (15b) would be to assume that these QPs must undergo QR at LF which adjoins them to an IP node (see May 1977). Thus, the application of this rule would map (15a, b) into the LF representations (16a, b), respectively:

- (16) a. $[_{IP} [_{NP_i} \text{ few children}] [_{IP} [_{NP} \text{ fathers (of) } t_i] \text{ have any fun}]]]$
 b. $[_{IP} [_{PP_i} \text{ with } [_{NP} \text{ few children}]] [_{IP} [_{NP} [_{N'} \text{ fathers}] t_i] \text{ have any fun}]]]$

In (16a), the minimal maximal projection containing *few* is the

IP-adjoined NP [*few children*] and this NP c-commands and so licenses *any*, while that in (16b) is the PP-internal NP and this NP fails to c-command and license *any*; hence the (15a)–(15b) contrast (cf. Aoun and Sportiche 1983). This consideration may lead them to suggest a slight revision of *c-command requirement* (10), as in (17):

- (17) An NPI *any* must be licensed by its c-commanding licenser *not* at LF as well as S-structure.³

In the remainder of this section, I will argue that the alleged *c-command requirement* as a licensing condition is by no means sufficient to account for the full range of relevant data.

3.2 *Any* and Island Constraints

3.2.1 *Any* and the specificity constraint

First of all, observe the following pairs of sentences:

- (18) a. John didn't see [pictures] of any of the children.
 b. *John didn't see [Mary's pictures] of any of the children.
- (19) a. John doesn't think that [pictures] of anyone will be on sale.
 b. *John doesn't think that [Mary's pictures] of anyone will be on sale.

(Brame 1981: section 10)

A question arises immediately with respect to whether *any* is to be licensed by *not*: Why do (18a)–(19a) behave differently from

³ See Safir (1985) and Mahajan (1990) for relevant discussion.

(18b)–(19b), even though the revised *c-command requirement* (17) is satisfied in both (18) and (19)? To put it another way, why is it that (18b)–(19b), in contrast to (18a)–(19a), are rendered ill-formed in the reading in which *any* has wide scope associated with *not*, as in (20a)–(20b), respectively?⁴

- (20) a. There were none of the children whose pictures by John I saw.
 b. There is no one whose pictures by Mary John thinks that will be on sale.

Notice that the salient distinction drawn between (18a)–(19a) and (18b)–(19b) correlates with the presence or absence of prenominal genitive NPs, as the bracketed NPs indicate. If the prenominal genitive NP intervenes between *not* and *any*, as in (18b)–(19b), the association between them is then blocked; hence the latter is not licensed by the former.⁵ However, if no such NP, as in (18a)–(19a), intervenes inbetween, then the association between *not* and *any* is not blocked; hence the latter is licensed by the former. We can now attribute the desired distinction above to the following descriptive generalization:

⁴ Brame (1981) observes that it is impossible for (19a, b) to have a reading in which *any* can have narrow scope restricted to the embedded clause, as the unacceptability of (19b) demonstrates. For a different view, see Linebarger (1980).

⁵ Note, in this regard, that (18b)–(19b) are not acceptable only if the prenominal genitive NP is interpreted as a Possessor, but not as an Agent (i.e. as the D-structure subject of DP). In other words, the possessivized DPs are islands with respect to the association between *any* and *not*, which appears to lend empirical support to the DP hypothesis (see Stowell 1989). I am grateful to Atsuro Tsubomoto for drawing my attention to this point.

- (21) *Any* cannot be licensed by *not* in its c-command domain
iff the prenominal genitive NP intervenes inbetween.

In other words, the intervening prenominal genitive NP is opaque to the required association between *any* and *not*, which is reminiscent of the Specificity Constraint (cf. Fiengo and Higginbotham 1981) to the effect that extraction out of [+specific] NPs is prohibited. More generally, if we assume that this intervening NP is analyzed as an instance of [+specific] NPs, (21) can then be replaced by (22) below:

- (22) *Any* cannot be licensed by *not* in its c-command domain
iff the prenominal [+specific] NP intervenes inbetween.

