Weak Crossover, Scope, and Agreement in a Minimalist Framework*

PIERRE PICA & WILLIAM SNYDER

UQAM & CNRS & Massachusetts Institute of Technology

0. Introduction

The first section of our paper presents a novel theory of weak crossover effects, based entirely on quantifier scope preferences and their consequences for variable binding. The structural notion 'crossover' plays no role. The second section presents a theory of scope preferences, based on assumptions of Chomsky's (1993) minimalist framework. The proposed theory ascribes a central role to the AGR-P system of case-checking.

I. Weak Crossover

I.1. Standard Accounts of WCO: The 'Crossover' Configuration

Since (Postal 1972), weak crossover effects (as in 1) have generally been attributed to a constraint stated in terms of a structural 'crossing' configuration, or similarly in terms of structural notions such as 'leftness' or 'bijection'. A recent formulation is (2), drawn from (Lasnik & Stowell 1991), which is taken to apply at LF after QR.[1]

(1) a. ?? Who$_i$ does his$_i$ mother like t$_i$
    b. ?? His$_i$ mother likes everyone$_i$

(2) In a configuration where a pronoun P and a trace T are both bound by a quantifier Q, T must c-command P. (Lasnik & Stowell 1989)

In this paper we argue *against* accounts of WCO in terms of directionality, bijection, or crossover, including the approach in (2).

I.2. Scope Preferences and Grammaticality

A major goal of this paper is to make the following methodological point: A 'dispreferred' scope reading should not be treated as 'fully grammatical'. The standard argument that variable binding should even be possible in (1b), for example, comes from the possibility of a wide-scope reading of *everyone* in the parallel example (3).

(3) Someone likes everyone

Yet, it is independently acknowledged that in (3) the wide-scope reading for *everyone* is strongly dispreferred, especially by informants who have not received extensive training in formal logic. The standard assumption, which we challenge, is that even 'dispreferred' scope readings are to be treated as 'fully

[1] Lasnik & Stowell take (2) as a descriptive generalization compatible with most of the data in the WCO literature. In the course of their paper, however, they argue that the range of WCO effects in fact observed is more restricted than would be expected under (2), a point to which we shall return.

grammatical'.

I.3. Weak Crossover Effects as a Failure of Variable Binding

We shall now argue that the classical cases of 'WCO' effects should be attributed to a difficulty in variable binding, rather than a constraint of the type in (2). On this view, the classical cases of 'WCO' are 'weak' violations precisely because it is at least marginally possible to obtain wide scope on the QP or *wh*-word at the point of interpretation. To the extent that wide scope is dispreferred in an example such as (1b), however, we take variable binding of the pronoun by the QP to be correspondingly dispreferred.

This is the opposite logic of all the standard accounts. In our view, to the extent that a 'crossover' configuration holds at the point of interpretation, the sentence is in fact grammatical. To the extent that the sentence is ungrammatical, this is because of the difficulty in allowing the QP or *wh*-expression to serve as a binder for the pronoun; in other words, because of the difficulty in *obtaining* the crossover configuration at LF.

The first part of our argument is that the acceptability of a WCO configuration involving a quantified NP is *directly proportional* to the acceptability of a wide-scope reading of the (lower) quantifier in parallel examples involving two quantifiers, as illustrated in (4-8a,b).[2] (Several of these examples are drawn from Barss & Lasnik 1986.)

(4) Double object datives
  a. * John gave someone everything (Wide Scope on *everything*)
  b. * John gave its$_i$ owner every paycheck$_i$
  c. * What$_i$ did John give its$_i$ owner t$_i$
  d. * John gave his$_i$ own master Fido$_i$

---

[2] In (4-8a), we are concerned with the scope preferences obtained with 'neutral' focus, such as focus on the verb or the proper name. While focus is probably present in some form in every sentence, the *parallellism* among the a-d examples under each of (4-8) is our crucial point, and this parallellism should obtain as long as the sentences are all focused in the same way. Although our proposals in the second part of the paper may provide a candidate explanation for the effects of focus on scope, we will not address this issue here. For a broader discussion of the 'complex predicate' constructions employed in (4-8), see also Snyder & Stromswold (in review).

