Generalized Inversion and the Theory of Agree
by
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Submitted to the Department of Linguistics and Philosophy
in Partial Fulfillment of the Requirements for the Degree of
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ABSTRACT

In this thesis I examine some of the fundamental questions surrounding inversion structures. I first provide an analysis of Locative Inversion. I show that the mixed A- and A- syntactic behavior of the fronted PP in English could be derived once we understand how the featural composition of locative phrases influences on the Probe-Goal relation between C and the postverbal DP. In particular, I argue that there is a correlation between syntactic categories of locative phrases and typological differences in the syntactic patterns in Locative Inversion: in Mandarin Chinese, Chichewa, Kinande and Gungbe, locatives are (or can be) represented by nominal categories (i.e. equipped with complete φ-features) and these locatives exhibit pure A-properties in Locative Inversion; in English and Sesotho, however, they are characteristically represented by non-nominal categories and the locative phrases are thus forced to undergo two-step movement from an A-position to an A-position as avoidance of intervention effects in the Agree system.

I also discuss a variety of (generalized) inversion constructions, including English Quotative Inversion, Sentential Subject and French Stylistic Inversion. In these constructions I show that since a φ-deficient constituent moves to [Spec, TP], additional operations (such as topicalization) have to take place so as to destroy the potentially offending structure created by the fronted defective elements. Specifically, I suggest that these are related constructions because they all display a mixture of A- and A- properties.

Finally I focus on the generalization concerning the placement restrictions of arguments by Spell-Out, in particular the principles that force argument externalization from the vP and VP. I argue that argument externalization is motivated by Case-related concerns.

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## Abbreviations

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Definition</th>
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<tr>
<td>ACC</td>
<td>accusative</td>
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<td>AGR</td>
<td>agreement</td>
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<td>APPL</td>
<td>applicative</td>
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<td>TOP</td>
<td>topic</td>
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<td>TRANS</td>
<td>transitivity</td>
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- 1: first person
- 2: second person
- 3: third person
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CHAPTER ONE

INTRODUCTION

1. THE ISSUES

In a run-of-the-mill English sentence like (1), it has been assumed that the preverbal Determiner Phrase (DP) *a cat* simultaneously fulfills two functions: it checks the nominative case of Tense (T) head and satisfies the Extended Projection Principle (EPP: every sentence must have a subject) requirement of the sentence.

(1) *English canonical word order*

A cat sat on the table.

It is also possible to have an inverted version of (1), as shown in (2), where the logical subject is placed in an atypical postverbal position and the preposition phrase (PP) apparently occupies the canonical grammatical subject position:

(2) *English Locative Inversion*

On the table sat a cat.

Granted the consensus among grammarians that the canonical surface word order of English is Subject-Verb-Object (SVO), sentences such as (2) raise important descriptive and theoretical problems. In this dissertation I will examine some of the fundamental
questions surrounding inversion structures. For example, what is the nature of the grammatical subject position? Does abstract Case have an independent formal status in syntactic computation? If yes, how is it assigned? How does locality theory fit in the inversion structures? How is verbal agreement determined in such constructions? These are old and rather broad questions for linguistic theory, which have received considerable attention over the years; in the following I will describe the questions in more detail and spell out the reasons I think that this work can make additional progress over previous treatments in such a well-studied area.

1.1 SUBJECT POSITION

From a rather impressionist point of view, one could say that subjects in English (or more broadly most languages of SVO word orders) are almost always nominal. Based on this reason, a number of researchers have attempted to investigate if there is any a priori reason to reserve the subject position, which is identified as [Spec, TP], exclusively for nominal phrases and if there is any morphosyntactic feature associated with this position. For instance, in Chomsky 1995 it is proposed that EPP is related to checking of a ‘categorial D-feature’, which by hypothesis is an uninterpretable nominal feature (on a par with φ-features). Checking of the D-feature can be met either by raising a referential subject to [Spec, TP] or by merging an expletive in that position. However, the existence of inversion constructions such as (2) has presented a well-known set of difficulties for this general claim because it appears that a non-nominal category sometimes can occupy the preverbal subject position as well. Nevertheless, I think that the general fact is striking enough that it cannot be ignored; for instance, it would be not remotely plausible to posit an independent principle such as the EPP for any other syntactic position. Therefore, in this dissertation I will investigate the nature of this subject position. I will study whether there is any particular morphosyntactic feature associated with this unique syntactic position and, if there isn’t, what might contribute to the remarkable impression that this position is reserved for a nominal category. In this regard, I will present a comparative study in Locative Inversion and show that [Spec, TP] is designated for
nominal category, which result can be derived as long as we have a proper characterization of how Agree operation proceeds in the syntactic computation.

1.2 EPP AND CASE

As mentioned in the very beginning, the preverbal DP fulfills Case and EPP needs, both of which have been assumed to regulate the surface distribution of DPs in standard Government and Binding (GB) and Minimalist theories of syntax. However, in many cases, the two principles seem to be overlapping and thus largely redundant. This is especially clear in subject-raising instances:

(3) Subject-raising
   a. *Seems to be John sick.
   b. John seems to be sick.

