SOME THEORETICAL ISSUES IN SYNTAX

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After briefly describing each article contained in the volume under review, this review article closely examines four articles out of the volume, which address important issues in current syntactic theory: Riemsdijk’s article, Lechner’s article, Cecchetto and Percus’s article, and Rizzi and Shlonsky’s article. The discussion includes how Free Relatives, Transparent Free Relatives and Horn Amalgams are unified in terms of grafting, whether head movement can have effects on semantic interpretation, what mechanisms are involved in VP-anaphora and VP-ellipsis, and how the Subject Criterion in the sense of Rizzi (2006) is satisfied in Locative Inversion.*

Keywords: graft, head movement, VP-anaphora, Subject Criterion, Locative Inversion

1. Introduction

The volume under review consists of fourteen articles, preceded by Mara Frascarelli’s introduction. Frascarelli presents a brief review of some fundamental issues on phases in the sense of Chomsky (2000), which might give readers the impression that the articles are assembled under the theme of phases. In fact, only a few articles focus primarily on phases. This volume could be characterized as a collection of papers which investigate various topics on syntax, syntax-semantics interface and syntax-phonology interface, rather than being edited under a unifying theme. However, this does not reduce the value of the volume because many articles address

* I would like to thank two anonymous reviewers for helpful comments on an earlier version of this paper. Thanks also go to Duncan Wotley for suggesting stylistic improvements. All remaining errors are my own.
important issues in the current syntactic theory, although they are not all relevant to phases. Due to space limitations, this review article will not review each of the articles in detail, but pick up four articles from the volume, which discuss different topics: Riemsdijk’s article, Lechner’s article, Cecchetto and Percus’s article, and Rizzi and Shlonsky’s article.¹ Before going to the details of these four articles, the next section devotes itself to describing each article contained in this volume in a very brief way.

2. An Overview of the Volume

The fourteen articles of this volume are grouped into four chapters. The title of the first chapter is Interpretation and structural conditions. Here, in “Grafts Follow from Merge,” Riemsdijk argues that Internal Merge and External Merge expect the third type of Merge, where non-root constituents could be merged with a root constituent which does not dominate them. The structure created with recourse to the third type of Merge is referred to as a ‘graft’ by him.

Lechner’s contribution, “An Interpretive Effect of Head Movement” is important in terms of the theoretical status of head movement. He argues that head movement can have semantic effects and thus concludes that it must take place in narrow syntax, not at PF, contrary to Boeckx and Stjepanović (2001), Chomsky (2000, 2001), and Harley (2005).

Cecchetto and Percus’s article, “When We Do That and When We Don’t: A Contrastive Analysis of VP-ellipsis and VP-anaphora” compares VP-anaphora with VP-ellipsis and argues that the former involves semantic copying while the latter employs PF-deletion, based on English and Italian.

The second chapter, Interpretation in the DP-phase, devotes itself to issues concerning DP. Based on Coptic Egyptian, Reintges and Lipták’s article, “HAVE = BE + PREP(position): New Evidence for the Preposition Incorporation Analysis of Clausal Possession” provides another argument for the hypothesis that the possessive ‘HAVE’ is decomposed into a copular verb and a preposition, as proposed by Kayne (1993, 1994). In Coptic Egyptian, the possessive verb want ‘have’ morphologically consists of wan ‘be’ and ante ‘with.’

Svenonius and Kennedy’s article, “Northern Norwegian Degree Questions and the Syntax of Measurement” pays attention to an interesting construc-

¹ See also Den Dikken (2007) for a recent review of the volume under review.
tion in Northern Norwegian such as (1a).

(1) a. Er du gammel?
    are you old
    ‘How old are you?’
    (Svenonius and Kennedy (under review: 134))

b. Op₁ er du t₁ gammel?

As the gloss shows, (1a) can be interpreted as a degree question with a specific intonation, although there is no overt degree operator. They argue that (1a) involves null operator movement, as illustrated in (1b). An indirect piece of evidence comes from Icelandic, where the operator movement in question is overt. The existence of null operator movement in the construction receives further support from the fact that the construction exhibits island effects. They develop a syntactic and semantic analysis of the construction based on rich empirical facts.

The second chapter also contains Giusti’s article, “Parallels in Clausal and Nominal Periphery” which investigates the left periphery of DP. She argues that there is a landing site for discourse-related movement inside nominal phrases in a parallel way to CP. Let us consider the following contrast in Italian first:

(2) a. le sue lunghe trecce bionde
    the her long braids blond
    ‘her long blond braids’  (Giusti (under review: 166))

b. *le sue bionde trecce lunghe
   the her blond braids long
   ‘her long blond braids’

As shown in (2), lunghe ‘long’ must precede bionde ‘blond’ in an unmarked order. However, interestingly, such ordering restriction disappears when either bionde or lunghe occurs to the left of the possessive adjective sue ‘her’ in (3).

(3) a. le bionde sue lunghe trecce
   the blond her long braids
   ‘her long blond braids’
   (ibid.)

Giusti analyzes (3a) in terms of movement of bionde. In (3a), bionde is base-generated to the right of trecce in a similar way to (2a) and then moves across lunghe, as shown in (4).

(4) le bionde₁ sue lunghe trecce t₁

Similarly, lunghe undergoes movement in (3b). Giusti provides similar arguments based on Albanian and Serbo-Croatian and further extends her
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analysis to Turkish and Hungarian.

The third chapter, *Functional projections in the vP-phase*, includes various topics concerning the verbal domain. Alexiadou, Anagnostopoulou, and Schäfer’s article, “The Properties of Anticausatives Crosslinguistically” addresses the issue as to how to derive the so-called causative/anticausative alternation such as (5).

(5) a. Bill broke the glass.
   b. The glass broke.

They provide arguments against the traditional view that causatives and anticausatives directly derive from one another. Rather, they are not derivationally related. They propose that the core structure of all change of state verbs has both a Voice and a Cause component and that different features of Voice are involved in the formation of causatives, anticausatives and passives. They attempt to capture some parametric variation on anticasatives between English/German and Greek. In Greek, externally caused roots such as destroy and kill can be used as anticausatives, in contrast to English and German. They propose that the locus of this parametric variation is the Voice component. Voice can be either totally absent or realized as non-agentive Voice (Voice[−AG]) in anticausatives. English and German select the former option while Greek selects the latter. On the assumption that Voice is responsible for introducing an external argument, English and German have no way to introduce external arguments, which are required by externally caused roots, in anticausatives. In contrast, Greek is capable of introducing external arguments, which is due to the presence of Voice[−AG].

This chapter also contains Bianchi’s “Number Agreement and Event Pluralization: A Case Study.” Here she challenges the general assumption that number features on verbal categories valued through Agree are semantically irrelevant. She argues that some verbal number agreement plays a crucial role for event pluralization, based on the Italian reciprocal modifier uno dopo l’altro ‘one after the other.’

Hinterhölzl’s article, “The Phase Condition and Cyclic Spell-Out: Evidence from VP-Topicalization” concerns the so-called ‘Infinitivus Pro Participio’ (IPP) effect in West Germanic, where the expected participle in the perfect construction of a restructuring verb is replaced with a bare infinitive, as shown in the following Dutch example:

(6) dat Elsje hem een brief heeft *gewild/willen schrijven
    That Elsje him a letter has wanted/want write
    ‘that Elsje has wanted to write a letter’

(Hinterhölzl (under review: 237))
VP-Topicalization voids the IPP-effect in Dutch and West Flemish but this voiding effect is observed only with perception verbs in German. Hinterhölzl addresses why this is so and attempts to derive the difference from the Phase Impenetrability Condition under the fine structure of verb clusters in the languages.