(5) Perceptual reports[3]
  a. * Mary saw someone greet everyone
      (Wide Scope on *everyone*)
  b. * Mary saw his$_i$ host greet everyone$_i$
  c. * Who$_i$ did Mary see his$_i$ host greet
      (contrast, 'Who did Mary see Fred greet')
  d. * Mary saw his$_i$ own host greet Ted$_i$

(6) Monotransitives
  a. ?? Someone likes everyone   (Wide Scope on *everyone*)
  b. ?? His$_i$ mother likes everyone$_i$
  c. ?? Who$_i$ does his$_i$ mother like
  d. ?? His$_i$ own mother likes Ted$_i$

(7) Prepositional datives
  a.   Mary gave something to everyone (Wide Scope on *everyone*)
  b. ? Mary gave his$_i$ paycheck to everyone$_i$
  c. ? To whom$_i$ did Mary give his$_i$ paycheck
  d. ? Mary gave his$_i$ own paycheck to Ted$_i$

(8) *Put*-locatives
  a.   Mary put something on every box (Wide Scope on *every box*)
  b. ? Mary put its$_i$ label on every box$_i$
  c. ? On what box$_i$ did Mary put its$_i$ label
  d. ? Mary put its$_i$ own label on the box$_i$

Many of the judgements in (4-8) vary across English speakers, and for this reason Snyder (1994) has conducted a psycholinguistic investigation on native English-speakers (all of them non-linguists) to evaluate the predicted positive correlation between the relative grammaticality of the a and b sentences for each of double object datives (4), monotransitives (6), and prepositional datives (7). Despite some variability in the relative ranking of the three sentence types across speakers, and despite the difficulty in eliciting judgements of scope preferences, the study found the predicted correlation at a statistically significant level (as indicated in 9).

(9) $r = .490, t(28) = 8.83, p < .006$

---

[3] The same pattern of judgements obtains for corresponding *make*-causatives.

We can extend our analysis in terms of scope preferences to *wh*-words, as demonstrated by the parallel judgements for the (b) and (c) examples in (4-8). Recent work (including Heim 1987, Chierchia 1993, among others) indicates that the traditional notion of 'scope' of a *wh*-word is too simplistic. We will adopt the proposal of Heim 1987 (cf. also Chomsky 1964, pp. 38-40), according to which *wh*-expressions are decomposed into a *wh*-feature and an existential expression, for purposes of interpretation. On this view, the *wh*-feature in a *wh*-question is typically interpreted in SPEC CP, where it indicates that the sentence is to be interpreted as a *wh*-question. The existential component of the *wh*-expression is interpreted in a lower position, where its scope relative to other quantifiers can vary.

We propose that (i) the portion of a *wh*-expression responsible for binding a lower variable is the existential component, and that (ii) the scope preferences affecting the existential component are the same as those affecting a simple quantified NP. (Again, we will discuss a theory of scope preferences in the second part of the paper.) On these assumptions, the judgements in (4-8c) are directly accounted for.[4]

The second part of our argument is that the cases in which a wide-scope reading of the lower quantifier is most fully acceptable are those in which the lower quantifier is contained in a prepositional phrase (e.g. 7a, 8a). Crucially, the parallel WCO

---

[4] In the restrictive relatives of (i) we find the same pattern as for *wh*-questions in (4c), (6c), and (7c). We are led to an analysis of restrictive relatives that is parallel to our account of *wh*-questions. For example, the relative pronoun (or null operator) may be interpreted as bifurcated into a relative-clause marking feature interpreted in C^0/CP, and a pronominal element preferentially interpreted in the same position as a simple quantified NP. Note also that the head noun (*paycheck, person*) of the restrictive relative is not a suitable antecedent for a bound variable pronoun, nor is the NP containing the restrictive relative. This is as expected, if a variable must be bound by a c-commanding maximal projection.

i. 'WCO' effects in restrictive relatives
  a. * No [paycheck which$_i$ Mary gave its$_i$ owner t$_i$] has been found
  b. ?? No [person who$_i$ his$_i$ mother likes t$_i$] is allowed in the support group
      (cf. Postal 1971, among others)
  c. ? No [person to whom$_i$ Mary gave his$_i$ paycheck t$_i$] is allowed ...

configurations are only very mildly ungrammatical in (7-8b,c), much less so than the standard examples of 'WCO' in monotransitives (6b,c).[5] Moreover, the 'residue' of WCO (7-8b,c) is plausibly related to some difficulty in variable binding out of the PP structure.[6] In (7-8c) we take the preposition to undergo LF movement as part of the oblique argument.