There are two possible explanations for the ungrammaticality of (3a): it can be ruled out because John is not in a position to receive or check Case (if we assume that Case assignment proceeds in the Spec-Head fashion, see more discussion later in section 1.4) and it can also be ruled out since there is no subject to satisfy the EPP of the matrix clause. Both deficiencies are satisfied by raising John to the matrix subject position as in (3b). A grammar that assumes both of these two principles is thus at least potentially more complicated than necessary, and researchers are led to wonder whether it would be possible to simplify it. For instance, it has been argued recently by a number of researchers (Martin 1999, Epstein and Seely 1999, Boškovic 2002) that there are reasons to prefer Case over the EPP on a conceptual level\(^1\), and thus that we should attempt to

---

\(^1\) It is posited that syntactic Case is indispensable and well-motivated in ways that the EPP is not. Yet, beside the claim that the EPP is stipulative, poorly understood and lacking in conceptual motivation, there is little discussion of how syntactic Case might be any different.
eliminate the latter. On the other hand, there is a rich literature\(^2\) that denies structural Case of any licensing function, and views it instead as a morphological marker, whose distribution is determined by syntax but does not determine anything in syntax. Under this view, the EPP alone is sufficient to license NPs and since abstract Case theory functions only in licensing NPs, not in deciding actual case realization (which these researchers argue is to be decided in PF component\(^3\)), it should be eliminable from syntax. Finally, there are some other works (for instance Lasnik 2001 and Lasnik & Park 2003) arguing that the EPP and Case exhibit properties different from each other and therefore should be held as independent principles of the grammar. In this work I will examine this issue and argue that both EPP and Case should have independent formal status in the computational system: we cannot do without abstract Case, even though its function often overlaps that of the EPP; meanwhile, the EPP cannot be reduced to Case/grammatical checking. By investigating the inversion structures, I show that two distinct operations can be triggered separately to satisfy the two features; in particular, Case drives syntax even in cases where the EPP is independently satisfied and vice versa.

1.3 **LOCALITY**

It is widely assumed (see Rizzi 1990, McGinnis 1998, Doggett 2004 among many others) that argument movement (A-movement), like other types of movement, is subject to a locality principle defined roughly as follows: each movement step must be as short as possible. The effect of such a constraint can be exemplified in (4):

\[(4) \quad \text{Movement is subject to locality} \]

a. Arthur resembles Melvin.

---


\(^3\) However the view that actual case realization is determined in PF is dubious. For example, case, in particular accusative case in (i), is assigned before the relevant NP is A-moved (Noam Chomsky p.c.).

(i) To whomever arranged such a rhetorical explosion, I offer belated thanksgiving.
In the sentences of (4b) and (4c), one DP from the embedded clause must raise to matrix [Spec, TP]. In (4b), the embedded subject has raised whereas in (4c) the embedded object has. Since the embedded subject Arthur is the closer (the definition of which will be made explicit below) DP to the subject position and thus creates a shorter movement path, it is the embedded subject that should move to the matrix subject position instead of the object. This account explains the grammaticality contrast between (4b) and (4c): (4c) is unacceptable because there is a potentially shorter movement step available. As one can tell from the above reasoning, the definition of "closeness" or "shortness" is thus extremely crucial in the locality theory since it determines the legitimacy of each movement step.

In the literature there have been different proposals in this regard. The simplest version of locality one can imagine is based on strict c-command, as defined in (5):

\[(5) \quad \text{Closeness in terms of strict c-command}\n\]

\[\beta \text{ is closer to } \gamma \text{ than } \alpha \text{ if } \gamma \text{ c-commands } \beta \text{ and } \beta \text{ c-commands } \alpha.\]

According to this definition, the DP Arthur c-commands the DP Melvin in the embedded clause while [Spec, TP] c-commands both DPs. Arthur is therefore closer to [Spec, TP] than Melvin. Consequently, movement of the DP Melvin to [Spec, TP] is prohibited and thus (4c) is ungrammatical. This condition prevents a syntactic dependency of one kind from being established across an intervening element of the same kind, since the intervening element is then a closer antecedent for the lower position in the dependency. This version of locality has success in accounting for a wide body of data; however, there are additional data that seem to suggest the constraint in (5) is either incomplete or
incorrect. For instance, the Object Shift (OS) data in (6) (Chomsky (1995)) consist of derivations that are grammatical but apparently violate (5).

(6) **Object Shift**

a. Jón las ekki baekurnar.
   Jon read not books.
   'Jon did not read the books.'

b. Jón las [baekurnar], ekki ti
   John read books not.
   'Jon did not read the books.'

In the derivation of a sentence like (6b) the definite object is arguably moved to a specifier of v. As illustrated in (7), this movement has first raised the object past the specifier of v in which the subject is base-generated; then the subject raises from this position past the object shifted DP to [Spec, TP].

(7) **Derivation of Object Shift**
In each of the movements in (7) a DP has moved past another DP. If the definition of closeness as described in (5) is adopted, we would not expect constructions like OS to be grammatical.

One way to resolve this problem, as argued in Chomsky (1995, 2001), is to modify the definition of closeness as in (8) so that closeness is relativized to minimal domains.

(8)  
Closeness in terms of minimal domains
   a. Terms of the same minimal domain are equidistant to the probe.
   b. The minimal domain of a head H is the set of terms immediately contained\(^4\) in the projection of H.