The question I shall address now is the following: Why is it that the particular relation holding between *any* and *not* obeys the Specificity Constraint, as recast in (22)? To sum up, the fact that the (18a)–(19a) vs. (18b)–(19b) distinction observed above obeys constraint (22) does not follow from the alleged *c-command requirement*.

3.2.2 *Any* and the complex NP constraint

We turn next to a close examination of the cases of the Complex NP Constraint, arguing equally against the *c-command requirement* as it stands. This constraint falls into two general types; relative clause constructions and adnominal clause constructions. Let us first consider the case of relative clause constructions, as shown in (23), where the bracketed relative head NP is preceded by a null determiner in (23a), by a definite article in (23b), by a demonstrative NP in (23c), and by a

genitive proper NP in (23d):

- (23) a. ?*We can't find [books] that have any missing pages.
 b. **We can't find [the books] that have any missing pages.
 c. **We can't find [those books] that have any missing pages.
 d. **We can't find [John's books] that have any missing pages.

(Chomsky 1977: 117, May 1985: 145)

Tim Stowell (personal communication) pointed out to me that (23a), but not (23b, c, d), has a reading in which *any* can have wide scope associated with *not*, if *any* is focused by dint of its contrastive stress. According to his insightful observation, (23 a) may have a reading synonymous with (24):

- (24) There are no missing pages such that we can find books that have them.

What this in fact means is that (23a) differs significantly from (23b, c, d) as to the wide scope interpretation of *any* (i.e. the possibility of associating *any* with *not*), in the sense that the former is marginal or bad, but understandable, while the latter are completely impossible, nor do they make any sense.

There are two possible factors that serve to distinguish (23a) from (23b, c, d). One possible factor concerns what we have examined previously, namely the property [\pm specific] of the relative head NP. To be more concrete, the relative head NP that is construed as [+specific]—as in (23b, c, d), but not in (23 a)—prevents *any* from having wide scope, as predicted by (22),

which in turn suggests that the intervening [+specific] relative head blocks the required association between *any* and *not*, so that *any* can never be licensed by *not*; hence the impossibility of (23b, c, d).

In order to derive the marginal status of (23a) (vis-à-vis 23b, c, d), we need to appeal to the other factor having to do with the property [\pm referential] of the postnominal relative clause CP that is an adjunct. The adjunct CP, being [+referential] in the sense of Stowell (1989), has in general the effect of creating an opaque domain with regard to quantifier scope interpretation (cf. Ross 1967; Rodman 1976; Cooper 1979; and many others). This is, in our terms, tantamount to saying that the [+referential] property of an adjunct CP is also opaque to the association between *any* and *not*, so that *any* cannot be licensed by *not* across the [+referential] CP boundary, as generalized in (25):

- (25) *Any* cannot be licensed by *not* in its c-command domain iff the postnominal [+referential] CP intervenes in-between.

This descriptive generalization, together with (22), permits us to predict the difference between (23a) and (23b, c, d) as follows: (i) The [+specific] relative head NP, followed by the [+referential] CP, conspires to render completely impossible for *any* to have wide scope, as in (23b, c, d), and thus strongly blocks the association of *any* with *not*; and (ii) the [-specific] relative head NP, followed by the [+referential] CP, renders difficult for *any* to have wide scope, as in (23a), and thus weakly blocks the required association of *any* with *not*.

Similarly, this line of consideration holds true for the cases of adnominal clause constructions, in which (26) involves “nonfactive” CPs, but (27) “factive” CPs. (The following judgments are according to Tim Stowell.)

- (26) a. I didn't believe that she would eat anything for lunch.
 b. ?*I didn't believe [the claim] that she would eat anything for lunch.
 c. *I didn't believe [that claim] that she would eat anything for lunch.
 d. *I didn't believe [John's claim] that she would eat anything for lunch.
- (27) a. ??I didn't regret that anyone failed the exam.
 b. ?*I didn't regret [the decision] that anyone failed the exam.
 c. *I didn't regret [that decision] that anyone failed the exam.
 d. *I didn't regret [John's decision] that anyone failed the exam.