Third, the *his own* construction in English, in order to be licensed, must be c-commanded by its antecedent at LF (cf. Fiengo & Higginbotham 1984). As predicted by our account, but not by standard treatments of WCO, the grammaticality of the *his own* construction is directly proportional both to the grammaticality of

---

[5] Lasnik & Stowell (1991) discuss a number of cases where WCO effects are predicted by standard accounts of WCO, yet are absent. Our own approach provides an account for most or all of these cases. For example, lack of WCO effects in topicalization and non-restrictive relatives (i,ii) is predicted on our account (in §II), to the extent that the topic or the head of the relative cannot be interpreted in any trace position lower than the pronoun. Unfortunately, L&S's evidence is confounded by their use of non-quantificational NPs:

i. John$_i$, OP$_i$ his$_i$ mother likes t$_i$ (Guéron 1986:62)
ii. John$_i$, who$_i$ his$_i$ mother likes t$_i$, ... (cf. L&S 1991, and references therein)

Postal (1993), in a reply to L&S, brings up examples of the type in (iii), which he takes to show that true quantified topics do yield WCO effects. As illustrated in (iv-v.b), however, Postal's claim does not hold up in other cases. Indeed, not only do (iv-v.b) seem relatively acceptable, but the contrast in judgements for (iii), with and without coindexing, is not at all clear for us.

iii. Everybody else$_i$, I told his$_i$/*$_i$ wife that I had called t$_i$ (Postal 1993)
iv. a. Anybody else$_i$ would have quit his$_i$ job
    b. Anybody else$_i$, his$_i$ boss would have fired t$_i$
v. a. Everybody else$_i$ likes his$_i$ mother
    b. Everybody else$_i$, his$_i$ mother likes t$_i$

[6] Some support for this view comes from the fact that the equivalents of 7b,c are fully grammatical in French (ia,b) (see also Snyder 1992). Kayne (1975) has argued, on the basis of coordination facts, that *à*-phrases serving as dative arguments are NPs rather than PPs in French. The more general pattern of WCO effects in French, as discussed by Postal (1993), is more complex, however, and remains somewhat mysterious on all currently available accounts.

i. a. Marie a donné sa$_i$ paye à tout le monde$_i$
    'Mary gave his$_i$ check to everyone$_i$'
  b. À qui$_i$ Marie a-t-elle donné sa$_i$ paye?
    'To whom$_i$ has Mary given his$_i$ check?'

the wide-scope reading on the corresponding quantifier example, and to the grammaticality of the corresponding WCO configurations, as illustrated in (4-8d). On the scope theory that we will now present, this parallelism follows from the 'preferred' position of interpretation for an NP. On our account, such preferences extend to definite descriptions as well as to *wh*-expressions and QPs.

II. A minimalist theory of quantifier scope preferences

In this section we present a very simple theory of quantifier scope preferences. The proposals represent work in progress, indeed in its early stages. Given the vastness and complexity of the literature on quantifier scope, we cannot hope to do justice here to the full range of related issues. As will become apparent, our approach relates in potentially interesting ways to recent work by Diesing (1992), Beghelli (1992), and others. Our hope is that these various lines of work will ultimately prove to be mutually compatible. We are especially indebted to Norbert Hornstein for several key suggestions, although the details of our proposals diverge in significant ways from Hornstein's own (1994) scope theory.[7]

II.1. Outline of the theory

In developing a theory of quantifier scope preferences, our starting point has been Chomsky's (1993) proposal that LF reconstruction to an A-position is 'obligatory if syntactically possible'. This has the effect that if 'QR', in the conventional sense of A-bar movement and adjunction at LF, occurs at all, it is effectively 'undone' prior to the point of semantic interpretation. Sportiche (1994) has recently argued, for independent reasons, that adjunction operations should be eliminated from the grammar entirely. If correct, Sportiche's arguments independently lead us to question the conventional view of QR as an LF adjunction operation.