Poletto’s paper, “Parallel Phases: A Study on the High and Low Left Periphery of Old Italian” argues that Old Italian has focus movement to the left periphery of vP in a parallel way to CP. Poletto suggests that the left periphery of each phase is available for focus movement in Old Italian. Given the assumption that DPs are also phases, it is expected that focus movement would take place within DPs in Old Italian as well. Poletto argues that this prediction is indeed borne out by showing that adjectives and complement PPs can undergo movement into prenominal positions.

The title of the fourth chapter is The CP-phase and subject licensing. Here, Costantini’s article, “Obviation in Subjunctive Argument Clauses and the First-personal Interpretation” reconsiders the so-called obviation effect in Romance subjunctive clauses, exemplified by (7).

(7) Gianni {'1'} vuole che pro{1/2} parta.
    Gianni wants that pro leave-Subj
    ‘Gianni wants *himself/her/him to leave.’

(Constantini (under review: 297))

Costantini takes a closer look at empirical data and presents the following interesting new generalization:

(8) Coindexation between the matrix and the embedded subject is ruled out if the verb carrying subjunctive morphology is a full verb; it is allowed if the verb carrying subjunctive morphology is a functional verb and the full verb is non-finite. (ibid.: 300)

Also in the final chapter is Trecci’s article, “Who is lui? Reference of Italian Overt and Covert Subject Pronouns.” Trecci attempts to capture different behaviors between overt pronouns and covert pronouns from a viewpoint of discourse function. Trecci argues that the function of overt pronouns is to shift topics while that of covert pronouns is to allow the speaker to continue talking about the same referent. Trecci’s proposal captures the following contrast under the out-of-the-blue context:

(9) a. Gianni{1} dice che pro{1/*2} studierà di più il prossimo mese.
    Gianni say.Pres.3sg Comp study.Fut.3sg of more Det next month
b. Gianni\textsubscript{2} dice che lui\textsubscript{1} studierà di più il Gianni say.Pres.3sg Comp 3sg.m study.Fut.3sg of more Det prossimo mese.
next month
‘John says he will study more next month.’

(Trecci (under review: 328))

Following Alexiadou and Anagnostopoulou (1998), Trecci assumes that a constituent which is taken to be a subject is in fact a topic in Italian. Thus, in each of the examples above, Gianni is interpreted as a topic. In (9a), pro obligatorily refers to Gianni. In contrast, (9b) forces a disjoint referent interpretation since the function of the overt pronoun is a topic shifter.\footnote{2}

Rizzi and Shlonsky’s article, “Satisfying the Subject Criterion by a Non-subject: English Locative Inversion and Heavy NP Shift” argues that Locative Inversion in English employs an indirect way to satisfy the ‘Subject Criterion’ in the sense of Rizzi (2006).

Cruschina’s article, “Informational Focus in Sicilian and the Left Periphery” investigates the left periphery in Sicilian. In Sicilian, constituents which bear informational focus undergo movement to the left periphery, as illustrated in (10b) and (11).

(10) a. Chi scrivisti airi?
what write.Past.2sg yesterday
‘What did you write yesterday?’

b. N’ articulu scrissi.
an article write.Past.1sg
‘I wrote an article.’

(Crushina (under review: 368))

(11) Na casa s’ accattnà!
a house Refl.Cl buy.Past.3sg
‘He bought a house!’

(iibid.: 371)

The moved phrase in (10b) expresses new relevant information and is an answer for the wh-phase in (10a). In (11), the surprising/unexpected information undergoes movement in the exclamatory sentence.

\footnote{2 However, it is not clear whether this characterization of overt pronouns can be extended to the following Japanese example:

(i) Taro-wa\textsubscript{1} kare-ga\textsubscript{1} 20-nen maeni katta hon-o imademo motteiru.
Taro-Top he-Nom 20-year ago bought book-Acc still have
‘Taro still has a book which he bought 20 years ago.’

In the example above, the overt pronoun easily refers to Taro, which is marked by the topic marker wa.}
Benincá and Poletto (2004) claim that contrastive focus and informational focus occupy different positions in the left periphery. Cruschina adopts this assumption and further claims that a projection of Topic is between the two focus positions, as illustrated in (12).

(12) (Contrastive)FocP… TopP… (Informational)FocP

The hierarchical relation given in (12) is supported by the contrast between (13b) and (13c).

(13) a. Chi ci scrivisti a Maria?
     what to-her.Cl write.Past.2sg to Maria
     ‘What did you write to Maria?’

b. A Maria na littira ci scrissi.
     to Maria a letter to-her.Cl write.Past.1sg
     ‘I wrote a letter to Maria.’

c.?? Na littira a Maria ci scrissi.
     a letter to Mary to-her.Cl write.Past.1sg
     ‘I wrote a letter to Maria.’ (ibid.: 376–377)

In (13b), na littira ‘a letter’ is interpreted as informational focus and is preceded by a Maria ‘to Maria,’ which is a topic phrase. As shown in (13c), the reversed order is illegitimate. However, if na littira ‘a letter’ is interpreted as contrastive focus, then (13c) becomes acceptable, though it is infelicitous as an answer for (13a). This is also expected under (12).

To sum up, this section has briefly overviewed what issue each article of the volume addresses. In the following sections, the details of the four articles under focus will be reviewed.

3. Grafts

3.1. A Graft Approach to Free Relatives

Riemsdijk (1998, 2000, 2001, 2006) has argued that syntactic nodes can have more than one mother node, contrary to the general assumption. The relevant structure is referred to as a ‘graft.’

Riemsdijk argues that the existence of grafts is expected by External Merge and Internal Merge in the sense of Chomsky (2004). Chomsky (2004) divides Merge into two groups. One is External Merge, which applies to two roots and yields a

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3 The structure under discussion has been also referred to as ‘multiple dominance’ in the literature. See McCawley (1982), Citko (2000, 2005), Gracanin-Yuksek (2007) and references therein for arguments for multiple dominance.
single constituent, as schematically illustrated in (14).

(14) \[
\begin{array}{c}
A \quad B \\
\rightarrow \\
A \quad B \\
\end{array}
\]

The other one is Internal Merge, where one of the targets of Merge is not a root, but rather is part of the other constituent in (15).

(15) \[
\begin{array}{c}
C \\
\downarrow \\
B \\
\downarrow \\
C \\
\end{array}
\]

The movement effect is captured in terms of Internal Merge.

Riemsdijk argues that given the nature of Merge, nothing prevents a non-root constituent from undergoing Merge with some root constituent which does not dominate the former (see Citko (2005) for a similar view), as illustrated in (16).

(16) \[
\begin{array}{c}
A \\
\downarrow \\
\beta \\
\downarrow \\
B \\
\end{array}
\]

In the structure above, D is merged with B, but there is no dominance relation between them. Riemsdijk analyzes Free Relatives such as (17a) in terms of grafting. The structure of (17a) is partially given in (17b).

(17) a. Ich gebe die Belohnung wem eine gebührt.
   'I give the reward (to) who(m) deserves one.'

   (Riemsdijk (under review: 21))
The *wh*-phrase *wem* undergoes Internal Merge and it also undergoes External Merge with the matrix V’ (see also Citko (2000) for a similar analysis). The latter merge creates a graft. Riemsdijk’s analysis nicely captures the so-called case matching effect observed in Free Relatives. The relevant examples are given in (18).

(18) a. Ich gebe die Belohnung *wer/*wem eine verdient.
I give the reward who/whom one deserves
‘I give the reward (to) who(m) deserves one.’
b. *Wem/*wer eine Belohnung gebührt bekommt eine.
whom/who a reward deserves receives one
‘Who deserves a reward receives one.’ (ibid.: 21)

The examples above involve case conflict. In (18a), the matrix verb requires a dative on the *wh*-phrase but the embedded verb requires a nominative. (18b) also exhibits a similar case mismatch. Under the graft approach, this case matching effect is straightforwardly captured because the *wh*-phrase is shared between the matrix clause and the embedded clause. It is natural that neither *wer* nor *wem* satisfies the case requirements simultaneously.