The definition of closeness in (8) permits each of the movements in (7). It allows the object to raise past the specifier in which the subject sits to a higher specifier of the same head because each specifier of v is contained within the same minimal domain. Because of this, the subject is not closer to v than the object. Furthermore, it allows the subject to raise to [Spec, TP] past the specifier in which the object sits because each specifier of v is equidistant to T.

The relativized notion of closeness is further supported in works like Anagnostopoulou (2003), where she argues that the data from ditransitive verbs in Greek, French and Italian provide evidence for equidistance between the specifier and the complement of the same head. For instance, as shown in the Greek example in (9), DP can only raise from an embedded clause to matrix [Spec, TP] if a PP argument does not appear in the matrix clause.

(9)  
Raising of embedded subject in Greek
      The Gianis-Nom seems intelligent

---
\(^4\) By merging the objects α and β, forming the new object K(α, β), Immediate Contain holds of (K, α) and (K, β).
'John seems to be intelligent.'

b. ?*[O Gianis]i fenete stin Maria [ t; eksipnos]

The Gianis-Nom seems to-the Maria intelligent

'John seems to Mary to be intelligent.'

As Anagnostopoulou argues, the derivation in (9b), where the DP raises past the PP, violates locality constraints because the DP has raised past a closer potential mover, the PP\(^5\). However, in the following contrast in (10), the DP also raises to [Spec, TP] in the presence of a PP but the resulting sentence is grammatical.

(10) **DP raising in passivized ditransitives in Greek**

To vivlio dhothike stin Maria apo ton Petro

The book-Nom gave-Non.active to-the Maria from the Petros

'The book was given to Mary by Peter.'

Anagnostopoulou proposes that the contrast between (9) and (10) follows from equidistance. Specifically, assume the VP structure in (11); the PP is the specifier of V and the DP is a complement of V. They are therefore contained within the same minimal domain, and thus equidistant from T, given the definition in (8). Equidistance therefore accounts for the ability of the DP to passivize over the PP in (10).

(11) **The VP structure of passivized ditransitives in Greek**

```
VP
 /   \
|     |
PP V  \\
     |
     V  \\
     |
     DP
```

\(^5\) Note that in these cases the PPs that stand as potential interveners bear experiencer / goal roles and are argued to be dative (Anagnostopoulou 2003).
By contrast, the PP and the DP in (9) are externally-merged in two different clauses, and consequently they are not equidistant to the higher probe T. Equidistance therefore also captures the inability of the DP to raise to [Spec, TP] past the PP in (9).

In this thesis I will argue that locality is defined over minimal domains rather by strict c-command. I will show that a study of inversion constructions across languages also supports the necessity of relativizing the notion of closeness in locality theory and, in particular, it helps provide a plausible analysis for overt verb movement observed in the inversion structures.

1.4 AGREEMENT

Agreement is the phenomenon where two elements co-vary in features. It is uncontroversial that the relation between the source that provides the features and the target on which agreement is spelled out is subject to locality. The issue is what notion of locality is relevant in this scenario: is it a relation between the specifier and its head (Spec-Head agreement) or c-command with the closest target in a local domain (Agree)? These are the two major different major proposals in the literature as to what configuration leads to agreement: Spec-Head (Kayne 1989, Koopman 1992, Mahajan 1989, Koopman and Sportiche 1991, Chomsky 1995, Sportiche 1998) and Agree (Chomsky 2000, 2001).

Kayne’s (1989) seminal work on past participle agreement provides an influential argument for the view that agreement processes should be taken to be the reflex of an established Spec–Head relation. As an illustration, consider the following paradigm from French.

(12) French past participle agreement is only possible with displaced objects
a. Jean a vu-(e) la fille
   Jean has seen-Agr.Fem the girl
   ‘Jean saw the girl.’
b. Jean l’a vu-e
Jean her-has seen-Agr.Fem
‘Jean saw her.’

c. Quelle fille Jean a(-t-il) vu-e
which girl Jean has-he seen-Agr.Fem
‘Which girl did Jean see?’

d. Cette fille a été vu-e
this girl has been seen-Agr.Fem
‘This girl was seen.’

As can be seen above, past participle agreement is only possible with displaced objects: cliticized in (12b), wh-moved in (12c), and passivized (12d). As Kayne argues, the paradigm indicates that agreement pattern should be obtained through the Spec–Head relation in the relevant low Agreement projection related to the past participial morphology and the relation is established in the course of object movement to its final landing site in some (functional) head in the upper part of the clause. Therefore Kayne took past participle agreement, and presumably all instances of agreement, to require raising to some specifier position and establish the Spec-Head relation.

On the other hand, the evidence for Agree comes mostly from existential constructions and instances of long-distance agreement such as Icelandic nominative object construction, illustrated in (13) and (14) respectively. In both cases the agreeing NP arguably has not raised to the locus of agreement at any point in the derivation, making it difficult for a Spec-Head analysis to be maintained.

(13) **Existential constructions**
   a. *There seems to be two uninvited guests in the party.
   b. There seem to be two uninvited guests in the party.