---

[7] Hornstein (1994) has developed a theory that, like ours, is based on interpretation of QPs in the A-positions available under Minimalist assumptions. The major ways in which our work differs from Hornstein's are that we develop a theory of scope *preferences*, we relate WCO effects to scope preferences (as opposed to linking), and we provide a somewhat different treatment of 'complex predicate' constructions, especially double object and prepositional datives.

A major motivation for LF adjunction as the basis of QR in (May 1977) was the need for scopal positions in which to interpret quantificational expressions. If we adopt the AGR-P theory of case-checking and the VP-internal subject hypothesis, however, we introduce as a consequence a number of A-positions that can potentially serve as scopal positions, a possibility exploited, for example, in the system of (Diesing 1992). We will assume here that A-movement, as well as A-bar movement, can trigger predicate abstraction, so that there should be no obstacle to treating the SPEC of an AGR-P as a scopal position.

We will assume a theory of LF reconstruction in terms of the 'copy' theory of traces developed in (Chomsky & Lasnik 1992) and (Chomsky 1993). This assumption will have important consequences for our treatment of scope in VP-ellipsis constructions.

The essential points of our theory of scope preferences are given in (10).

(10) a. The *preferred* syntactic position in which to interpret a DP (quantified or otherwise) is the position in which its Case is checked. (i.e. SPEC AGRsP for subjects, SPEC AGRoP for objects bearing structural accusative Case).

We assume, perhaps controversially, that PP arguments, like DP arguments, must be checked in a VP-external SPEC AGR-P position by LF.

(10) b. Argument PPs are preferentially interpreted in a checking position intermediate between T^0 and VP.

Below we will motivate (10b) on empirical grounds. We assume that the checking position for PP arguments can be generated either immediately above, or immediately below, AGRoP. The final component of our theory is (10c).

(10) c. It is marginally possible to interpret a DP in its theta-position (subject to the requirement of Full Interpretation).

If we assume a restrictive account of quantifier interpretation in which internal object positions of a transitive verb are not scopal (that is, if we avoid a flexible-types approach), then (10c) will

only affect the interpretive possibilities for subjects: A quantified subject may be interpreted either in SPEC AGRsP or (with marginal acceptability) in SPEC VP.[8]

II.2. Application of the Theory to Selected Examples.

Let us now examine how the proposals in (10) account for the evidence in (4-8). Recall that the relevant scope judgements all assume 'neutral' focus, without focus on either QP. The preferred interpretation of a monotransitive example such as (6a) follows from interpretation of the quantified subject in SPEC AGRsP, and interpretation of the quantified object in SPEC AGRoP:

(11) a. Preferred interpretation of (6a):
   someone AGRs everyone AGRo [VP t likes t]

The marginally possible interpretation in which *everyone* receives wide scope, follows from interpretation of the object in SPEC AGRoP,

---

[8] One place where we differ with Hornstein (1994) is on the standard question of whether ellipsis should be handled by LF copying or PF deletion. Hornstein adopts an LF-copying approach, but we find that this approach is inconsistent with an A-position approach to quantifier scope. For example, in (ii.a), the existential QPs can take narrow scope:

(ii) a. Some girl likes every teacher, and some boy does too.
   b. A friend of mine went to every party, and a bassoonist did too.

