# A-Scrambling Exists!

Martha McGinnis

## 1 Preliminaries

The nature of scrambling is a focus of recent debate in the syntactic literature. The term *scrambling* is used to describe apparently optional permutations of word order, found especially in languages with extensive case-marking. Saito (1989) argues that scrambling is A-bar movement (like *wh*-movement), rather than A-movement (like movement to the subject position). Webelhuth (1989) argues for scrambling to positions with mixed A- and A-bar properties, while Mahajan (1990) counters that local (clause-internal) scrambling can be either to an A- or an A-bar position, while long-distance scrambling is A-bar movement.

In a recently published paper, Frank, Lee & Rambow (FLR; 1996) take a careful look at different types of evidence for the kind of movement involved in scrambling in German and Korean. They conclude that there is no A-scrambling, and that scrambling is actually a special kind of A-bar movement that can affect binding relations in some languages. However, there is good reason to reconsider the evidence against A-scrambling, and to maintain the strong hypothesis that there are only (at most) three types of syntactic movement—A-, A-bar, and head movement.

The central argument to be presented here is based on examples like the Georgian ones below. Suppose that local scrambling can be A-movement, as Mahajan (1990) suggests. Like other types of A-movement, local scrambling can create new binding relations. Thus, although the unscrambled object in (1a) cannot bind a possessive anaphor embedded in the subject, the scrambled object in (1b) can. On the other hand, some binding relations cannot be created by scrambling. For example, the subject anaphor in (2) cannot be bound by either an unscrambled object (2a) or a scrambled one (2b).

(1) a.?? *Tavisi*$_i$ deida [**nino-s**$_i$ xaTav-s].
self's aunt.NOM N.-DAT draw-PRES
'*Her*$_i$ aunt is drawing **Nino**$_i$.'

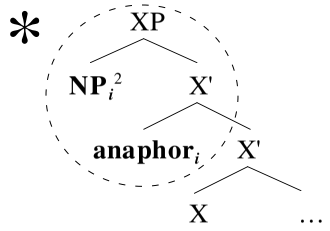
b. **Nino-s**$_i$ *tavisi*$_i$ deida [***t*** xaTav-s].
'(same as (1a))'

(2) a. * *Tavisi tav-i*$_i$ [**vano-s**$_i$ xaTav-s].
self.NOM V.-DAT draw-PRES
'*Himself*$_i$ is drawing **Vano**$_i$.'

b. * **Vano-s**$_i$ *tavisi tav-i*$_i$ [***t*** xaTav-s].
'(same as (1b))' (Léa Nash, p.c.)

One possible interpretation of the contrast above is that the scrambled argument is not in an A-position, but rather in a position from which it can bind some anaphors and not others. However, there is reason to believe that the contrast between (1) and (2) falls under the broader generalization in (3), which affects all types of A-movement (McGinnis 1998). If so, the failure of binding in (2b) cannot be taken as evidence against A-scrambling.[1]

(3) An anaphoric dependency cannot be established between two specifiers of the same head.




## 2 Local Scrambling Can Be A-Movement

Prima facie evidence that scrambling can be A-movement is that, in some languages, it can create new binding relations, a property characteristic of A-movement. As a basis for comparison, consider A-movement to the subject position in Albanian (Massey 1990, 1992). In the active voice, the dative indirect object of a double object construction c-commands the accusative direct object. Thus an indirect object quantifier can bind a pronominal possessor embedded in the direct object (4a), but a direct object quantifier cannot bind a pronominal possessor embedded in the indirect object (4b).[3]

(4) a. Agimi ia dha [*secilit djalë* [**pagën e tij** $t_V$]].
A.NOM CL give each boy.DAT pay.ACC his
'Agim gave (to) *each boy(x)* **his*(x)* pay**.'

b. * Agimi ia ktheu [*autorit të tij* [**secilin liber** $t_V$]].
A.NOM CL return author.DAT its each book.ACC
'Agim returned (to) *its(x)* author **each book*(x)***.'

---

[1]There is also a positive argument for A-scrambling, not given here, namely that a well-defined subclass of local scrambling behaves like A-movement for the purposes of relativized minimality (McGinnis 1998).

[2] Subscript indices are used to indicate anaphor-binding dependencies.