A non-trivial question arises as to how to linearize the structure involving graft. Riemsdijk suggests that (16), where A is a graft tree and β is a host tree, is linearized in the following way:

(19) Linearization seems rather straightforward. There is an asymmetry between the host tree and the graft tree; pronouncing elements of the host tree from left to right has precedence; as soon as we hit a shared element, here D, anything that precedes D in the graft tree A is pronounced first, followed by D itself, followed by whatever follows in A. After D is exhausted, the remainder of β (that is, B) is pronounced.

(Riemsdijk (under review: 37))
In other words, what is included in the graft tree is linearized directly before and after a shared element. The left edge of the graft tree follows whatever precedes a shared element in the host tree and the right edge of the graft tree precedes whatever follows the shared element in the host tree.

Transparent Free Relatives such as (20) are also analyzed in terms of grafting.

(20) a. I ate what they euphemistically referred to as a steak.
   b. There is what I suspect is a meteorite on the front lawn.

(20) Transparency Free Relatives exhibit different properties from regular Free Relatives. Free Relatives have a definite interpretation or free choice interpretation. For example, (21) has two interpretations. One is that I eat the thing that is on the table. The other one is that I eat whatever is on the table, no matter what it is.

(21) I eat what is on the table.

Contrary to (21), the examples in (20) have indefinite readings. (20a) is paraphrased as “I ate a steak—at least they called it a steak.” The indefinite property of the construction is due to the predicate nominal, a steak in (20a). Riemsdijk suggests that in the case of Transparent Free Relatives, what is shared is not a wh-phrase but rather a predicate nominal. Thus, a steak is shared between the matrix clause and the embedded clause in (22a). The structure of (22a) is given in (22b).

(22) a. I ate what they called a steak.
   b. The host tree, that is, the matrix clause of (22b), is linearized in such a way that I < ate < a steak, where ‘A < B’ indicates that A precedes B. On the other hand, the linear order of the graft tree is ‘what < they < called < a steak.’ Recall from (19) that the left edge of the graft tree follows what-
ever precedes a shared element in the host tree. Thus, the left edge of the
graft tree what follows ate.

As Riemsdijk points out, there is another interesting asymmetry between
regular Free Relatives and Transparent Free Relatives with respect to subex-
traction.

(23) a. *Who$_1$ did they copy a photograph that was identified as [a
picture of $t_1$]?
b. *Who$_1$ did they copy whatever was identified as [a picture of
$t_1$]?
c. Who$_1$ did they copy what was identified as [a picture of $t_1$]?

(ibid.: 23–24)

The ungrammaticality of (23a) is due to the extraction out of the is-
land. (23b), which is a regular Free Relative, exhibits the same effect.
Interestingly, Transparent Free Relatives such as (23c) behave differ-
ently. (23c) is grammatical, contrary to (23a) and (23b). Under Riems-
dijk’s analysis, in (23c), the predicate nominal is merged with the matrix
verb. Thus, it is natural that the predicate nominal behaves as a matrix
object in terms of subextraction.

Riemsdijk addresses the issue as to whether his analysis is compatible
with Phase Theory, proposed by Chomsky (2001). Let us consider the der-
ivation of (17) again. Recall that the free relative clause has been already
built up to CP when $wem$ is merged with the matrix $V'$. He assumes that
once one starts building IP, leaving $vP$, $vP$ including $wem$ is immediately
sent to PF-interface and is not accessible to any syntactic computation. Ri-
emsdijk suggests that $wem$ undergoes Internal Merge and projects CP, which
indicates that it is indeed still accessible at the CP-level. There is no cy-
clicity problem with the merger of $wem$ with the matrix $V'$.

However, Riemsdijk points out that this solution is not workable for
Transparent Free Relatives. In the case of Free Relatives, the application
of Internal Merge of the $wh$-phrase at the CP-level plays a crucial role. In
contrast, Transparent Free Relatives involve no Internal Merge of the shared
material at the CP-level, as illustrated in (22). When External Merge ap-
plies to the predicate nominal and the matrix verb, the embedded CP has
been already built up and thus the predicate nominal is supposed to be inac-
cessible. Riemsdijk’s solution is that External Merge, including grafting,
may apply at any stage of the derivation, which allows a stake in (22) to
undergo merge with eat, before the $vP$ is sent off to PF.

Finally, Riemsdijk extends his graft approach to the following construc-
tion, which is referred to as Horn Amalgams:
(24) John is going to, I think it’s Chicago on Saturday.  
\hspace{1cm} (Lakoff (1974: 324))

In the example above, *Chicago* is shared between *to* and the copular verb. Riemsdijk suggests that the construction behaves in a similar way to Transparent Free Relatives with respect to some points and he attempts to unify these points. One of the similarities he suggests is that shared constituents are transparent for extraction. Let us consider the following example, which is reminiscent of the grammaticality of (23c):

(25) Who did they publish, I believe it was a dirty picture of \( t_i \)?  
\hspace{1cm} (Riemsdijk (under review: 35))

In (25), *who* is extracted from the postverbal noun phrase, which indicates that the noun phrase is also an element of the matrix clause.

### 3.2. Problems with Riemsdijk’s Analysis

As illustrated in (17), under Riemsdijk’s approach, the free relative clause is not dominated. That is, (17) has two roots. A non-trivial question arises as to how to interpret the structure which has two roots at the semantic component. The same question is true with Transparent Free Relatives and Horn Amalgams.

The root status of the free relative clause also expects that there should be no structural relation between the free relative clause and the matrix clause. However, the following example indicates that the free relative clause is within the c-command domain of the matrix subject:

(26) Every German likes what he considers peasant food.  
\hspace{1cm} (Riemsdijk (under review: 39))

In (26), the bound pronoun, which is a subject of the free relative clause, is supposed to be c-commanded by the matrix subject. The grammaticality of the example indicates that the free relative clause is supposed to be merged with the matrix clause at some point of the derivation. Riemsdijk notes this problem and suggests a speculative solution. (26) can be interpreted as a regular Free Relative construction and thus *what* is shared between the free relative clause and the matrix clause. *Every German* c-commands *what* within the matrix clause, because *what* is merged with the matrix clause as an object. On the other hand, *what* c-commands *he* in the free relative clause, because *what* moves to [Spec, CP]. He suggests that *every German* c-commands *he* by transitivity.

However, it is suspicious that the relevant transitivity holds among *every German*, *what*, and *he*, on the standard assumption that c-command refers to structural positions. It is crucial that the syntactic position of *what*, which
is c-commanded by *every German*, is different from the syntactic position of what which c-commands he. The former position is the complement of *like* and the latter is [Spec, CP] of the free relative clause. The relevant transitivity should not hold because there is no syntactic position which is c-commanded by the matrix subject position and c-commands the subject of the free relative clause. Thus, the grammaticality of (26) is still problematic for Riemsdijk’s analysis and strongly suggests that the free relative clause is merged with the matrix clause.4

Horn Amalgams such as (24) also pose a problem for Riemsdijk’s analysis. As shown in (19), for the purpose of linearization, it is necessary to figure out which one of the two trees is a host tree or a graft tree. Riemsdijk speculates that the root character of a tree can be detected by some syntactic cues such as the absence of an overt complementizer or a verb in the second position in German. However, this strategy is totally unavailable for (24), where both of the trees are equal with respect to the root status. The two sentences *John is going to Chicago on Saturday* and *I think it’s Chicago* can be used as root sentences or can be embedded. Thus, it is unclear how the linearization algorithm linearizes (24), though it does not know which one is a host tree or a graft tree.