As in the case of relative clause constructions, the [+specific] property of the bracketed nominal head NP has the opacity-inducing effect of uniformly blocking the required association between *any* and *not*, as in (26b, c, d) and (27b, c, d), irrespective of whether *any* occurs inside nonfactive or factive CPs. However, it is not entirely clear in this context why (26b)–(27b) are somewhat better than (26c, d)–(27c, d), despite the fact that the nominal head, which is preceded by a definite article, should

equally be construed as [+specific]. I suspect then that the subtle difference in relative acceptability between them may stem from the varying degrees of specificity strength of a nominal head, so that the nominal head, which is preceded by a demonstrative NP in (26c)–(27c) and by a genitive NP in (26d)–(27d), is more [+specific] than that in (26b)–(27b). This suggests that the (26b)–(27b) vs. (26c, d)–(27c, d) distinction may be expected if we assume that the more [+specific] the nominal head becomes, the sufficiently stronger it becomes to block the association between *any* and *not*.

What remains to be accounted for is why (26a) is impeccable, but (27a) is marginal. What counts at this stage of exposition is to distinguish nonfactive CPs from factive CPs. According to Stowell (1989), factive CPs in (27)—unlike nonfactive CPs in (26), but like adjunct CPs in (23)—are construed as [+referential]. Unlike adjunct CPs, however, factive CPs, though [+referential], are not strong enough to block the association of *any* with *not*, as the marginality of (27a) (vis-à-vis 26a) demonstrates. Why should this be? It seems fairly plausible to suppose that the [+referential] property of factive CPs, as distinct from the [–referential] property of nonfactive CPs, still contributes to the inducement of some opaque domain *implicitly* construed as [+specific], as shown in (28):

- (28) I didn't regret ([_{NP} *the fact*]) that anyone failed the exam.
(cf. 27b)

The marginal status of (27a) may safely be achieved if we assume the *implicitly* intervening presence of the [+specific] nominal head NP that is (to some degree) opaque to the

association between *any* and *not*.

Crucially again, that the particular relation holding between *any* and *not*, namely the required association between them, obeys the Complex NP Constraint, as stated in (25), does not follow from *c-command requirement* (17) at issue.

3.2.3 *Any* and the *wh*-island constraint

Last of all, I will discuss how *any* in its association with *not* interacts with the so-called *wh*-island effects, casting doubt on the status of the alleged *c-command requirement* as a licensing condition. Observe the following contrasting pairs of examples.⁶

- (29) a. ?I don't remember who bought anything.
 b. ?*I don't remember what anybody bought.

(Stowell p. c.)

It should be observed that there arises a subject/object asymmetry as to whether *any* can have wide scope associated with *not*. (Note here that this asymmetry is not attributable to a violation of the Empty Category Principle (ECP) resulting from syntactic *wh*-movement.) More specifically, the wide scope reading of *any* inside a *wh*-island depends on whether it

⁶ In the case of (29b), at least, there seems to be some variation in judgment among native speakers to the extent that (29b) is not so marginal, but is virtually as acceptable as (29a) (cf. Keenan 1990). Why should this be? I suspect that the cases of the *Wh*-island Constraint typically involve less severe violations than those of the Specificity Constraint and the Complex NP Constraint (cf. Chomsky 1986b). In fact, some languages never show *wh*-island violations at all. For instance, in French, extraction out of *wh*-islands that are infinitives is allowed (cf. Sportiche 1990: class lecture). In any case, although judgments may be subtle, there is indeed a real contrast in relative acceptability between (29a) and (29b), as indicated.

occurs in the subject or object position. If *any* occurs in the object position, as in (29a), it can have wide scope; hence the acceptability of (29a). However, if *any* occurs in the subject position, as in (29b), it cannot have wide scope; hence the virtual unacceptability of (29b). In our terms, this observation can be restated as follows: The required association between *any* and *not* is only available when a *wh*-subject intervenes inbetween, as in (29a), while this association is not available when a *wh*-object intervenes inbetween, as in (29b).