[3] These binding asymmetries hold regardless of word order; although a lower DP can scramble to an A-bar position above a higher one, such movement in (4b) (or (5b)) would only create a Weak Crossover violation.

In the passive, however, the binding asymmetry is reversed: the direct object, now bearing nominative case, raises to the subject position, from which it can bind a pronoun embedded in the indirect object (5a). Conversely, an indirect object quantifier cannot bind a pronoun embedded in the raised direct object.

(5) a. **Secili libër** iu kthye [*autorit të tij* [***t*** $t_V$]].
each book.NOM CL returned.NACT author.DAT its
'**Each book*(x)*** was returned (to) *its(x)* author.'
b. * **Paga i tij** iu dha [*secilit djalë* [***t*** $t_V$]].
pay.NOM his CL gave.NACT each boy.DAT
'**His*(x)* pay** was given (to) *each boy(x).*'

Similar effects arise for anaphor binding. For example, an argument embedded in an infinitival clause in English cannot bind an anaphor in the higher clause (6a). However, if the embedded argument raises to the subject position of the higher clause, an anaphor-binding relation can be created (6b).

(6) a. * There seemed to *themselves*$_i$ [*t* to be **many people**$_i$ in trouble].
b. **Many people**$_i$ seemed to *themselves*$_i$ [***t*** to be in trouble].

By contrast, A-bar movement does not create new binding relations.[4] (7) and (8) illustrate the familar Strong and Weak Crossover effects, respectively. In English, an object operator cannot bind a subject variable, either from its base position or from an A-bar position c-commanding the variable. Thus, neither the object *wh*-operator *which girl* in (7a) nor the object quantifier *some girl* in (7b) can bind the subject variable *she*. Likewise, an object operator cannot bind a pronominal variable embedded in the subject, as shown in (8).

(7) a. * **Which girl*(x)*** [does *she(x)* [like ***t***]?
b. * *She(x)* likes **some girl*(x)***.
(8) a.?? **Which girl*(x)*** [did *her(x)* friend [call ***t***]?
b.?? *Her(x)* friend called **some girl*(x)***.

Like A-movement, and unlike A-bar movement, scrambling can create new binding relations. (9) shows a transitive clause in Korean with an object *wh*-operator and a pronominal variable embedded in the subject (FLR 1996).

---

[4] However, A-bar movement can repair Condition C violations. For example, *Which claim that John made was he willing to discuss?* allows coreference between *John* and *he*, unlike *He was willing to discuss the claim that John made* (Freidin 1986).

(9a) is a normal transitive sentence, in which the subject is in an A-position c-commanding the object. In this case, the operator-variable binding dependency is ill-formed. In (9b), however, the object falls to the left of the subject, and the binding dependency is fine. This suggests that the object in (9b) has scrambled to an A-position c-commanding the subject.

(9) a. * [*pro* chinkwu]-ka [**nwukwu-lul** paypanhayss-ni].
friend-NOM who-ACC betrayed-Q
'**Who*(x)*** did *his(x)* friend betray?'
b. **Nwukwu-lul** [*pro* chinkwu]-ka [***t*** paypanhayss-ni].
'(same as (9a))'

A similar contrast can be seen in the double-object construction in (10), in which the direct object is a quantificational operator, and the indirect object contains a pronominal variable. Again, suppose that in (10a), the indirect object is in an A-position c-commanding the direct object; thus the operator cannot bind the variable. When the direct object falls to the left of the indirect object, the binding dependency is well-formed (10b), suggesting that the direct object has scrambled to an A-position c-commanding the indirect object.[5]

(10) a. * Kim pancang-i [*pro* iwus]-eykey [**nwukwuna-lul** sokayhayssta].
K. d.c.-NOM neighbor-DAT everyone-ACC introduced-Q
'District chair Kim introduced **everyone*(x)*** to *his(x)* neighbor.'
b. Kim pancang-i **nwukwuna-lul** [*pro* iwus]-eykey [***t*** sokayhayssta].
'(same as (10a))'

In addition to operator-variable binding dependencies, anaphor-binding dependencies can be created via A-scrambling. This possibility is illustrated by the Georgian examples in (1), repeated below. In (1a), the object cannot bind the reflexive anaphor *tavis* embedded in the subject, since the subject is in an A-position c-commanding the object. In (1b), where the object precedes the subject, it can bind the anaphor, suggesting that it has scrambled an A-position c-commanding the subject.