For both Hornstein and us, the existential QPs in (ii.a) must be interpreted in SPEC VP, yet this means that LF-copying of the non-elliptical VP into the elliptical VP should over-write *some boy* with *some girl*, leading not to the observed narrow scope reading, but to an unavailable interpretation: 'Some girl likes every teacher, and some girl likes every teacher too'. We propose instead that VP ellipsis is accomplished through PF deletion of defocused material (cf. Tancredi 1992). The material is required to be parallel to corresponding overt material, but this requirement is checked at LF. When two SPEC VPs stand in a contrastive focus relation (ii.a), the [+F] material is subject to a weaker parallelism constraint that does not require identity. This weaker constraint is nonetheless violated in (ii.b), where only the narrow-scope reading of the universal QP is allowed. An important consequence of our minimalist approach is that the parallelism constraint can be stated entirely on the LF representation, without stipulating parallel derivations. This follows if we take VP ellipsis to be in reality AGR-P ellipsis (i.e. everything under T[0]), because there is only one scope position (AGRsP) above T[0]. Hence, we avoid the standard problem of two QPs raising and adjoining to IP in different orders in the two conjuncts (which has led others to stipulate parallel derivations as well as parallel LF representations).

---

but interpretation of the subject in VP-internal subject position:

(11) b. Marginally possible interpretation of (6a):
   AGRs everyone AGRo [VP someone likes t]

The full ambiguity found in *to*-datives (7a) (as well as *put*-locatives, 8a) follows from interpretation of the PP (*to*-phrase) in a position either immediately above, or immediately below, SPEC AGRoP.[9]

(12) a. Wide-scope interpretation of lower QP in (7a):
   Mary$_i$ AGRs [to everyone]$_j$ AGRpp something$_k$ AGRo [VP t$_i$ gave t$_k$ t$_j$]

(12) b. Narrow-scope interpretation of lower QP in (7a):
   Mary$_i$ AGRs something$_k$ AGRo [to everyone]$_j$ AGRpp [VP t$_i$ gave t$_k$ t$_j$]

Notice that the system in (10) correctly captures the scope preferences applying to the subject and prepositional object in a *to*-dative. In (12c), *someone* preferentially takes wider scope than *everyone*, but can marginally take narrow scope.

(12) c. Someone gave a present to everyone

This follows if *to everyone* is interpreted between T[0] and VP (10b), and if *someone* is interpreted either in SPEC AGRsP (the preferred location) or in VP-internal subject position (the dispreferred location).

We attribute the apparent lack of ambiguity in scope relations

---

[9] The examples (7a) and (8a) of course show only that the prepositional argument can take wider scope than the direct object. The examples (i-ii) show that the direct object can also take wide scope over the PP with no loss of grammaticality.

(i) Mary gave every story to a (different) reporter
(ii) Mary put every letter in a (different) box

There is a tendency for an existential quantifier in the PP to be interpreted specifically in (i-ii), but this tendency can be easily overcome with addition of a modifier such as *different*.

found in double object datives (4a) to the presence of a phonologically null P^o which takes the lower object as its complement. On our account, this null P^o contrasts with the overt P^o in *to*-datives (7a) or *put*-locatives (8a), in that the null P^o blocks both variable binding and quantifier 'scoping' out of the PP. Thus, even though the PP is interpreted in a checking position intermediate between T^o and VP, there is no way for its complement to bind or take scope over a DP in SPEC AGRoP or in SPEC VP.

(13) a. John$_i$ AGRs someone$_j$ AGRo [$_{PP}$ P^o everything]$_k$ AGRpp
$\qquad$ [$_{VP}$ t$_i$ gave t$_j$ t$_k$]

$\quad$ b. John$_i$ AGRs [$_{PP}$ P^o everything]$_k$ AGRpp someone$_j$ AGRo
$\qquad$ [$_{VP}$ t$_i$ gave t$_j$ t$_k$]

(The LF in 13b, while possible, corresponds to a proper subset of the interpretations available in 13a.) Thus, the narrow scope interpretation of the lower (universal) QP in (4a) is the only available interpretation under the principles in (10).[10]

The analysis in (13) is comparable to a proposal of Hoffman (1991), in which the null P^o would correspond to the preposition *with* in (14a). (In the use of a null P^o 13 also resembles proposals of Kayne 1984 and Pesetsky 1994, among many others.) Interestingly, the *present-with* construction parallels the double object dative (4) with respect to scope, WCO, and licensing of *his own*, as illustrated in (14a-d).