Furthermore, the wide scope interpretation of *any* is not available either, when an adjunct *wh*-phrase intervenes between *not* and *any* below:

- (30) a. ?*John doesn't know when any student left.
 b. ?*John doesn't know why any student left.

(Stowell p. c.)

In other words, the intervening presence of a *wh*-adjunct blocks the association between *any* and *not* in a fashion parallel to a *wh*-object in (29b).

The above discussion suggests that the difference in relative acceptability between (29a), on the one hand, and (29b)–(30a, b), on the other, would follow if we assume that:

- (31) *Any* cannot be licensed by *not* in its c-command domain
 iff the *wh*-nonsubject intervenes inbetween.

The question, then, becomes why the particular relation that holds between *any* and *not* also obeys the *Wh*-island Constraint, as stated in (31), whose fact constitutes further evidence

against the status of the alleged *c-command requirement* as a licensing condition.⁷

4 A CRITIQUE OF THE WIDELY HELD ANALYSIS

4.1 *Any* as Names

Let us next consider how *any* has been handled in what has widely been assumed in the Government and Binding (GB) literature with special reference to the second property of *any* characterized above.

Chomsky (1981), Aoun, Hornstein, and Sportiche (1981), Hornstein (1984), and Aoun and Hornstein (1985), among others, have claimed that *any*, unlike *every*, is treated on a par with proper names. One consequence of this is that *any* does not undergo QR as proposed by May (op. cit.), nor obey the ECP. Assuming that *any* is standardly treated as an instance of universal quantifiers taking wide scope and that the wide scope property of *any* is captured by QR, we would then derive the relevant LF representation (32b) corresponding to (32a):

- (32) a. John does not believe that anyone likes bagels.
 b. [_{IP} anyone_j [_{IP} John does not believe that [_{x_j} likes bagels]]]

(Aoun, Hornstein, and Sportiche 1981:83)

⁷ In Ohashi (1990, 1991), I have provided a fuller account of the phenomena under discussion and its implications in a principled fashion, arguing in support of the assumptions that (i) Neg(ation) projects its own maximal projection NegP with the negative morpheme *not* as its head (cf. Pollock 1989, Chomsky 1989); and (ii) LF is the only level of syntactic representation relevant for NPI licensing in English as well as Japanese (cf. Linebarger 1980, 1987).

LF derivation (32b) should involve a violation of the ECP, since x_j is neither lexically governed nor antecedent-governed (i.e. x_j = offending trace). Nonetheless, (32a) is perfectly acceptable. This leads them to the claim that *any*, unlike *every*-type universal QPs, does not undergo QR at LF, so that it does not form an operator/variable configuration at this level.

Another consequence is that like a name, *any* does not exhibit the so-called “weak crossover” (WCO) phenomena. The absence of WCO effects is illustrated by the following examples:

- (33) a. That he_i might be laughed at didn't bother [any clown]_{*i*}.
 b. That he_i might be laughed at didn't bother [John]_{*i*}.
 c. *That he_i might be laughed at didn't bother [every clown]_{*i*}.
 d. *Which picture of his_i mother annoyed [which boy]_{*i*}?
 (Aoun and Hornstein 1985:626)

The fact that *any*—unlike other ordinary QPs or *wh*-operators in (33c, d), but like names in (33b)—can coindex a pronoun without c-commanding it can be explained, they argue, under the assumption that *any* does not undergo QR, since WCO provides a diagnostic test for postulating QR. The crucial point made here is that *any* is claimed to involve no movement even at LF.

4.2 Refutation: Toward a Proper Treatment

I will claim here that this treatment of *any* is not adequate, and argue instead in support of the assumption that *any* must move

at LF, contrary to the widely held view. One such argument concerns the second essential property of *any* to be accounted for: Why is *any* treated as a wide scope universal quantifier? Why is it that *any* is unique in taking only wide scope? If QR is only capable of assigning (wide or narrow) scope over the whole clause (see May op. cit.), and if QR is in no way involved in *any* at LF, then how could one ensure this wide scope property of *any*, as already noted in Aoun, Hornstein, and Sportiche (1981)? This unique property of *any* would not follow naturally if we assume that *any* involves no movement at LF. The crucial assumption that *any* does move at LF seems to provide a more reasonable account for why *any* must have wide scope, giving rise to ECP effects at LF.⁸