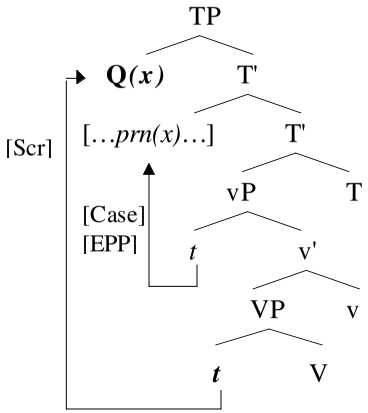
(1) a.?? *Tavisi*$_i$ deida [**nino-s**$_i$ xaTav-s].
self's aunt.NOM N.-DAT draw-PRES
'*Her*$_i$ aunt is drawing **Nino**$_i$.'
b. **Nino-s**$_i$ *tavisi*$_i$ deida [***t*** xaTav-s].
'(same as (1a))'

---

[5] An alternative possibility is that the direct object is base-generated in an A-position c-commanding the indirect object in (9b). There is evidence against this possibility in Japanese (see Takano 1996, Yatsushiro 1997).

Locality assumptions constrain the possible derivation of sentences involving A-scrambling. For example, consider the version of locality proposed in Chomsky (1995), where movement to the specifier of a head H occurs via feature-attraction by H. Locality is built into the definition of Attract: essentially, for each feature F of a head H, H attracts the closest element containing a feature of the right type to check F. Suppose that there are (at most) three types of features, corresponding to Rizzi's (1990) A-, A-bar and head dependencies, and that A-dependencies are created by attraction of nominal features (D, N or phi-features). Under this view, A-movement of the object past the subject can be represented as in (11).

(11)




[=derivation of (9b)]

In (11), the syntactic subject moves to the first specifier of TP, to check the Case/EPP features of T.[6] The object then scrambles into a second (higher) specifier of TP. Assuming that the subject leaves a copy or trace in a VP- (here, vP-) internal position, this trace has no features that could satisfy T, so it does not block attraction of the object. Once the subject is in a specifier of TP, no locality violation arises if T attracts the object as well. I assume that in languages allowing scrambling to spec-TP, T can be inserted into the derivation with an extra Scrambling or EPP feature, which attracts nominal features.[7] Note that, to move to an A-position c-commanding the subject, the object must move into the maximal projection occupied by the subject (here,

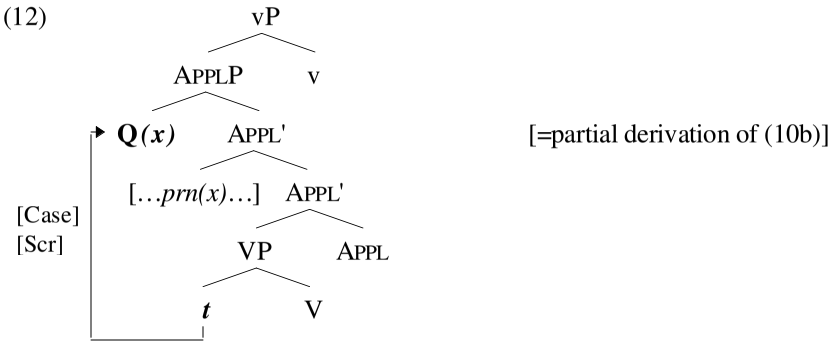
[6] The (first) EPP feature of T ensures that a sentence has a syntactic subject, in conformity with the Extended Projection Principle (a version of the familiar rule S→NP VP).

[7] It may be that a scrambled object is obliged to check Case in spec-TP as well (Miyagawa 1997), since normally an argument cannot undergo A-movement after checking Case.

TP). Under the relativized locality condition on Attract, the head of a higher maximal projection could not attract the object past the intervening subject.

The derivation of (10b), in which a direct object A-scrambles over an indirect object, can be represented as in (12). Suppose that this double-object construction has a VP-shell structure, in which the indirect object is base-generated above the direct object and below the external argument, in the specifier of a light "applicative" verb (Marantz 1993). If the direct object can scramble over the indirect object, it moves to a second specifier of APPLP.