4. Can Head Movement Have Semantic Effects?

4.1. Lechner’s Argument

Lechner attempts to show that head movement can have semantic effects. If his analysis is successful, it leads to a strong argument against the claim that head movement takes place at PF, as suggested by Boeckx and Stjepanović (2001), Chomsky (2000, 2001), and Harley (2005), among others. In this section, Lechner’s analysis will be carefully examined. His crucial example is given in (27), which has a reading where negation is separated from its host, *every*. This reading is referred to as a ‘scope splitting’ reading.

(27) Not every boy can make the basketball team. (Neg > can > ev-

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4 It is also wrongly expected that *every boy* would c-command *his* in the following example:

(i) *What₂ does his₁ mother think every boy₁ likes t₂?*

In (i), *every boy* c-commands *what* before the latter moves. *What* c-commands *his* after the former moves. *Every boy* is supposed to c-command *his* by the relevant transitivity, contrary to fact.
His argument involves three important assumptions. One concerns the restriction on the reconstructability of strong QPs, which is formulated in (28). The constraint is referred to as ‘Strong Constraint’ by Lechner.

(28) Strong Constraint: A strong NP cannot reconstruct below \( T^0 \).

This constraint is empirically motivated by the (anti-)reconstructability of the following examples:

(29) a. Every critic seemed to like the movie. (de re, *de dicto)  

b. I expected everyone not to be there. (every > Neg, Neg > every)

In (29a), the subject has to take wide scope over the raising predicate *seem*, which leads to the absence of ‘de dicto’ reading. In order to obtain the relevant ‘de dicto’ reading, it is necessary to reconstruct the subject into the embedded clause, which is below the matrix T. This is prohibited by (28). On the other hand, in (29b), the ECM subject can take narrow scope with respect to negation in the embedded clause. Lechner assumes that the ECM subject has to move up to the matrix clause. The Strong Constraint does not prevent the ECM subject from undergoing reconstruction into the embedded [Spec, TP], as illustrated below:

(30) I expected \([\text{XP everyone } [\text{VP expected } [\text{NegP not } [\text{TP everyone to be...}]]]]\)  

In (30), there is no T between the surface position of *everyone* and the reconstruction site, that is, the embedded [Spec, TP].

The second assumption concerns the position of modals. Let us consider the following examples, first:

(31) a. John can\(_1\) not \( t_1 \) come along today. (not > can, ??can > not)  
b. He can\(_1\) always \( t_1 \) count on me. (always > can, *can > always)  
c. He can\(_1\) never \( t_1 \) do that. (never > can, *can > never)

The narrow scope interpretations of the modals in (31) indicate that the base-generated positions of the modals have to be below *not, always, and never*. The narrow scope interpretations in question are obtained by the reconstruction of the modal verbs.

The third assumption concerns how to interpret negative NPs. On the assumption that negative NPs such as *not every boy* have a negative feature
[+neg], Lechner adopts the following hypothesis:

(32) a. Syntax: [+neg] must be in the local scope of the possibly abstract negation Not.

b. Semantics: [[[Not every NP]]] = [[[every NP]]]

(32a) requires negative NPs to be c-commanded by the abstract negation Not. (32b) guarantees that the negative feature [+neg] of a negative NP is eliminated somehow and the negative NP is interpreted as its contradictory. Thus, not every NP is interpreted as every NP, although it is a morphologically negative NP.

Given these assumptions, Lechner argues that (27) has the following structure:

(33) AgrSP<s, t>

[not every boy]PF NegP<s, t>

[[Not]] Neg'<s, t>

[[can]]<s, t> TP<s, t> TP<s, t> TP<s, t> TP<s, t>

[[not every boy1]] T<s, t> T<s, t> T<s, t> T<s, t>

λ1 T<s, t> t2 vP/VP<s, t> make the team

Strong Constraint → *[[not every boy1]]

Lechner makes two more assumptions. One is that the modal verb is base-generated under T and moves to the head of NegP. The other one is that there are two derived positions for subjects, [Spec, TP] and [Spec, AgrSP]. In order for the subject to take narrow scope with respect to negation, it has to undergo reconstruction. However, given the Strong Constraint, the subject cannot be reconstructed into [Spec, vP/VP] because it is below T. Thus, [Spec, TP] is the only possible reconstruction site. Crucially, [Spec, TP] is higher than the base-generated position of the modal. The wide scope reading of the modal over the subject requires the modal to be interpreted at the higher position, which indicates that the head movement of the modal makes a contribution to semantic interpretation. This strongly
argues against the view that head movement takes place at PF because under such a view, head movement has no way to have semantic effects.

4.2. Reconsidering the Strong Constraint

As illustrated in (33), the Strong Constraint prevents the subject from undergoing reconstruction to [Spec, vP/VP], which is below T. Without the Strong Constraint, the lowest copy of the subject at [Spec, vP/VP] could interact with the lower copy of the modal for the narrow scope interpretation of the subject with respect to the modal. This would nullify Lechner’s argument, because the relevant reading of (27) would be obtainable, without appealing to the claim that head movement can have semantic effects. It is obvious that the Strong Constraint plays a crucial role for his analysis. In this subsection, it will be shown that the Strong Constraint remains a matter of debate, although it is crucial.

Recall that the Strong Constraint is established to capture the reconstruction asymmetry observed in (29), repeated below:

(34) a. Every critic seemed to like the movie. (de re, *de dicto)
   b. I expected everyone not to be there. (every > Neg, Neg > every)

One might wonder if the constraint could be formulated in a different way from (28). In fact, Lechner presents another version of the Strong Constraint given in (35).

(35) Strong Constraint (1st version)

Strong QPs do not reconstruct below raising predicates.

(Lechner (under review: 50))

Lechner refers to (35) as ‘the first version of the Strong Constraint’ because he presents (35) before (28). The reason he abandons (35) is that (35) fails to expect the narrow scope reading of everyone in (34b). In order for everyone to take narrow scope, it has to undergo reconstruction across the lower copy of expect, as illustrated in (36). (Lechner assumes that expect is also a raising predicate.)

(36) I expected [XP everyone [VP expected [NegP not [TP everyone to be...]]]]

The reconstruction of everyone would be wrongly blocked by the constraint given in (35) and thus Lechner adopts the constraint given in (28), rather than (35).

Lechner’s crucial assumption is that ECM subjects obligatorily raise to the matrix clause. If the ECM subject can stay in the embedded [Spec, TP],
then the first version of the Strong Constraint in (35) would allow everyone to undergo reconstruction to its base-generated position, which is below not, because no raising predicate intervenes between the surface position and the reconstruction site, as illustrated below:

\[(37) \quad \text{I expected} \left[ TP \text{ everyone not to everyone be there} \right] \]

Lasnik (1999) independently argues that ECM subjects raise optionally. Under his analysis of (34b), when the embedded subject stays in the embedded clause, either everyone or not can take wide scope over the other. On the other hand, when the embedded subject raises to the matrix clause, it obligatorily takes wide scope. In other words, (34b) is derivationally ambiguous. Lasnik points out that this derivational ambiguity disappears in (38a), which employs make out as an ECM predicate, rather than expect.

\[(38) \quad \begin{array}{ll}
\text{a.} & \text{The mathematician made every even number out not to be the sum of two primes. (every > not, *not > every)} \\
\text{b.} & \text{The mathematician made out every even number not to be the sum of two primes. (every > not, not > every)} \\
\end{array} \]

(Lasnik (1999: 201))

Crucially, the ECM subject is allowed to occur between make and out, as shown in (38a), in addition to the make out NP order in (38b). Lasnik observes that there is an interpretive difference between (38a) and (38b). In (38a), every even number, which precedes out, has to take wide scope over not. On the other hand, (38b) is ambiguous in a similar way to (34b). He claims that the ECM subject raises to the matrix clause in (38a) while the ECM subject stays in the embedded clause in (38b). It is important to note that the absence of the narrow scope interpretation of every even number in (38a) is problematic for the Strong Constraint in (28) because it is expected that it could undergo reconstruction below negation in a similar way to (36).