A more convincing argument for LF movement of *any* comes from a careful consideration of the third, but crucial property of *any* discussed earlier. Recall that *any* cannot be licensed by *not* in its c-command domain iff (i) the prenominal [+specific] NP, as in (22); (ii) the postnominal [+referential] CP, as in (25); and (iii) the *wh*-nonsubject, as in (31), intervenes inbetween. More precisely, the fact that the particular relation holding between *any* and *not* seems to obey such island constraints would follow as a natural consequence of the requirement that *any* must move at some level (=LF); otherwise we would fail to capture the strong parallelism between the behavior and distribution of *any*, and syntactic *wh*-movement. For example, consider the following:

⁸ For explicit justification for obtaining the desired ECP effects at LF, see Ohashi (1990).

- (34) a. Who did you see [pictures of t]?
 b. *Who did you see [the pictures of t]?
 c. *Who did you see [John's pictures of t]?
 (Chomsky 1977:116)

- (35) a. The man who I gave John [a picture of t] was bald.
 b. ??The man who I gave John [this picture of t] was bald.
 c. *The man who I gave John [Ed's picture of t] was bald.
 (Ross 1967:465)

Strikingly, syntactic *wh*-movement observes the same Specificity Constraint that restricts the distribution of *any*, which strongly suggests that *any* must move at LF in a fashion closely analogous to syntactic *wh*-movement.^{9,10} Thus, we can relate these two arguments in a unified fashion if we maintain the assumption that *any* must move at LF.

⁹ Another piece of evidence suggesting that the distribution of *any* is essentially identical to that of a *wh*-phrase lies in the possibility of triggering topicalization:

- (i) a. Who thinks that I like who.
 b. *Who thinks that who I like.
 (vs. Who thinks that John I like.)
- (ii) a. I don't think that Mary solved any problems.
 b. *I don't think that any problems, Mary solved.
 (vs. Someone thinks that every problem, Mary solved.)
 (Lasnik and Uriagereka 1988:156)

As a matter of fact, a *wh*-phrase cannot undergo topicalization in an embedded clause, nor an *any*-phrase either, which shows that *any* behaves in a fashion syntactically parallel to a *wh*-phrase.

¹⁰ This is in effect tantamount to claiming that there is indeed a cyclic movement at LF, contra Huang (1982) and Lasnik and Saito (1984).

5 CONCLUSION

The arguments advanced in this paper have definitely shown that the alleged *c-command requirement* as a condition for licensing *any* is by no means sufficient to explain the full range of relevant data and the distribution of *any* observed thus far, and that the analysis of treating *any* as (proper) names is furthermore not tenable. Alternatively, I have suggested that *any* must move at LF, simply put, in order for it to be properly licensed by an appropriate licenser like *not*, contrary to the widely held view.

This conclusion, if correct, may lead us to call into question the widely held status of *any* as an instance of existential quantifiers (cf. Fauconnier 1975, Ladusaw 1979, Carlson 1980, etc.) or universal quantifiers (cf. Quine 1960, Lasnik 1972, etc.) in its usual sense, since *any* involves no WCO effects at all, but it does move at LF, I claim, in a fashion parallel to syntactic *wh*-movement, which does run counter to the QR approach advocated by May (1977, 1985). I would like to suggest then that *any* is not treated as an instance of true “quantificational” operators in the spirit of Lasnik and Stowell (1991),¹¹ but as an instance of *anaphoric* operators that form operator/variable structures at LF.¹² Essentially, this approach may lend itself to

¹¹ Lasnik and Stowell (1991) independently argue in favor of the fundamental distinction between true “quantificational” operators and “nonquantificational” anaphoric operators, and suggest that the absence of WCO effects arises only in contexts where the operator is not a true quantifier, but a “nonquantificational” anaphoric operator.

¹² Cf. Ohashi (1991).

a neat solution to this issue, I hold.

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Received 24 December 1991

Revised 10 March 1992

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