(12)




[=partial derivation of (10b)]

If we assume the version of locality in Chomsky (1995), scrambling past one A-position to a higher A-position must involve a multiple-specifier derivation like (11) or (12). Even making this restrictive assumption, however, it is possible to capture the fact that scrambling can create new binding relations: a scrambled argument can move to an A-position where it c-commands another A-position that it did not c-command before movement.

## 3 Restrictions on Binding by Scrambled Arguments

As observed above, scrambled arguments are subject to certain binding restrictions. For example, although scrambling the (dative) indirect object over the (accusative) direct object can create a well-formed operator-variable binding relation in German (13), it cannot create the anaphor (reciprocal) binding relation in (14b) (Webelhuth 1989, FLR 1996).

(13) a. * daß der Jörg [*seinen* Vater] [**jedem** gezeigt hat]
that the J.-NOM his father-ACC each-DAT shown has
'that Jörg has shown *his(x)* father to **everyone*(x)***.'

b. daß der Jörg **jedem** [*seinen* Vater] [***t*** gezeigt hat]
'(same as (13a))'

The indirect object in German cannot bind a reciprocal direct object regardless of word order (14a-b). On the other hand, the direct object can bind a reciprocal indirect object (14c), suggesting that the direct object is base-generated in this c-commanding position.[8]

(14) a. * Gestern habe ich *einander*$_i$ [**den Gästen**$_i$ vorgestellt].
yesterday have I each other-ACC the guests-DAT introduced
'Yesterday, I introduced the guests to each other.'

b. * Gestern habe ich **den Gästen**$_i$ *einander*$_i$ [***t*** vorgestellt].
'(same as (14a))'

c. Gestern habe ich *die Gäste*$_i$ [**einander**$_i$ vorgestellt].
yesterday have I the guests-ACC each other-DAT introduced
'(same as (14a))'

The contrast between (13) and (14) is by no means an isolated case. A similar contrast arises when an object scrambles over the subject, and can be observed in a wide range of scrambling languages, including Hindi, Japanese, and Georgian. What are we to make of this observation? One possibility would be to take the view that there is no A-scrambling, at least in these languages. For example, FLR (1996) propose that scrambling is an intermediate type of movement, non-operator A-bar movement, which can create new quantifier-pronoun binding relations but not necessarily anaphor binding relations. Since in some cases a scrambled argument can bind an anaphor, they suggest that binding principle A is parameterized: in some languages, an (overt) anaphor can be bound only from an A-position; in others, from any non-operator (A- or A-bar) position (15).

(15)

| | A-mvt. | operator A-bar mvt. | non-operator A-bar mvt. |
|---|---|---|---|
| Q-pronoun binding | √ | * | √ |
| anaphor binding | √ | * | parameterized |

However, cross-linguistic evidence suggests a different explanation of the contrast between (13) and (14). First of all, a similar contrast can be observed within a given language, using only examples with anaphor binding. Moreover, the binding restrictions that arise in scrambling also arise under movement to subject position. I will argue below that the key to the contrast actu-

[8] Other base-generated c-command relations (e.g., subject-object) also allow reciprocal binding in German. However, focus interpretations may provide evidence that the indirect object is actually base-generated above the direct object (Hotze Rullmann, p.c.). I leave this issue for further investigation.

ally lies in the structural position of the bound element. The bound pronoun is embedded in the direct object (13b), while the reciprocal is the direct object itself (14b).

## 4 Anaphor Binding Contrasts Within a Language

In a language with possessive anaphors, a contrast can be observed in the anaphor binding possibilities arising under A-scrambling. As already noted, for example, scrambling the object over the subject in Georgian makes it possible for the object to bind a possessive reflexive anaphor embedded in the subject (1b). On the other hand, although there are nominative (object) anaphors in Georgian, a scrambled object cannot bind a reflexive subject (2b).

(1) b. **Nino-s**$_i$ *tavisi*$_i$ deida [*t* xaTav-s].
N.-DAT self's aunt.NOM draw-PRES
'*Her*$_i$ aunt is drawing **Nino**$_i$.'

(2) b. * **Vano-s**$_i$ *tavisi tav-i*$_i$ [*t* xaTav-s].
N.-DAT self.NOM draw-PRES
'*Himself*$_i$ is drawing **Vano**$_i$.'