(14) **Icelandic nominative object constructions**
   a. *Mér virðist þeir vera skemmtilegir
      me.dat seem.3sg they.nom be interesting
      ‘It seems to me that they are interesting.’
As a result, Chomsky proposes a simplified relation of feature checking by eliminating feature displacement. Instead, the operation Agree should be entertained in the grammar, under which relation a functional head, called Probe, checks its uninterpretable feature against a matching element, called Goal, located in the Probe’s complement domain. All instances of Case/Ø-features checking are hypothesized to fall under the Probe-Goal Agree relation. In a sense, the mechanism of Case/Ø-features checking seen in existential constructions should be the model to which all other instances of Case/Ø-features agreement must be reduced. As for the traditional arguments for the Spec-Head view, it can be said to be an independent requirement of EPP or Edge Feature (sometimes optionally) imposed on the phase heads, the satisfaction of which is taken to be a process distinct from Case/Ø-features checking. Crucially, the Spec-Head relation is dismissed as a significant syntactic relation in such a theory. The advocacy of Agree relation is conceptually motivated as well since, as Chomsky notes, a Spec-Head relation is beyond the set of relations available within a reasonable definition of minimal search space (essentially, the complement domain) and it necessarily comes with the unwanted ‘look-ahead’ property. By investigating cross-linguistic inversion structures, one aim of this dissertation is to study how the operation of agreement proceeds. I will argue that the Agree operation (and hence the Probe-Goal relation), as proposed in Chomsky (2001, 2005), is the only device available in the grammar for the determination of agreement and Spec-Head agreement should be eliminated from the computational system.

2. THE PROPOSAL

In this part I first outline the framework this work adopts and the assumptions that are necessary in the following discussion. Subsequently I give a sketch of the analysis and system I will propose in this thesis.
2.1 FRAMEWORK AND ASSUMPTIONS

The framework I adopt in this work is essentially that proposed in Chomsky (2001). Certain items are merged into the syntactic tree with uninterpretable features that must be deleted by the interfaces (PF and LF). Deletion of these features is accomplished via the relation Agree, which is established between a Probe P and a Goal G. Only those categories that contain features that match the uninterpretable features of P can enter into an Agree relation with P. The Probe-Goal dependency operates under the following conditions:

(15) *Probe-Goal dependency*

a. Probe and Goal must be active for Agree to apply.

b. Agree divides into Match and Valuation.

c. Probe must contain a full set of features (it must be complete) to delete uninterpretable formal features of matched Goal.

[from Chomsky 2001: 6]

Uninterpretable morphology renders syntactic objects active, namely able to implement an operation.

(16) *Activity Condition*

Uninterpretable morphology renders syntactic objects active.

Agree is parasitic on a Match relation: a dependency sensitive to the type of features two lexical items share, not its value.

(17) *Match*
F1 and F2 match if they belong to the same feature class (e.g., [person], [Case], etc.), independently of value (e.g., 1\textsuperscript{st} vs. 2\textsuperscript{nd} person, nominative vs. accusative, etc.).

Crucially, Agree relies on Match, but not vice-versa. In other words, Valuation requires Match, but not every Match is followed by Valuation. This is possible since, for example, Match can relate two syntactic objects, one of which lacks some of the relevant features for the checking operation to succeed, namely a defective element. Therefore, while an item that is not $\varphi$-complete may enter into an Agree relation with another element that carries uninterpretable $\varphi$-features, the Agree relation cannot eliminate those features on the probe.

Crucially, I assume with Chomsky (2000) that under certain circumstances (which will be defined below), an Agree relation between a probe and a goal could be blocked by an intervening potential goal that is inactive in the sense that all its features have been valued. Cases like these are particularly interesting in that it seems to suggest that the grammar allows an intermediate syntactic object to be still giving rise to intervention effects while being inactive.

\begin{enumerate}
\item[(18)] \textbf{The Intervention Constraint} \hfill (cf. Chomsky 2000:123)
\begin{align*}
\alpha > \beta > \gamma \\
\text{AGREE}\ (\alpha, \gamma) \text{ fails when } \alpha \text{ is a probe and } \beta \text{ is a closer matching goal to } \alpha \text{ than } \gamma \text{ is, even if } \beta \text{ is inactive due to a prior Agree with some probe.}
\end{align*}
\end{enumerate}

\begin{enumerate}
\item[(19)] \textbf{Inactivity of an XP} \hfill (Chomsky 2001)
\begin{align*}
\text{An XP that eliminates its uninterpretable features is rendered inactive.}
\end{align*}
\end{enumerate}

Consider (20) for example.

\begin{enumerate}
\item[(20)] \textbf{Super-raising in English}
\begin{enumerate}
\item [a.] *It seems (that)[ ___ is likely [Arthur to have finished his work]].
\end{enumerate}
\end{enumerate}
b. *Arthur seems (that) [it is likely [ __ to have finished his work.]]

\[ \text{\textit{**}}} \]

c. It seems (that) [Arthur is likely [ __ to have finished his work.]]

\[ \text{\textit{**}}} \]

The expletive \textit{it} in (20a) checks Case in the embedded finite clause, so it is blocked from raising to the subject position of the higher finite clause. Suppose that the subject of the lower embedded infinitival, \textit{Arthur}, has an unchecked Case feature. (20b) shows that even if the highest DP \textit{it} cannot itself raise, it can block this lower DP \textit{Arthur} from raising. That is, it cannot undergo "super-raising", moving past the expletive to the matrix subject position. Such a result is expected if some version of defective intervention like (18) is assumed. Specifically, because the expletive \textit{it}, which has eliminated all of its uninterpretable features, is a closer matching goal to the matrix [Spec, TP] position than the DP \textit{Arthur}, it constitutes an intervener and blocks the Agree relation between the matrix T and the lower DP \textit{Arthur}.