(14) *Present-with* constructions
$\quad$ a. * Mary presented someone with everything
$\qquad$ (Wide scope on *everything*)
$\quad$ b. * Mary presented its$_i$ owner with every check$_i$
$\quad$ c. * With what$_i$ did Mary present its$_i$ owner t$_i$
$\quad$ d. * Mary presented his$_i$ own master with Fido$_i$

We are led to conclude that the *with*-phrase in (14), like the PP in

---

(13), is a barrier to variable binding and quantifier scope. Thus, it appears that the choice of preposition determines whether the preposition's object can bind or take scope over a DP that the PP c-commands.[11]

If both internal arguments of a triadic predicate are interpreted outside the VP, we predict that when the subject takes narrow scope relative to either internal argument (by being interpreted in SPEC VP), it must take narrow scope relative to the other internal argument as well. This prediction is borne out, as shown in (15a-b).

(15) a. Someone$_i$ gave everyone his$_i$ business card
$\quad$ b. Someone$_i$ gave every good book to his$_i$ friend

In 15a-b, the requirement that the existential QP bind a variable in one of the internal arguments can be satisfied only if the existential takes wider scope than *both* internal arguments. Hence, wide scope on the universal quantifier is blocked in both examples.[12]

Although the proposals in (10) are somewhat stipulative in their present form, we would like to suggest that they may be derived from Pica's (1994) theory of the AGR-P system and its role in the visibility of syntactic arguments. The general idea is that the AgrP system serves as an alternative to the widely assumed mechanism of 'syntactic indexing'. On this approach, NPs are

---

[10] Strictly speaking, in (13a) there is also the possibility of 'independent' scope relations between the two QPs; this is the only possibility in (13b). In these examples, however, the 'independent' scope interpretation yields the same truth conditions as a wide scope reading of the existential.

---

[11] One place where *present-with* constructions diverge from double-object datives is in antecedent-contained deletion (ACD), as in (i). A preliminary investigation suggests to us that overt prepositions as in (ib) tend to interfere with ACD, for reasons that are unclear.

(i) a. $\quad$ John gave Frank everything that I did $\quad$ (Hornstein 1994, p.192)
$\quad$ b. ?* John presented Frank with everything that I did

[12] Hornstein (1984:194) notes an example similar to (15a), and arrives at a similar conclusion, except that he treats the two internal arguments of a double object dative as together forming a SC-like constituent, which is checked as a unit in SPEC AGRoP. This approach raises obvious problems for the analysis of indirect passives, where only the first of the two internal arguments moves to SPEC AGRsP. Also, Hornstein does not address the ambiguity of scope relations between the internal arguments of prepositional datives, or the obligatoriness of narrow scope on the existential in (15b). If Hornstein were to accept an explanation in which the two internal arguments of a prepositional dative are checked in separate AGR-Ps, then his idea that there is only one AGR-P for both internal objects of a double object dative would again be called into question.

normally related, via the AgrP system, to what Pica terms a 'cognitive value' (adapting the terminology of Heim 1993) in the discourse representation, and thus become visible to interpretive processes. We suggest that NPs are necessarily interpreted (i.e. take scope) in the position in which they become visible. Interpretation in a non-Case-checking position such as SPEC VP, while possible, is a more 'costly' option that perhaps depends on visibility through incorporation (cf. Marantz 1984, Baker 1988).[13]

II.3. Major Conceptual and Empirical Advantages.

A major conceptual advantage of our approach is that it marks a return to the direct account of relative quantifier scope in terms of *LF c-command relations between quantifiers*. This was the approach of (May 1977), but was abandoned for example in (May 1985) and in (Aoun & Li 1989, 1993). The latter accounts depend on additional mechanisms to derive possible scope relations from the LF structural relations holding between quantifiers. A further conceptual advantage is that we provide a predictive theory of quantifier scope *preferences*, in contrast to most if not all prior accounts.

---

[13] This approach is consistent with several additional facts concerning scope preferences in raising and passive constructions. If we assume that an NP can receive a 'cognitive value' in any SPEC AGR-P position through which it passes in the course of having its features checked, then we account for the relative lack of scope preferences in (i) and (ii), as compared with (iii).

i. Something was given to everyone
(LF: something AGRs [to everyone] AGRpp (something) AGRo)
ii. Almost everyone seems (t) to like Mary
(LF: almost everyone AGRs seems (almost everyone) AGRs Mary AGRo)
iii. Someone spoke to everyone
(LF: someone AGRs [to everyone] AGRpp [VP (someone) ...])