If Lasnik’s claim that ECM subjects optionally raise to the matrix clause is correct, the first version of the Strong Constraint in (35) is consistent with (34). If (35) is adopted, nothing prevents the subject from undergoing reconstruction below T in (33) anymore, which undermines Lechner’s argument.\(^5\)

\(^5\) It is worth noting that the contrast in (38) is controversial, as pointed out by Bošković (2002). Norbert Hornstein (p.c.) suggests to him that negation must take narrow scope in both of the examples for him. Of course, his judgment cannot be expected under the first version of the Strong Constraint given in (35), combined with the proposal that ECM subjects optionally raise. Crucially, however, the relevant judgment cannot be
It should be emphasized that the issues concerning (34) are still controversial, which would weaken the motivation for the Strong Constraint in (28). At this point, it is not so clear if (28) is convincingly motivated, on the basis of (34). To the extent that the status of the Strong Constraint is not clear, Lechner’s argument would be not so convincing.

The present review article investigates an alternative way to derive the scope interpretation of (27), abandoning the Strong Constraint in (28). An alternative analysis of (27) is given below:

(39)

\[
TP \\
[\text{not every boy}_1] \\
\lambda_1 T' \\
[\text{can}_2] \quad \text{NegP} \\
[\text{Not}] \quad \text{ModalP} \\
\text{t}_2 \quad \nuP \\
\text{t}_1 \\
\text{make the team}
\]

Lechner assumes that the modal is base-generated under T and moves to the head of NegP, but there seems to be no compelling evidence in favor of this assumption. I assume that the modal verb is merged with νP and it projects its own category, which is referred to as ModalP in this review article. It finally moves to T, crossing the abstract negation. This assumption is supported by the narrow scope reading of the modal verb in (31a), which indicates that the modal verb stays at a lower position than negation at some point of the derivation. If the modal were base-generated under T, the relevant narrow scope would be not expected.\(^6\) I also assume that the position of the relevant abstract negation is between ModalP and TP. The expected under Lechner’s analysis either. The Strong Constraint given in (28), combined with the assumption that ECM subjects undergo obligatory raising would expect that every even number could take narrow scope in (38b). That is, the judgment on (38b) given by speakers like Norbert Hornstein is problematic, whichever version of the Strong Constraint is adopted. I leave this speaker variation for future research.

\(^6\) A question arises as to why the modal has to take narrow scope with respect to negation in (31a) under the structure given in (39). This obligatory reconstruction effect is naturally explained if head movement takes place at PF.
reconstruction of the modal and the subject yields the interpretation ‘Not >
can > every boy.’ Crucially, the base-generated position of the modal is
relevant to the scope interpretation. This alternative is consistent with the
claim that head movement has no effect on semantic interpretation. Un-
der the present alternative, it is not necessary to postulate two syntactic
positions for subjects, as Lechner does. Recall that his analysis needs to
postulate two syntactic positions for subjects, [Spec, AgrSP] and [Spec,
TP]. The former is needed as a surface position of the subject and the lat-
ter is needed as a reconstruction site above T. However, there seems to be
no independent evidence for postulating the two subject positions.

To sum up, under Lechner’s analysis, the Strong Constraint is moti-
vated on the assumption that ECM subjects obligatorily move to the matrix
clause. This assumption is still controversial, as Lasnik (1999) empirically
argues. Given this controversy, it seems too hasty to conclude that head
movement can have effects on semantic interpretation.

4.3. Reconsidering Lechner’s Argument Based on Negative Polarity Items

Lechner provides another argument in favor of his claim, based on Neg-
ative Polarity Items (henceforth, NPIs). First, let us consider the following
contrast:

(40) a. Not everyone who works on negation has ever read any Jes-
persen. (not everyone > NPI) (Horn (2000: 165))
b. *Not everyone can ever be on the team. (not (> NPI) > can
(> NPI) > everyone (> NPI)) (Lechner (under review: 56))

In (40a), the negated universal not everyone licenses the NPI if it is inter-
preted on the surface position. However, the licensing becomes impos-
sible if negation is interpreted separately from everyone, as exemplified in
(40b). (40b) is ungrammatical in all scope splitting interpretations. Lech-
ner attempts to unify the contrast above with the following contrast:

(41) a. *It is not possible that everyone will ever be on the
team. (not > every > NPI)
b. It is not possible that you will ever be on the team. (not
possible > NPI) (ibid.: 57)

In (41a), the universal quantifier intervenes between not and ever (cf. Line-
barger’s (1980) Immediate Scope Constraint). On the other hand, (41b),
which has no intervener between not and ever, is grammatical. Lechner
argues that if the reconstruction site of the subject is between the abstract
negation and ever in (40b), (40b) will be excluded in a similar way to
(41a). He first pins down the position of ever, based on some ordering re-
stirction between ever and always.

(42) a. No one source is ever always authoritative.
   b. *No one source is always ever authoritative. (ibid.: 56)

Lechner suggests that the contrast above indicates that ever has to be base-generated in a higher position than always. Also, as shown in (31b), repeated as (43), always has to take wide scope over can, which indicates that always is higher than the base-generated position of can.

(43) He can always count on me. (always > can, *can > always)

Given that can is base-generated under T, Lechner assumes that always is a TP-adjunct. Combining this assumption with the assumption that ever has to be base-generated in the higher position than always, he suggests the following assumption:

(44) Ever is generated as a TP-adjunct or an adjunct above TP.

(44) (ibid.: 58)

Lechner argues that not everyone undergoes reconstruction into [Spec, TP] and intervenes between Not and ever, as shown in (45), which leads to the ungrammaticality of (40b).

(45) [AgrSP Not everyone 1 [NegP Not [Neg′ can2 [TP t1 [TP ever [… t2 … t1
   ...
   []]]]]]

If the subject undergoes reconstruction below ever, as illustrated in (46), it never intervenes between Not and ever, but this reconstruction is prohibited by the Strong Constraint because the reconstruction site is below T.

(46) [AgrSP Not everyone 1 [NegP Not [Neg′ can2 [TP t1 [TP ever T [… t2 …
   t1 ...
   []]]]]]

It is true that the reconstruction in (45) leads to the intervention effect by not everyone, but it is doubtful that (45) is the only possible syntactic representation of (40b). I would like to point out that the following structure would be also a possible syntactic representation of (40b) under Lechner’s analysis:

(47) [AgrSP Not everyone 1 [NegP Not [Neg′ can2 [TP ever [TP t1 [… t2 … t1
   ...
   []]]]]]

In (47), the position of ever is higher than [Spec, TP], which is consistent with Lechner’s assumption that ever is a TP-adjunct or an adjunct above TP. Nothing would prevent (40b) from being analyzed as (47). In (47), the reconstructed subject does not intervene between ever and Not. Thus, it
is wrongly expected that (40b) would be grammatical.

One might wonder how to capture the ungrammaticality of (40b) under the alternative analysis presented in this review article. Unfortunately, there is no explanation for (40b). Under the present alternative analysis, the reconstruction site of the subject is [Spec, vP] for narrow scope with respect to the modal, as illustrated in (39). In order for the reconstructed subject to intervene between negation and ever, the position of ever is supposed to be below [Spec, vP]. However, this is incompatible with (42) and (43). Recall that Lechner suggests that ever has to be higher than always, which in turn should be higher than the base-position of can. Under the present analysis, however, the base-position of can is higher than [Spec, vP] in (39), which leads to a contradiction.