A similar contrast can be seen in Japanese (Miyagawa 1997, Yatsushiro 1997), which also has nominative anaphors. (16a) shows the object unscrambled, thus unable to bind a possessive anaphor in the subject DP. A clause-internally scrambled object can bind the reciprocal *otagai* embedded in the subject (16b), but not a reciprocal subject (16c). Likewise, for Hindi speakers allowing a nonsubject binder for *apne*, a clause-internally scrambled object can bind the possessive anaphor embedded within the subject (17b), but not a subject anaphor (17c) (Mahajan 1990 and Rajesh Bhatt, p.c.).

(16) a. * [*otagai*$_i$-no sensei-ga] [[**John-to Mary**]-**o**$_i$ mita].
each other-GEN teacher-NOM J.-and M.-ACC saw
(lit.) '*Each other*'s teachers saw **John and Mary**.'

b. [**John-to Mary**]-**o**$_i$ [*otagai*$_i$-no sensei-ga] [*t* mita].
'(same as (16a))'

c. * [**John-to Mary**]-**o**$_i$ *otagai*$_i$-ga [*t* mita].
J.-and M.-ACC each other-NOM saw
(lit.) '*Each other* saw **John and Mary**.'

(17) a. * [apne$_i$ baccoN-ne] [**mohan-ko**$_i$ ghar se nikaal diyaa].
self's children-ERG M.-ACC house from throw give.PERF
'*His*$_i$ children threw **Mohan**$_i$ out of the house.'

b. ? **mohan-ko**$_i$ [apne$_i$ baccoN-ne] [*t* ghar se nikaal diyaa].
'(same as (17a))'

c. * **raam-ko**$_i$ apne-aap-ne$_i$ [*t* maraa].
R.-ACC self-ERG beat.PERF
(lit.) '*Himself*$_i$ beat **Raam**$_i$.'

These observations support the view that the structural position of the bound element plays a key role in determining whether it can be bound by a scrambled argument. Under this view, the distinction between reciprocals and bound pronouns observed in German is incidental. Likewise, the ill-formed cases of anaphor binding cannot be attributed to a language parameter, since a scrambled argument can bind a possessive anaphor in the same language.

## 5 Binding Restrictions in Movement to Subject

There is additional cross-linguistic evidence to suggest that the binding restrictions that arise in scrambling also arise in movement to the subject position (Snyder 1992). For example, the subject of a passive or unaccusative verb cannot bind anaphoric (reflexive or reciprocal) *si* in Italian (Rizzi 1986). (18) shows the passive of a ditransitive clause in Italian. In (18a), the (dative) indirect object is a pronominal clitic, while the direct object *Gianni* raises to the subject position of the passive. This derivation is well-formed, unlike (18b), where the indirect object is a reflexive clitic. (18b) also contrasts with the well-formed (18c), where the indirect object is a nonclitic reflexive.

(18) a. **Gianni**$_i$ *gli*$_j$ è stato [*t* affidato].
G. him-DAT has been entrusted
'**Gianni**$_i$ has been entrusted to *him*$_j$.'
b. * **Gianni**$_i$ *si*$_i$ è stato [*t* affidato].
G. self has been entrusted
'**Gianni**$_i$ has been entrusted to *himself*$_i$.'
c. **Gianni**$_i$ è stato [*t* affidato [a *se stesso*$_i$]].
G. has been entrusted to himself
'**Gianni**$_i$ has been entrusted to *himself*$_i$.'

Rizzi points out that in (18b), the reflexive indirect object c-commands the base position of its would-be antecedent (indicated in bold), while in (18c), it is c-commanded by the base position of its antecedent.[9] The argument that moves to the subject position (*Gianni*) cannot bind the argument it moves over (*si*). This restriction is parallel to the binding restriction on

[9] Most likely it is a trace in the base and/or Case positions of the reflexive clitic that c-commands the direct object in (18b). The clitic itself moves from its highest specifier position to adjoin to $T^0$ (McGinnis 1998), where it may not c-command the direct object.

scrambling: a scrambled argument cannot bind an argument it scrambles over—only an anaphor or a pronominal variable embedded within it.