In (i) the surface subject is an underlying direct object, and (arguably) passes through SPEC AGRoP on the way to SPEC AGRsP; the relative scope of the universal and existential quantifiers is fully ambiguous in (i). In (ii) the matrix subject is generated in VP-internal subject position of the embedded clause, but presumably passes through a SPEC AGRsP position in the embedded clause before raising to SPEC AGRsP in the matrix clause; the relative scope of the quantifier and the verb *seems* is again highly ambiguous. In (iii), however, the surface subject is not an underlying direct object; the only way for it to be interpreted lower than the indirect object is through the more 'costly' option of being interpreted in SPEC VP. (On the structure of 'dyadic' *to*-datives as in (iii), see also Snyder & Stromswold, in review.) In (iii) the preference is for wide scope on the existential quantifier.

A major empirical advantage of our approach is that it provides a very natural explanation for the role of S-structure c-command relations in determining quantifier scope relations, discussed by Huang (1982), Frey (1993), and Krifka (1994), among others. This is because S-structure positions in most cases correspond to the preferred position of interpretation for a quantified DP.

Similarly, our approach provides a very natural account of Aoun & Li's (1989) generalization that two quantified DPs have ambiguous scope relations if and only if their A-chains overlap. For the cases discussed by Aoun and Li, this generalization follows on our account from the fact that a quantified subject is preferentially interpreted in SPEC AGRsP, but with marginal acceptability can also be interpreted in VP-internal subject position. If a second quantifier is Case-checked in a position between SPEC AGRsP and the VP-internal subject position, then its A-chain overlaps with that of the subject, and precisely then our system allows the subject to be interpreted either inside or outside the scope of the second quantifier. A further empirical advantage of our system is that it explains the generalization that quantifier scope is overwhelmingly clause-bounded.[14] This generalization follows on our account from the obligatory nature of reconstruction, in most cases, to an A-position.[15]

III. References

Abusch, Dorit. 1994. The scope of indefinites. To appear in *Natural Language*

---

[14] Abusch (1994) has presented some apparent counterexamples to this generalization, in which indefinites seemingly take clause-external scope. Kratzer (1994) has argued, however, that the apparently extra-clausal scope of these indefinites is in fact a 'pseudoscope' phenomenon. According to Kratzer, these indefinites really take clause-internal scope, but appear to take wider scope because of an interpretive dependence on a variable bound from outside the clause.

[15] The cases where our account permits clause-external scope are those in which a quantified element undergoes clause-external movement to satisfy a morphological checking relation, and then is syntactically blocked from reconstruction. For example, reconstruction may be syntactically blocked if part of the QP undergoes incorporation into the head of a clause-external XP; Chomsky (1993) gives an example involving *wh*-movement of the phrase *which picture of himself*, with incorporation of *-self* into a clause-external antecedent. The apparent ability of *focus* to license clause-external scope would follow on our account if focus involves LF movement and incorporation into a phonologically null (or at least non-segmental) 'focus-marker'.

Semantics 2.

Aoun, Joseph and Audrey Yen-Hui Li. 1989. Scope and constituency. *Linguistic Inquiry* 20.141-172.

Aoun, Joseph and Audrey Yen-Hui Li. 1993. *Syntax of scope*. Cambridge, MA: MIT Press.

Baker, Mark. 1988. *Incorporation: A theory of grammatical function-changing*. Chicago: University of Chicago Press.

Barss, Andrew and Howard Lasnik. 1986. A note on anaphora and double objects. *Linguistic Inquiry* 17.347-354.

Beghelli, Filippo. 1992. A minimalist approach to quantifier scope. *Proceedings of NELS* 23, 65-80. Amherst, MA: GLSA.

Chierchia, Gennaro. 1993. Questions with quantifiers. *Natural Language Semantics* 1.181-234.

Chomsky, Noam. 1964. *Current Issues in linguistic theory*. The Hague: Mouton.