Another case that arguably shows defective intervention effects is the Icelandic example of (21) (data taken from Holmberg & Hróarsdóttir 2003). In (21), agreement between the finite verb and the nominative argument is blocked by an intervening dative argument, which according to Chomsky must have its dative feature valued and therefore be inactive by the time that T^0 is merged into the structure. In this example the plural nominative phrase cannot trigger plural agreement on the finite verb, which must therefore appear with the default value singular.

(21) (Defective) Intervention in Icelandic

\begin{enumerate}
\item [a.] 
\textbf{bað virðist einhverjum manni hestarnir vera seinir.}
\textit{Expl seemssg some mandat the horseSnom/pl be slow}
\textquote{The horses seem to some man to be slow.}'
\end{enumerate}

\footnote{An alternative explanation would be that the expletive can be inserted only when no well-formed movement is possible (Marantz 1991). In (20a-b), movement of \textit{Arthur} is possible, so insertion of the expletive would be ruled out. However, Chomsky (1995) argues that Merge is preferred over Move generally. If this line of argument is correct, then the ill-formedness of superraising in (20b) is most straightforwardly viewed as the result of a locality violation.}
b. *[pað virðast einhverjum manni hestarnir vera seinir.

This establishes that the dative experiencer counts as an intervener by the schema in (18). Again, what is of interest in the Icelandic construction is not simply the fact that the dative in this case is an intervener, but rather that it is a defective intervener. Although there have been doubts on whether we should admit the existence of such effects (Nevins 2004, Broekhuis 2007 among others), in this thesis I will argue for the necessity of incorporating such a principle in the grammar. In particular, I will show that defective intervention effects manifest in various constructions, including (but not limited to) English Locative Inversion, English Quotative Inversion, French Stylistic Inversion and Linker Constructions in several African languages.

Finally, this thesis will assume a particular version of nominative agreement system as argued in Chomsky (2005, 2006). Traditionally it has been assumed that the Case/φ-features for subject-verb agreement, are located on T. Therefore, under the Spec-Head relation, the subject agrees with T and gets its nominative Case. Recently, however, a number of works (Carstens 2003, Miyagawa 2004 and others) have argued this approach might be incorrect; instead, subject-verb agreement, should be principally associated with a head higher than T, precisely, C. In other words, the φ-features and Tense, which were assumed to be associated with T, appear to be derivative, not inherent. Evidence for the feature inheritance proposal comes in two sorts. The first has to do with co-occurrence restrictions (Chomsky 2005). As noted in works like Iatridou (1993) and Freidin (2004), T manifests the basic tense features if and only if it is selected by C (default agreement aside); if not, it is a raising (or ECM) infinitival, lacking φ-features and basic tense. Thus it seems reasonable to assume that Agree- and Tense-features are associated with C, the phase head. Secondly, it has been noticed that in some languages the inflection present on C exhibits agreement with the φ-features of the embedded subject. For example, the paradigm of C-agreement in West Flemish distinguishes all person and number combinations (cf. Haegeman 1992) and, as can be clearly seen here, the agreement pattern is determined by its embedded subject.
This thesis will expand the empirical coverage of the feature inheritance analysis; specifically, I will show that feature inheritance can be evidenced in inversion structures as well. With the understanding of C being the locus of nominative Case/agreement system, the long-standing mysteries in the studies of English inversion structures can thus cease to be puzzling.

2.2 THE PROPOSED SYSTEM

Given the assumptions spelled out in the last section, let us now consider two scenarios under this framework: first, a nominal category moves to [Spec, TP] and, second, a non-nominal category moves to [Spec, TP]. In the first scenario, the DP at [Spec, TP] fulfills two requirements: it satisfies the EPP need of T and it Agrees with C,
getting nominative Case. A common English SVO sentence, for instance, is thus generated.

(23) When XP=Nominal, it stays in [Spec, TP]

In the second scenario, suppose we have a configuration like (24), where the XP, which is non-nominal, is only equipped with incomplete φ-features. When XP moves to [Spec, TP], it only checks off the EPP need of T whereas it cannot delete the uninterpretable formal features of matched goal due to its deficiency in φ-features (cf. (15b)). The XP is rendered inactive after this Agree operation. Note that at this point the probe C is still left with its uninterpretable Case/φ-features since its prior Agree relations with XP is unsuccessful, so it has to keep looking for another potential goal in its complement domain. However, C cannot Agree with the next goal it can reach, i.e. the lower DP, because the inactive XP now stands as an intervener between C and the DP. Crucially, I propose that one plausible way to destroy such an offending structure is to move the intervener XP away (for instance to [Spec, CP]) so that the Agree relation between C and the DP can be established, as demonstrated in (24). I propose (24) is the structure of English inversion constructions: when a non-nominal phrase moves to [Spec, TP], additional operations (such as topicalization) must take place in order to save the derivation; in this sense, these operations can thus be said to be of last-resort nature. In the remaining chapters, I will argue in support of this system. We will first look at Locative Inversion and show that languages vary in their behavior in Locative Inversion depending on whether they allow nominal locative phrases. Moreover, we will see other
inversion constructions (in a broad sense) that implicate movement of a non-nominal to the subject position, which I suggest also involve the structure of (24).