To sum up, neither Lechner’s analysis nor the alternative analysis explains the ungrammaticality of (40b). It is unfortunate that the nature of the ungrammaticality of (40b) is still mysterious, but what is important for the discussion in this subsection is that the ungrammaticality of (40b) does not support Lechner’s claim that head movement can have effects on semantic interpretation.

4.4. Summary
This section has examined Lechner’s claim that head movement can have effects on semantic interpretation, based on the scope splitting interpretation in (27). The Strong Constraint in (28) plays an important role for his analysis, but it has been pointed out that the motivation of the Strong Constraint in (28) is not so convincing. This section has presented an alternative analysis of (27), without recourse to the Strong Constraint in (28), which is consistent with the claim that head movement does not have effects on semantic interpretation. The alternative analysis has no explanation for the ungrammaticality of (40b), but Lechner’s explanation also needs to be reconsidered.

5. VP-ellipsis and VP-anaphora
5.1. A Semantic Copying Approach to VP-anaphora
This section reviews Cecchetto and Percus’s paper, which investigates what kinds of mechanisms are involved in VP-ellipsis and VP-anaphora. It has been observed in the literature that VP-anaphors such as do that can take non-linguistic antecedents. For example, without too, (48) is naturally interpreted as (49a) under the context given in (49b).
(48) If you order a pizza then I will do that (too).

(Cecchetto and Percus (under review: 72))

(49) a. If you order a pizza, then I will pick up your stuff.
b. John has dropped all of his papers on the restaurant floor and is trying to pick them up while the waiter is patiently waiting for his order.

(ibid.: 73)

However, Cecchetto (2004) argues that VP-anaphors can have the same denotation as another VP present at LF when there is no clear extralinguistic source for them, based on Italian VP-anaphora. Cecchetto and Percus extend this approach to do that. Let us consider the following contrast:

(50) a. I declared everyone who imagined I would do that to be present.
b. #I declared everyone who imagined I would do that was present. (# under the relevant meaning)

(50a) can have the interpretation where for every x such that x imagined, I would declare x to be present, I declared x to be present. In contrast to (50a), (50b) cannot be naturally interpreted as “I declared that everyone who imagined I would declare him to be present was present.” The contrast is reminiscent of the contrast observed with VP-ellipsis such as (51).

(51) a. John believes every suspect Bill does [e] to be guilty.
b. *John believes that every suspect Bill does [e] is guilty.

In the examples above, ACD (Antecedent Contained Deletion) resolution is contingent upon the availability of QR. In (51a), every suspect Bill does is allowed to undergo QR out of the matrix VP, which becomes a possible antecedent for the ellipsis site. In contrast, in (51b), the ACD gap is in the embedded subject. Since QR is clause-bounded, the embedded subject QP, which contains the ellipsis site, fails to move out of the matrix VP. The infinite regress problem cannot be resolved in (51b).

Cecchetto and Percus give a similar explanation for (50). In (50a), the ECM subject, which contains do that, undergoes QR out of the matrix VP, which is the antecedent of do that. (50a) has the following representation at LF:

(52) [$IP [DP everyone who [1 [IP $t_1$ imagined I would do that]] 1 [IP I [declared $t_1$ to be present]]]]

They assume with Heim and Kratzer (1998) that LF contains adjoined binder indices which function as lambda abstraction. The index at the top of the relative clause is the same as that of the trace of the moved ECM subject everyone who imagined I would do that. They claim that in (52), do that obtains the same denotation as the matrix VP, ‘λg. the property of
declaring g(1) to be present’ through semantic copying. They suggest that “the VP-anaphor, whose denotation is the same as that of the remnant VP, ‘behaves’ as though it contained a variable bound by the binder index at the top (Cecchetto and Percus (under review: 76)).”

Cecchetto and Percus analyze *do that* as an unanalyzed expression whose meaning can be identified with the meaning of another VP. They argue that the semantic copying approach to VP-anaphora captures the ungrammaticality of (53a).

(53) a. *I examine every student (that) John does that.
   b. I examine every student John does. (ibid.: 80)

Their explanation for (53a) is that the relative operator needs to be associated with its variable, but *do that* cannot contain a trace of the relative operator because it is an unanalyzed expression. Thus, the relative operator in (53a) has nothing to be associated with. In contrast, in (53b), the ellipsis site can contain a trace of the relative operator because the ellipsis site in (53b) has an internal structure. Under a PF-deletion approach, (53b) is analyzed as (54).

(54) I examine every student $O_{p_1}$ John does [examine $t_x$]

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7 Cecchetto and Percus provide an empirical argument in favor of the PF-deletion approach to VP-ellipsis. They assume that the material which is pied-piped by a *wh*-phrase is interpreted at the base-position. Thus, (ia) has the LF representation given in (ib).

(i) a. I know whose mother Mary talked to $t$.
   b. I know who Mary talked to *'s mother.

On this assumption, (iia), which involves VP-ellipsis, is interpreted as (iib) at LF.

(ii) a. I know whose mother Mary talked to $t$, and whose mother Bill didn’t.
   b. I know who Mary talked to *'s mother, and who Bill didn’t talk to *'s mother.

In (iib), after the reconstruction of the pied-piped material at LF, the antecedent VP in the first conjunct, i.e. *talk to *'s mother*, is copied into the second conjunct under a LF-copying approach. They argue that the LF-copying approach wrongly expects that (iiiia) could be interpreted as (iiib) in a similar way to (ii), that is, with recourse to the copying of *talk to *'s mother* into the second conjunct.

(iii) a. *I know whose mother Mary talked to $t$, and who Bill didn’t.
   b. I know who Mary talked to *'s mother, and who Bill didn’t talk to *'s mother.

Under a PF-deletion approach, in contrast, in order for (iiiia) to be interpreted as (iiib), only *who* has to undergo *wh*-movement, leaving behind *'s mother. However, this is morpho-phonologically prohibited. Also note that the second conjunct of (iiiia) cannot be interpreted as “who Bill didn’t talk to *?” either. This is due to the identity condition on ellipsis because the antecedent VP in the first conjunct is *talk to *'s mother* at LF. Based on the discussion above, Cecchetto and Percus adopt the PF-deletion analysis for VP-ellipsis.
In (54), the relative operator is successfully associated with the trace within the ellipsis site.

Importantly, their analysis postulates some constraint which requires a relative operator to be associated with its trace at syntax. The constraint should be syntactic. Otherwise, there would be no way to exclude (53a). Semantically speaking, there should be nothing wrong with (53a) because *do that* could have the same denotation as the matrix VP, that is, *examine* after the object undergoes QR. Recall from the discussion in (50) that *do that* can have the same denotation as the matrix VP, which contains a variable. In a similar way, in (53a), *do that* could have the same denotation as the matrix VP. In order to exclude (53a), the relevant constraint should be applied at syntax, not at semantics.

A conceptual question arises as to why the constraint should be syntactic. It makes sense that operators should be associated with a variable at semantics. Otherwise, the structure would be uninterpretable. However, it is not so straightforward what forces operators to be associated with a trace at syntax. A more principled explanation should be investigated in the future.

5.2. Apparent VP-ellipsis as VP-anaphora

Cecchetto and Percus pay attention to some interesting variations on VP-ellipsis among speakers. Let us consider the following examples:

(55) a. I examined every boy who asked me to.
    b. I examined every boy who asked me to *do that*.

(55a) has been reported as a grammatical example in the literature, but some speakers, including Orin Percus, find (55a) unacceptable. These speakers are referred to as speakers like O.P. in this review article. For speakers like O.P., (55a) cannot be interpreted as “I examined every boy who asked me to examine him,” unlike (55b). That is, (55a) cannot have the following LF representation:

(56) [[every boy who [I asked me to examine him]], 1 [I examined *t*]]

On the assumption that an elided VP must be ‘sufficiently identical’ to its antecedent VP, they suggest that for speakers like O.P., pronouns do not count as sufficiently identical to traces.\(^8\) (55a) is ungrammatical for speak-

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\(^8\) In (56), the pronoun in the relative clause *him* and the trace in the antecedent VP do not share a binder index. In cases where a trace and a pronoun share a single binder
ers like O.P. because the elided VP and its antecedent VP are not sufficiently identical.