Raising to the subject position also gives rise to a contrast between embedded and unembedded bindees (Massey 1990, 1992). Recall that in the Albanian passive, the direct object raises past the indirect object to the subject position. From this position, a raised direct object quantifier can bind a pronoun embedded in the indirect object (19a). However, the raised direct object cannot bind a reflexive indirect object (19b).

(19) a. **Secili djalë** iu tregua [***t*** babës *të tij* [***t*** $t_V$]].
each boy.NOM CL show.NACT father his.DAT
'**Each boy*(x)*** was shown to *his(x)* father.'

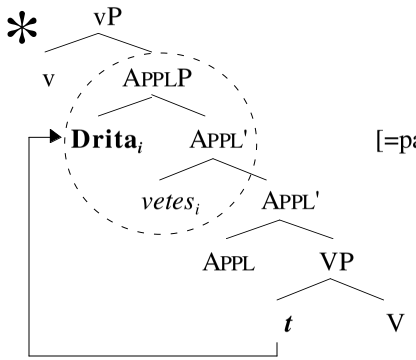
b. * **Drita**$_i$ iu tregua [***t*** *vetes*$_i$ [***t*** $t_V$]] prej artistit.
Drita.NOM CL show.NACT self.DAT by the.artist
'**Drita**$_i$ was shown to *herself*$_i$ by the artist.'

The contrast in (19) is an exact parallel to the contrast between embedded and unembedded bindees that appears under A-scrambling. This parallel can be captured if the binding restrictions on clause-internal scrambling are not specific to scrambling, but rather arise from a general constraint on binding and A-movement.

## 6 Lethal Ambiguity

As noted in section 2, the relativized locality condition on Attract constrains the possible derivations of a sentence in which a lower DP undergoes A-movement past a higher one. Such movement can only succeed if the lower DP moves into the maximal projection occupied by the higher one. Under this view, consider the derivation of the Albanian passive in (19b), part of which is shown in (20).

(20)




[=partial structure for (19b)]

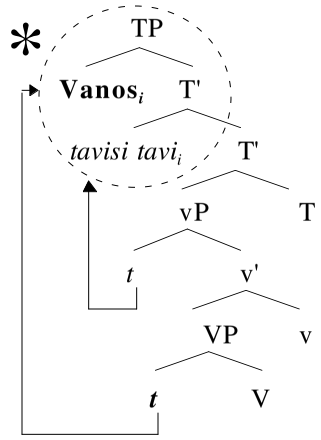
For the direct object (*Drita*) to raise past the indirect object (*vetes*) to the subject position, it must first move to the maximal projection where the indirect object is base-generated (APPLP). Once the direct object is in a specifier of APPLP, it is local enough to be attracted to spec-TP. However, because of the constraint in (3), no anaphoric dependency can be established between the two arguments (20). On the other hand, if an anaphor or bound pronoun is embedded *within* the indirect object, (3) is satisfied and the derivation is fine.[10]

(3) An anaphoric dependency cannot be established between two specifiers of the same head.

Similarly, if the object scrambles over the subject, it cannot bind the subject directly, since the two occupy specifiers of the same head. For example, the derivation of (2b) is schematized in (21).[11]

(2) b. * **Vano-s**$_i$ *tavisi tav-i*$_i$ [***t*** xaTav-s].
N.-DAT self.NOM draw-PRES
'*Himself*$_i$ is drawing **Vano**$_i$.'

(21)




[=structure for (2b)]

[10] An obvious question that arises is what allows the anaphor binding in (6b): *Many people seemed to themselves [*t *to be in trouble].* Possibly, as a PP, the *to*-phrase has no nominal features to be attracted by T. If so, the embedded subject can simply skip over this PP to the subject position.

[11] FLR report that in Korean, a subject anaphor *casin* can be bound by a scrambled object even when not embedded. Apparently, however, this interpretation is possible only when the binder is already a discourse topic (Yoonjung Kang, p.c.). It is possible that *casin* is actually bound by a discourse operator, which happens to corefer with the scrambled object. If so, a subject *casin* should be possible even if the object is unscrambled. I have not yet been able to test this prediction.