(24)  
\[ \text{When } XP \neq \text{Nominal, it cannot stay in [Spec, TP]} \]

3. **STRUCTURE OF THE DISSERTATION**

This dissertation will be dedicated to the investigation of the issues outlined in the above discussion. In Chapter 2 I will first provide an analysis of English Locative Inversion. I will show that the well-known mixed A- and Ā- syntactic behavior of the fronted PP could be derived once we properly understand how the featural composition of locative phrases influences on the probe-goal relation between C and postverbal DP. The later sections of chapter 2 will be devoted to a comparative study (with the focus on Mandarin Chinese) of Locative Inversion. I will describe how the proposed theory brings out the predictions in diverse languages. In particular, there is a correlation between syntactic categories of locative phrases and a typological difference in the syntactic patterns in Locative Inversion: in Mandarin Chinese, Chichewa, Kinande, Gungbe locatives are (or can be) represented by nominal categories and these locatives exhibit pure A-properties in Locative Inversion; in English and Sesotho, however, they are characteristically represented by non-nominal categories and the locative phrases display a mixture of A- and Ā- properties in Locative Inversion. In chapter 3 I will discuss a
variety of (generalized) inversion constructions, including English Quotative Inversion, Sentential Subject and French Stylistic Inversion. In these constructions I show that since a $\varphi$-deficient constituent moves to [Spec, TP], additional operations have to take place, just as the current system predicts. In particular, I suggest that we should treat these as related constructions since they both display A- and $\bar{A}$- properties with regard to a battery of syntactic tests. One of the conclusions we obtain towards the end is that Spec-Head agreement should be eliminated in the computational system and C is indeed the locus of nominative agreement system. Chapter 4 focuses on the generalization concerning the placement restrictions of arguments by Spell-Out, in particular the principles that force argument externalization from the vP and VP. The empirical domain consists of constructions where argument movement is not required for reasons that have to do with the EPP. I will argue that argument externalization is related to Case and it is forced for avoidance of intervention effects. Chapter 5 is the conclusion.
CHAPTER TWO

LOCATIVE INVERSION:
A COMPARATIVE STUDY

1. OVERVIEW

English Locative inversion (LI), of which a typical example is given in (1), has long posed a major challenge in the generative literature.

(1)  *English Locative Inversion*

On the table sits a frog.

In an LI sentence, a locative (or sometimes directional) PP occurs pre-verbally while the DP argument of the verb occurs after the verb. One of the most perplexing problems about the locative phrase in this construction is its mixture of subject-like and non-subject-like behavior. That is, it displays both A- and Ā- properties. Accordingly, the status of this preverbal locative PP has been the focus of debate: whether it is the grammatical subject occupying [Spec, TP] or not. For the former view see Bresnan (1994), Collins (1997), Levin and Rappaport (1995), Doggett (2004); for the latter see Stowell (1981), Branigan (1992), Kuno (1971), Postal (1977), (2004), Coopmans (1989).

In addition to the grammatical role and syntactic position of the fronted PP, locative inversion poses other theoretical challenges. For example, is it a counterexample of the

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1 I will not discuss the inversion construction with the copula as the main verb. As pointed out in the literature, copular sentences involve a very different structure and thus should receive a different treatment.

2 Theories within this group differ in their detailed implementation. We will return to this later.
Uniformity of Theta Assignment Hypothesis\(^3\) (UTAH, Baker 1997)? That is, is it possible to have an argument bearing locational theta role to be structurally higher than theme argument? If this construction conforms to the UTAH and the PP is base-generated lower than the DP, then how does its movement past the theme DP evade the potential locality violation? More important, languages appear to be very different in their possibility of tolerating a locative phrase at the canonical subject position: it is well-known that Chichewa has locative subjects that determine the noun class agreement patterns (Bresnan 1994) while in English the preposed locative phrase can never affect verbal agreement.

In this chapter I will go over the issues raised by this construction and attempt to arrive at a proper characterization cross-linguistically. I will provide a unified analysis of LI and show that the proposed Agree system, which assumes the existence of defective intervention effects as described in chapter 1, would bring out the predictions in diverse languages. I demonstrate that the need for checking off the uninterpretable Case/\(\varphi\)-features on C is satisfied by long-distance Agree, while the EPP need of T, which minimally demands \([\text{Spec, TP}]\) be filled at some stage during the derivation, is met by fronting the locative phrase. In addition, I propose that the apparent nominal category restriction associated with \([\text{Spec, TP}]\) can be attributed to be a result of defective intervention effects; simply put, because a non-nominal element at \([\text{Spec, TP}]\) not only fails to delete the uninterpretable Case/\(\varphi\)-features on C but also constitutes a defective intervener for the subsequent probing action, it can not reside in \([\text{Spec, TP}]\). In particular, I will show that the typological difference in LI is determined by the syntactic category of the locative phrase in the particular language. I will motivate a system in which when the preverbal locative phrase is non-nominal, it would have to undergo two-step movement from \([\text{Spec, TP}]\) to \([\text{Spec, CP}]\) (as in (2)); by contrast, if the preverbal locative phrase is nominal, it can move to and stay in \([\text{Spec, TP}]\) (as in (3)).