Concerning the variation on (55a), their speculation is that even for the speakers who accept (55a), the VP-ellipsis analysis given in (56) is also unavailable because of the relevant identity condition. Instead, a null counterpart of do that is available for the speakers, unlike speakers like O.P. They suggest that there are some cases in Italian where apparent VP-ellipsis is analyzed as covert VP-anaphora. It has been reported that VP-ellipsis is more restricted in Italian than in English. For example, (57) is ungrammatical, although its counterpart in English is grammatical.

(57) *Tu hai mangiato la pizza e anche io ho.  
You have eaten the pizza and also I have  
‘You have eaten the pizza and also I have.’

(Ceccheto and Percus (under review: 88))

However, there exist some instances of apparent VP-ellipsis in Italian. (58) is one of them, where the complement of vorrebbe ‘want’ is missing.

(58) Vorrei mangiare la pizza e anche Gianni vorrebbe.  
want-to eat the pizza and also Gianni want  
‘(I) want to eat the pizza and also Gianni wants.’ (ibid.)

Cecchetto and Percus’s position is that Italian has no VP-ellipsis at all and they analyze (58) in terms of covert VP-anaphora. There is good independent evidence for the null VP-anaphora analysis of (58). In (58), the overt VP anaphor farlo can follow vorrebbe in the second conjunct.

Cecchetto and Percus also investigate why Italian does not allow VP-ellipsis. They adopt Merchant’s (2001) proposal that ellipsis constructions involve a silent head E, which takes an elided category as its complement. In the case of VP-ellipsis such as (59), E sends to PF an instruction that the complement of E, i.e. VP should be unpronounced at PF.

(59) I like everyone Bill does E [like t]

They suggest that the absence of VP-ellipsis in Italian is due to the presence of V-to-I movement in the language. In order for VP-ellipsis to take place in Italian, V has to move to I across E, which violates the Head Movement index, they can count as sufficiently identical. (i) is a relevant example.

(i) I examined every boy before you did.

(i) has the following representation at LF through an application of QR to every boy:

(ii) [every boy [I examined t₁ before you did [examine him₁]]]]

In (ii), the trace and him share a single binder index. Speakers like O.P. find (i) acceptable, in contrast to (55a).
Constraint. In contrast, English has no V-to-I movement and thus nothing blocks VP-ellipsis. However, as pointed out by Cecchetto and Percus themselves, the analysis is too simple. There are some languages which have both verb movement and VP-ellipsis (cf. McCloskey (1991) and Goldberg (2005)). The issue on parametric variation is left for future research.  

6. The Subject Criterion and Locative Inversion

6.1. Rizzi and Shlonsky’s Analysis

Rizzi (2006) puts forward the hypothesis that once a phrase moves to a position dedicated to scope-discourse semantics (a criterial position in his terminology), it cannot move from the position anymore. He attempts to deal with subject positions as criterial positions, like the landing site of wh-movement and argues that they also exhibit frozen effects. His approach captures the so-called complementizer-trace effect exemplified below:

(60) *Qui$_1$ crois-tu que $t_1$ gagnera la course?  
Who think-you that will-win the race  
‘Who do you think will win the race?’

He postulates a functional head Subj, which is higher than T. [Spec, SubjP] has to be occupied, which is referred to as the Subject Criterion. In (60), the wh-phrase moves to the embedded [Spec, SubjP], from which it cannot move anymore.

Rizzi and Shlonsky (2007) propose another strategy to satisfy the Subject Criterion. Under the fine structure of the left periphery, which has been developed since Rizzi (1997), Fin is the lowest head of the complementizer system and is merged with SubjP. Regularly, the direct merger of Fin with SubjP is unable to satisfy the Subject Criterion. However, Rizzi and Shlonsky (2007) propose that Fin is capable of satisfying the Subject Criterion through a direct merger with SubjP, when it is endowed with phi-features. This option is instantiated in subject relativization in French, as illustrated in (61).

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9 Japanese has no overt evidence for V-to-I movement and lacks VP-ellipsis in (i).

(i) *Taro-ga ringo-o tabeta. Hanako-mo sita.  
Taro-Nom apple-Acc ate Hanako-also did  
‘Taro ate apples. Hanako did too.’

(61) a. L’homme qui est venu.
   ‘the man who has come’

b. L’homme [Op₁ qu [FinP t₁ -i phi [SubjP Subj est venu t₁]]]

In (61), they take -i of qui as a realization of Fin which is endowed with phi-features, based on Taraldsen (2001). Fin satisfies the Subject Criterion by undergoing merger with SubjP without appealing to any movement to [Spec, SubjP]. The phi-features of Fin are uninterpretable and they must be licensed (or valued). The operator for relativization moves to [Spec, FinP] to license the phi-features of Fin and undergoes further movement to its final destination ([Spec, ForceP] or [Spec, RelP]). It is crucial that what satisfies the Subject Criterion is not the null operator but Fin. If the null operator moved to [Spec, SubjP], it could not undergo further movement for relativization because of the Subject Criterion. Recall that a phrase which has moved to a criterial position is frozen in place.

Rizzi and Shlonsky extend this indirect way of satisfying the Subject Criterion to Locative Inversion such as (62).

(62) In the room was sitting my old brother.

In the construction under investigation, Fin is endowed with special nominal features [+Loc]. The derivation of (62) is given below:

(63) a. Fin [SubjP Subj T be [sitting [my old brother] [in the room]]]
   b. [FinP [in the room], Fin [Subj T be [sitting [my old brother] t₁]]]
   c. [in the room]₁…[FinP t₁ Fin [Subj T be [sitting [my old brother] t₁]]]

Fin is merged with SubjP, which satisfies the Subject Criterion in (63a). Then, the locative phrase moves to [Spec, FinP] to license the nominal features of Fin in (63b) in a similar way to subject relativization in French. Rizzi and Shlonsky claim that Fin is not a criterial head and thus it does assign any special interpretive property to its specifier. Finally, the fronted locative PP moves to [Spec, TopP] or to any other criterial position in (63c).

As observed in Bresnan (1977), Locative Inversion exhibits the so-called that-trace effect, as exemplified in (64), in a parallel way to the subject extraction in the non-inverted construction such as (65).

(64) In which villages₁ do you believe (*that) t₁ can be found the best examples of this cuisine?

(Rizzi and Shlonsky (under review: 348))
Rizzi and Shlonsky (2007) suggest that “under the natural assumption that expletive and argument functions cannot be performed by the same element, *that* cannot simultaneously be the head of the declarative—a clausal argument—and function as an expletive-like surrogate subject to formally satisfy the Subject Criterion.” Thus, *that* is incompatible with the extraction of the locative phrase in (64) and that of the embedded subject in (65).

6.2. Heavy NP Shift and Locative Inversion

It has been observed that subjects cannot undergo Heavy NP Shift, as shown in (66).

(66) *$t_1$ will give a book to John—[the author whom I decided to recommend for the literary prize].

(Rizzi and Shlonsky (under review: 350))

In contrast to the non-inversion construction such as (66), postverbal subjects can undergo Heavy NP Shift in Locative Inversion. The relevant example is given below:

(67) Into the room walked $t_1$ carefully—[the students in the class who had heard about the social psych experiment that we were about to perpetrate].

(ibid.: 351)

Rizzi and Shlonsky argue that Rizzi’s (2006) Criterial Freezing gives a straightforward explanation for the ungrammaticality of (66). The subject moves to [Spec, SubjP], where it is frozen in place. In contrast, the Subject Criterion is satisfied by the merger of Fin with SubjP without appealing to any movement in (67). Nothing blocks the application of Heavy NP Shift to the postverbal subject.