I have proposed that the derivations in (20) and (21) are ruled out by the constraint in (3)—but what gives rise to this constraint? Suppose that when the interpretive system is faced with an anaphor and an antecedent in specifiers of the same head, it cannot determine which one should receive the intended reference. An ambiguity (undecidability) arises between the two specifiers, and the derivation becomes uninterpretable. Alexiadou & Anagnostopoulou (1997) propose that a similar effect gives rise to the impossibility of leaving both the subject and the object in their vP-internal base positions. On the assumption that all heads raise covertly and adjoin to Comp, the Case features of v and T, if unchecked, become part of the same complex head at LF. In this configuration, the two Case features are equally eligible to attract the nominal features of the closest DP. An ambiguity arises between the two potential attractors, and the derivation crashes. Let us tentatively suppose that the same principle, Lethal Ambiguity, underlies both these effects and those of the constraint in (3).

Lethal Ambiguity also constrains the binding relations that can arise when one object scrambles over another. For example, if the direct object scrambles over the indirect object in Georgian, it can bind a possessive reflexive embedded in the indirect object (22b), but not a reflexive indirect object (22c) (Léa Nash, p.c.).[12] In (22a), the direct object has not scrambled, so cannot bind the anaphor in the indirect object. Parallel cases can be observed in (23) for Japanese (Yatsushiro 1997 and Takako Aikawa, p.c.).[13]

(22) a.?? Nino-m [*tav-is*$_i$ deda-s] [**bavSv-i**$_i$ anaxa].
N.-ERG self-GEN mother-DAT child-NOM showed-AOR
'Nino showed **the child**$_i$ to *his/her*$_i$ mother.'

b. Nino-m **bavSv-i**$_i$ [*tav-is*$_i$ deda-s] [***t*** anaxa].
'(same as (22a))'

c. * Nino-m **bavSv-i**$_i$ [*tav-is tav-s*$_i$] [***t*** anaxa].
N.-ERG child-NOM self-DAT showed-AOR
'Nino showed **the child**$_i$ to *him/herself*$_i$.'

(23) a.* Hiroshi-ga [*karezisin*$_i$-no hahaoya]-ni [**Osamu-o**$_i$ miseta].
H.-NOM self-GEN mother-DAT O.-ACC showed
'Hiroshi showed **Osamu**$_i$ to *his*$_i$ mother.'

b. Hiroshi-ga **Osamu-o**$_i$ [*karezisin*$_i$-no hahaoya]-ni [***t*** miseta].
'(same as (23a))'

c. * Hiroshi-ga (kagami-o tukatte) **Osamu-o**$_i$ *karezisin*$_i$-ni [***t*** miseta].
H.-NOM mirror-ACC using O.-ACC self-DAT showed
'Hiroshi showed **Osamu**$_i$ to *himself*$_i$ (using a mirror).'

---

[12] A nonsubject otherwise can bind *tavis tav*, for some speakers.

[13] According to Miyagawa (1997), cases like (23b) are fine with the reciprocal *otagai*. It may be that *otagai* has non-anaphoric uses (Hoji 1998, Ueyama 1998).

These examples have essentially the derivation shown in (20): the direct object raises into the maximal projection occupied by the indirect object (APPLP), so no anaphoric dependency can obtain between them.

(22) and (23) are closely analogous to the German examples (13)-(14). In German, however, the direct object appears to be generated in a position c-commanding the indirect object. When the indirect object scrambles over the direct object, no anaphoric dependency can obtain between them (24a), as noted above. If Lethal Ambiguity underlies the ill-formedness of (24a), it is possible that the scrambled indirect object could bind a reciprocal embedded within the direct object. In fact, such binding is possible.[14] On the other hand, the well-formedness of (24b) is unexpected if (24a) is ruled out by a language parameter.

(24) Gestern habe ich…
yesterday have I…

a. * …**den Gästen**$_i$ *einander*$_i$ [***t*** vorgestellt].
the guests-DAT each other-ACC introduced
(lit.) 'Yesterday, I introduced *each other*$_i$ to **the guests**$_i$.' (=14b)

b. …**den Gästen**$_i$ [Freunde von *einander*$_i$] [***t*** vorgestellt].
the guests-DAT friends-ACC of each other introduced
(lit.) 'Yesterday, I introduced friends of *each other*$_i$ to **the guests**$_i$.'