\(^3\)UTAH demands the direct mapping between thematic roles and structural positions and thus Agent is necessarily structurally higher than Theme and Location according to the Thematic Hierarchy.

i. UTAH: Identical thematic relationships between items are represented by identical structural relationships between those items at the level of D-Structure.

ii. The Thematic Hierarchy: Agent/Causer >> Theme/Patient >> Path/Location
Under such an analysis, the fact that movement of the preverbal PP in English LI exhibits A- and Ā- properties can receive a satisfactory explanation: this is so since the PP first moves to an A- then to an Ā- position. Crucially, this analysis predicts that whenever a non-nominal phrase preposes to the preverbal position, it will likewise display the same set of mixed A- and Ā- properties⁴. In this light, I suggest that a range of constructions, including English LI, English Quotative Inversion and French Stylistic Inversion, are related or similar constructions in this sense. I will tackle these constructions in chapter 3.

⁴ Expletives, which presumably cannot determine verbal agreement or get nominative Case, seem to pose a problem for the current proposal because (apparently) it is an intervener that stays in [Spec, TP]. The problem of expletives in this system will be addressed in section 2.6.
In the following discussion, I will first focus on LI in English and motivate the necessity of the analysis proposed here. Subsequently, I will demonstrate the other part of the system, where the locative phrases are or can be nominal. After displaying a macro-comparative study of this phenomenon, I will present a micro-comparison of Bantu languages (Chichewa, Kinande and Sesotho), which shows that the correlation of having nominal locative phrases and allowing grammatical locative subjects can be evidenced within typologically close languages. Finally, we examine the auxiliary restriction that is observed in inversion structures and argue for an equidistance account for this phenomenon. I will also discuss its implications for the theories of locality and linearization.

2. **Locative Inversion in English: When the Locative Phrase is Non-Nominal**

2.1 **Properties**

In what follows I summarize the properties of LI that were pointed out in the literature. At the outset, let us consider the arguments in support of the view that the PP is in [Spec, TP], the so-called *Locative Subject Hypothesis*.

The preverbal locative PP is argued to be the grammatical subject in that it shows typical A-properties. First, it can undergo raising (Bresnan 1993, Levin 1986, Postal 1977): the fronted PP can be raised in raising constructions, just as common subject DPs can.

(4) *Raising of DP subjects*

[John] seems __ to be unhappy.
(5)  *Raising of preverbal PPs* (Bresnan 1994)

   a. [Over my window] seems ___ to have crawled an entire army of ants.
   b. [On that hill] appears to be located a cathedral.

By contrast, non-subjects do not typically raise and the locative PPs do not raise in their non-inverted postverbal positions.

(6)  *Raising of postverbal PPs*

   a. *[Over my window] seems an entire army of ants to have crawled ___.
   b. *[On that hill] appears a cathedral to be located ___.

Second, the preverbal PP displays the *that*-trace effect (Bresnan 1994, Stowell 1981). Extraction of the preverbal PP in LI therefore patterns with extraction of DP subjects in this regard.

(7)  *DP subjects show that-trace effects*  

   (Perlmutter 1971)

   a. Who do you think t₁ met Sue?
   b. *Who do you think that t₁ met Sue?

(8)  *Preverbal PPs in LI show that-trace effects*  

   (Bresnan 1994)

   a. It’s [in these villages] that we all believe t₁ can be found the best examples of this cuisine.
   b. *It’s [in these villages] that we believe that t₁ can be found the best examples of this cuisine.

This pattern seems to suggest that the preverbal PP is indeed the subject, because no such effect is triggered when the PP is extracted from the VP internal position.

---

5 Note that experiencer PPs make these sentences degraded:

(i)  *[Over my window] seems to John to have crawled an entire army of ants.*
Postverbal PPs in LI do not show that-trace effects

a. It’s [in these villages] that we all believe the best examples of this cuisine can be found there.
b. It’s [in these villages] that we all believe that the best examples of this cuisine can be found there.

Thirdly, *wh*-extraction of the fronted PP cannot involve auxiliary inversion, as shown in (10a), and it is incompatible with the occurrence of unstressed *do*, as in (10b)\(^6\). This behavior parallels that of regular DP subjects, as illustrated in (11).

**Wh-extraction of preverbal PPs**

a. [Down which hill] rolled a baby carriage?
b. *[Down which hill] did roll a baby carriage?

**Wh-extraction of DP subjects**

a. [Which baby carriage] rolled down the hill?
b. *[Which baby carriage] did roll down the hill?

Fourthly, LI sentences are not sensitive to Weak Crossover (WCO), which is taken to be a property characteristic of A-movement (Postal 1972). The sentence in (12), a typical example of WCO, is unacceptable since a violation ensues when the *wh*-phrase A-moves to the front of the sentence and crosses over a co-indexed pronoun. However, as shown in (13), no such effect is observed with LI. Thus the locative PP appears to have undergone A-movement because A-movement is known to suppress WCO (Culicover and Levine 2001).

**WCO**

??Who do his mother like there?