Rizzi and Shlonsky also attempt to capture the observation that Heavy NP Shift saves illegitimate cases of Locative Inversion, which is due to Culicover and Levine (2001). Let us consider the following contrast:

(68)  a. *In the room slept Robin fitfully.

     b. In the room slept $t_1$ fitfully [the students in the class who had heard about the social psych experiment that we were about to perpetrate].

(ibid.: 351)

In (68a), the unergative verb is incompatible with Locative Inversion. In contrast, (68b) is grammatical, where the postverbal subject undergoes Heavy NP Shift. Rizzi and Shlonsky claim that the movement of the locative phrase in (68a) induces a locality violation, particularly a violation of Relativized Minimality in the sense of Rizzi (2004), according to which
intervention effects arise between positions bearing features of the same class. They assume that [+Loc] belongs to phi-features. The locative phrase is attracted by the nominal Fin^+Loc, but the postverbal subject Robin is closer than the locative phrase and intervenes the movement of the locative phrase, as illustrated in (69).

(69)    Fin^+Loc Subj T^Phi [Robin v sleep in the room fitfully]

In contrast, (68b) involves the following derivation:

(70) a. [FinP [in the room]_1 Fin^+Loc Subj T^Phi [[the students...] v sleep t_1 fitfully]]

b. [FinP [in the room]_1 Fin^+Loc Subj T^Phi [t_2 v sleep t_1 fitfully]] [the students...]_2

In the same way as (68a), the locative phrase undergoes movement to [Spec, FinP] in (70a). Additionally, in (70b), the external argument of the verb undergoes Heavy NP Shift, adjoining to FinP. Rizzi and Shlonsky assume with Chomsky (2001) that traces are not visible and do not count in the computation of locality. Thus, the trace created by Heavy NP Shift does not intervene in the dependency between Fin and the locative phrase. Alternatively, they suggest that whole chains are relevant for calculation of locality. In the case of (70), a part of the chain intervenes in the dependency, because the landing site of Heavy NP Shift is higher than the moved locative phrase. In either of the analyses, (68b) induces no intervention effect. It is crucial to note that their analysis requires a representational view of locality. In other words, Relativized Minimality should be evaluated after movement takes place. Under a derivational view of locality, Relativized Minimality would be violated by the movement of the locative phrase to [Spec, FinP] in (70a).

The same effect is also observed in the following contrast:

(71) a. *Into the room appeared to be walking Robin slowly.

b. Into the room appeared to be walking a very large caterpillar.

(Rizzi and Shlonsky (under review: 355–356))

As shown in (71a), Locative Inversion is incompatible with raising constructions. In contrast, (71b) is grammatical, where the postverbal NP

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10 It has been observed in the literature that there are some examples where Locative Inversion occurs in the raising construction. The following is one example:

(i) On that hill appears to be located a cathedral. (Bresnan (1994: 96))
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is heavy. Rizzi and Shlonsky assume that Fin is not available for raising infinitives because they have no C-system. Recall that Fin plays a crucial role for the availability of Locative Inversion. Since Fin is not available, the locative phrase is not capable of moving within the infinitival clause in (71a). Rather, Robin is supposed to be attracted by the embedded T, as shown in (72).

(72) Robin₁ T-\text{t} \text{ Phi be} \ [t₁ \text{ walking into the room slowly}]

In order to derive (71a), it is necessary to move the locative phrase to [Spec, FinP], as illustrated in (73).

(73) Into the room₂ Fin Subj appear [Robin₁ T-\text{t} \text{ Phi be} \ [t₁ \text{ walking } t₂ \text{ slowly}]]

However, Robin intervenes in the movement of the locative phrase in the same way as (69). In (71b), a very large caterpillar, which is an interven-er, is heavy enough to undergo Heavy NP Shift. The application of Heavy NP Shift salvages a violation of Relativized Minimality.

6.3. Examining Rizzi and Shlonsky’s Analysis

As has been reviewed in section 6.1, Rizzi and Shlonsky unify Locative Inversion with the subject extraction in terms of the Subject Criterion. The parallelism between the two constructions concerning the that-trace effect is nicely captured. However, their explanation for the that-trace effect in Locative Inversion faces a serious problem. Let us consider the following example, which is cited by Rizzi and Shlonsky themselves:

(74) John says that near his house lies a buried treasure.

(Stowell (1981: 271))

Locative Inversion can take place in the embedded clause which is headed by that. Rizzi and Shlonsky’s analysis expects that the example would be excluded in a similar way to (64) because that is incompatible with Fin endowed with phi-features. There is no way to generate (74) under their analysis. In order to rule in (74), they would have to abandon the assumption that that is incompatible with Fin endowed with phi-features. This problem goes beyond the scope of Locative Inversion, however. This is because once they give up this assumption, they would have to come up with an alternative analysis of that-trace effects in general.

Furthermore, it is not clear how to derive the following example under

It is unclear how Rizzi and Shlonsky’s analysis treats the case of (i) as (i) would be wrongly excluded in the same way as (71a).
Rizzi and Shlonsky’s analysis:

(75) In what room is sitting my old brother?

(Rizzi and Shlonsky (under review: 344))

Rizzi and Shlonsky claim that the preposed locative phrase moves to [Spec, FinP] and moves to some other criterial position (for example, [Spec, TopP]). It is expected that it would be incapable of undergoing wh-movement from the criterial position, which is due to the Criterial Freezing.

Finally, as reviewed in (66), Rizzi and Shlonsky argue that subjects cannot undergo Heavy NP Shift, which is due to the Subject Criterion. However, a question arises as to why the nominal Fin, which is available for (61), is unavailable for (66). If it were available, (66) would have the following derivation.

(76) a. Fin Subj [the author whom I decided to...] will give a book to John

b. [FinP [the author whom I decided to...], Fin Subj t₁ will give a book to John]

c. [[[FinP t₁ Fin Subj t₁ will give a book to John] [the author whom I decided to...]]₁]

In (76a), Fin is merged with SubjP, which satisfies the Subject Criterion. The heavy NP moves to [Spec, FinP] to license the nominal features in (76b) and then the heavy NP undergoes rightward movement in (76c). There would be nothing wrong with the derivation above.¹¹

7. Summary

This review article has selected the four articles out of the volume under review, and put them under close scrutiny. Riemsdijk’s graft approach is illuminating and worth investigating in the other empirical domains as well, but his specific analysis of Free Relatives is problematic in the sense that it is difficult to capture the c-command relation between the matrix subject and the subject of the free relative clause, because of the root status of the free relative clause. Lechner’s conclusion that head movement can have semantic effects is influential in terms of suggesting at which component

¹¹ One might suggest that the ungrammaticality of (66) is due to the unavailability of Fin endowed with phi-features in the matrix clause. However, as shown in (i), subjects cannot undergo Heavy NP Shift even in the embedded clause.

(i) *I think t₁ will give a book to John—[the author whom I decided to recommend for the literary prize]₁.
head movement takes place. His crucial assumption that ECM subjects raise obligatorily is controversial, however. Alternatively, Lasnik (1999) argues that the raising of ECM subjects is optional, which would undermine Lechner’s claim. Cecchetto and Percus argue that VP-anaphora involves semantic copying, contrary to VP-ellipsis. In order to capture some difference between the two constructions, they postulate the constraint that operators have to be associated with a trace at the level of syntax, which needs further investigation on conceptual grounds. Rizzi and Shlonsky argue that Fin which is endowed with phi-features satisfies the Subject Criterion in the sense of Rizzi (2006) in Locative Inversion. However, their approach seriously fails to accommodate the fact that Locative Inversion can take place in the embedded clause.

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