## 7 Conclusion

The evidence presented here suggests that local scrambling can be treated as A-movement, despite some apparent exceptions to the possibility of creating new binding relations. I have argued that these exceptions do not arise from a language-particular binding parameter, but rather fall under a general principle concerning A-movement, including movement to the subject position for Case/EPP. This principle (Lethal Ambiguity) ensures that binding cannot obtain between two DPs occupying specifiers of the same head. Since A-scrambling one DP past another always involves the two DPs occupying specifiers of the same head at some stage in the derivation, Lethal Ambiguity restricts the binding possibilities that arise in A-scrambling, or in A-movement of any kind.[15]

---

[14] Miriam Eckert, Martin Hackl, Martin Kappus, and Beatrice Santorini (p.c.). Not all speakers get this contrast; some find [*X von einander*] strange in general.

[15] An issue not addressed here is the Condition C effects discussed by FLR (1996). They observe that scrambling one object over another repairs a Condition C violation, as one might expect with A-movement, while scrambling an object over the subject does not, as one might expect with A-bar movement. I know of no theory of scrambling that captures this difference without stipulation.

## References


Alexidou, Artemis & Elena Anagnostopoulou. 1997. Postverbal subjects. Paper presented at the Thirteenth Comparative Germanic Syntax Workshop. Cornell University, Ithaca, NY, July 18–19.

Chomsky, Noam. 1995. Categories and transformations. In *The minimalist program*. Cambridge, MA: MIT Press.

Frank, Robert, Young-Suk Lee & Owen Rambow. 1996. Scrambling, reconstruction and subject binding. *Rivista di Grammatica Generativa* 21, 67-106.

Freidin, Robert. 1986. Fundamental issues in the theory of binding. In Barbara Lust, ed. *Studies in the acquisition of anaphora*. Dordrecht: Reidel.

Hoji, Hajime. 1998. *Otagai* is NOT a local anaphor. Ms., University of Southern California.

Mahajan, Anoop Kumar. 1990. *The A/A-bar distinction and movement theory*. Doctoral dissertation, MIT. Distributed by MIT Working Papers in Linguistics.

Marantz, Alec. 1993. Implications of asymmetries in double object constructions. In Sam Mchombo, ed. *Theoretical aspects of Bantu grammar*. Stanford: CSLI Publications.

Massey, Victoria Walker. 1992. *Compositionality and constituency in Albanian*. Doctoral dissertation, University of North Carolina, Chapel Hill. *MITOPL* 3.

Massey, Victoria Walker. 1990. Experiencers, themes, and c-command in Albanian. In Thomas Green & Sigal Uziel, eds., *MIT Working Papers in Linguistics 12: Papers from the second Student Conference in Linguistics*. Department of Linguistics and Philosophy, MIT.

McGinnis, Martha. 1998. *Locality in A-movement*. Doctoral dissertation, MIT. Distributed by MIT Working Papers in Linguistics.

Miyagawa, Shigeru. 1997. Against optional scrambling. *Linguistic Inquiry* 28, 1–25.

Rizzi, Luigi. 1990. *Relativized minimality*. Cambridge, MA: MIT Press.

Rizzi, Luigi. 1986. On chain formation. In Hagit Borer, ed., *The syntax of pronominal clitics: Syntax and Semantics 19*. New York: Academic Press.

Saito, Mamoru. 1989. Scrambling as semantically vacuous A′-movement. In Mark Baltin & Anthony Kroch, eds. *Alternative conceptions of phrase structure*. Chicago: University of Chicago Press.

Snyder, William. 1992. Chain-formation and crossover. Ms., MIT.

Takano, Yuji. 1996. Movement and parametric variation in syntax, Doctoral dissertation, University of California, Irvine.

Ueyama, Ayumi. 1998. *Two types of dependency*. Doctoral dissertation, University of Southern California.

Webelhuth, Gert. 1989. *Syntactic saturation phenomena and the modern Germanic languages*. Doctoral dissertation, University of Massachusetts, Amherst, MA.

Yatsushiro, Kazuko. 1997. Structure within VP in Japanese. In *Japanese/Korean Linguistics 8*. Stanford, CA: CSLI Publications.

Department of Linguistics
University of Pennsylvania
Philadelphia, PA 19104-6305
*marthajo@alum.mit.edu*