Chomsky, Noam. 1993. A minimalist program for linguistic theory. *The view from Building 20: Essays in honor of Sylvain Bromberger*, ed. by Ken Hale and Samuel Jay Keyser, 1-52. Cambridge, MA: MIT Press.

Chomsky, Noam and Howard Lasnik. 1992. Principles and parameters theory. *Syntax: An international handbook of contemporary research*, ed. by J. Jacobs, A. von Stechow, W. Sternefeld, and T. Vennemann Berlin: Walter de Gruyter.

Diesing, Molly. 1992. *Indefinites*. MIT Press: Cambridge, MA.

Fiengo, Robert and James Higginbotham. 1984. Opacity in NP. *Linguistic Analysis* 7.395-421.

Frey, Werner. 1993. *Syntaktische Bedingungen für die semantische Repräsentation. Über Bindung, implizite Argumente und Skopus.* (Studia Grammatica XXXV). Berlin: Adademie Verlag.

Guéron, Jacqueline. 1986. Coréférence et structures topicalisées. *La Grammaire Modulaire*, ed. by Mitsou Ronat and Daniel Couquaux. Paris: Minuit.

Heim, Irene. 1987. Where does the definiteness restriction apply? Evidence from the definiteness of variables. *The representation of (in)definiteness*, ed. by Eric Reuland and Alice ter Meulen, 21-42. Cambridge, MA: MIT Press.

Heim, Irene. 1993. Anaphora and semantic interpretation: A reinterpretation of Reinhart's approach. SfS-Report-07, Eberhard-Karls-Universität Tübingen.

Hoffman, Mika. 1991. *The syntax of argument-structure-changing morphology*. Doctoral dissertation, MIT.

Hornstein, Norbert. 1994. The grammar of LF: From GB to Minimalism. (To be published by Blackwell.) Ms., University of Maryland.

Huang, C.-T. James. 1982. *Logical relations in Chinese and the theory of grammar*. Doctoral dissertation, MIT.

Kayne, Richard. 1975. *French syntax: The transformational cycle*. Cambridge, MA: MIT Press.

Kayne, Richard. 1984. Connectedness and binary branching. Dordrecht: Foris.

Kratzer, A. 1994. Scope or pseudoscope? Are there wide-scope indefinites? Paper presented at MIT, Cambridge, MA, 1 April 1994.

Krifka, Manfred. 1994. Focus and operator scope in German. Paper presented at the Linguistic Society of America Annual Meeting, Boston, MA, January 1994.

Lasnik, Howard and Tim Stowell. 1991. Weakest crossover. *Linguistic Inquiry* 22.687-720.

Marantz, Alec. 1984. *On the nature of grammatical relations*. Cambridge, MA: MIT Press.

May, Robert. 1977. *The grammar of quantification*. Doctoral disseration, MIT.

May, Robert. 1985. *Logical form: Its structure and derivation*. Cambridge, MA: MIT Press.

Pica, Pierre. 1994. On the disjoint agreement principle. To appear in *Essays on modularity: Projections, interfaces and modules*, ed. by Anna-Maria DiSciullo. Cambridge, UK: Oxford University Press.

Pesetsky, David. 1994. *Zero-syntax: Experiencers and cascades (Final Version)*. MIT ms.

Postal, Paul. 1971. *Cross-over phenomena*. New York: Holt, Rinehart, and Winston.

Postal, Paul. 1993. Remarks on weak crossover effects. *Linguistic Inquiry* 24.539-556.

Snyder, William. 1992. Chain-formation and crossover. Generals Paper, MIT.

Snyder, William. 1994. A psycholinguistic investigation of weak crossover, islands, and syntactic satiation effects. Poster presented at CUNY Sentence Processing Conference, CUNY Graduate Center, New York , 17 March 1994.

Snyder, William and Karin Stromswold. In review. The structure and acquisition of English dative constructions. Cambridge, MA: MIT ms.

Sportiche, Dominique. 1994. Adjuncts and adjunction. *GLOW Newsletter* 32.54-55.

Tancredi, Chris. 1992. *Deletion, Deaccenting, and Presupposition*. Doctoral dissertation, MIT.