---

\(^6\) The unacceptability of (10b) might be also related to the fact that, generally speaking, auxiliaries are bad with LI. More details are in section 5.
(13)  No WCO in LI

Into every dog’s pen peered its owner\(^7\).

On the other hand, the locative PP in English LI does not behave like a typical grammatical subject in several respects. First, the preverbal PP cannot determine verb agreement as a normal subject does. Instead, the verb has to agree with the postverbal DP.

(14)  Verbal agreement

On the table were placed several trophies.

Moreover, the preverbal PP cannot undergo subject-auxiliary (Sub-Aux) inversion like a DP subject; this is shown in (15).

(15)  Sub-Aux inversion

a. DP subject: Has a small spider run from the doorway?
b. Preverbal PP: *Has from the doorway run a small spider?

In addition to the above properties that are the central focus of debate, there are other properties that do not favor a particular theory but still call for a proper explanation. To begin with, LI is impossible with transitive verbs\(^8\), as discussed in detail by Bresnan (1994) and Levin and Hovav (1995). This condition is interesting in that, crucially, in its non-inverted counterpart as in (17) no grammaticality problem would arise with the occurrence of a transitive verb.

(16)  Transitivity condition in LI


\(^7\) In this kind of examples, notice the unexpected ability of the quantifier phrase to c-command out of the PP. See Pesetsky (1995) for relevant discussions.

\(^8\) The most common verbs found with Locative Inversion are unaccusatives and passives. The question of whether unergative verbs are compatible in this construction has been controversial since the possibility of allowing a particular unergative verb further depends on the theta-role received by its subject (i.e. whether it is Theme or Agent) and the ‘prototypical’ connection between the verb and its argument. Throughout the discussion I will assume that the fundamental constraint is that no active transitive verb can appear in LI and I will deal with this constraint separately in chapter 4.

(17) *No transitivity condition in non-inverted structure
John placed the book on the table.

Second, in LI it is often the case that the post-verbal DP gets focus interpretation. It is thus argued (Brenan 1994) that this construction displays a specific discourse function, namely “presentational focus”. This effect can be exemplified below.

(18) *Presentational focus
A: I’m looking for my friend John. (Bresnan 1994)
B1: # Among the guests of honor was sitting John.
B2: John was sitting among the guests of honor.

The response in B1 is semantically and/or pragmatically odd because it seems to depend on a scene having been set that includes the guests of honor, which A does not provide and also because B1 reintroduces John as a focus, which was already mentioned in A.

Moreover, not all phrases headed by prepositions can occur in the LI construction. As exemplifies in (19), PPs expressing manner, instrument and time are not possible in LI but only locative PPs that express position (or sometimes direction) are allowed.

(19) *Restrictions on PPs in LI
a. *With little care rolled the baby carriage.
b. *With a knife walked John.
c. *On Tuesday arrived John.

Fourthly, the fact that the postverbal CP is prohibited in LI has not received due attention in previous studies⁹. As clearly shown in (20), a sentential complement is not tolerated post-verbally in LI; by contrast, when the clause is introduced by the DP the fact as in (21), the sentence in question becomes licit again.

⁹ Thanks to David Pesetsky for bringing this fact to my attention.
(20) *Sentential complements in LI
*In this very lab was discovered [that the cure for cancer is tomatoes].

(21) *DPs taking sentential complements in LI
In this very lab was discovered [the fact that the cure for cancer is tomatoes].

Furthermore, it has been noticed in the literature (Kuno 1971, Postal 1977, 2004) that the LI construction bears a close parallel to the presentational-\textit{there} construction, which differs only in the overt presence of \textit{there} presumably at [Spec, TP]\textsuperscript{10}:

(22) *Presentational-\textit{there} construction
On the table there sat a frog.

The resemblances between the two constructions include, for example, they are not found with transitive verbs in English and the postverbal DPs in both cases determine verbal agreement. We will return to this issue separately in section 2.5.

Last but not the least, LI generally occurs only when the verb is in simple form. Modals and auxiliaries make these sentences much less acceptable.

(23) *Auxiliary Restriction
a. *Down the hill may roll the baby carriage.
b. *Down the stairs has fallen the baby.
c. ??Out of the house was strolling my mother’s best friend.
d. ??On that table has been put a valuable book.
e. *Into the room may have been walking John.

\textsuperscript{10} Based on this, works like Postal (1977, 2004) and Coopmans (1989) have argued that LI is derived from \textit{there}-insertion constructions with \textit{there}-dropping. In other words, according to this view, in LI it is actually a null element that occurs in [Spec, TP] while the PP occurs in a topic position of some sort. This is the so-called Null Expletive Hypothesis. Though this approach has some empirical support, nevertheless, as I will show in section 2.5, it does not fare well in several empirical and conceptual issues.
I will call this phenomenon *Auxiliary Restriction* and deal with it separately in section 4.

### 2.2 The Analysis

As outlined in chapter 1, I assume with Chomsky (2000, 2001) that deletion of the uninterpretable features is accomplished via the Agree relation between a probe $P$ and a goal $G$. In particular, in this framework a goal $G$ must be $\phi$-complete so as to delete the uninterpretable matching features on a probe $P$. Therefore, while an item $G$ that is not $\phi$-complete may enter into an Agree relation with another element $P$ that carries uninterpretable $\phi$-features, the Agree relation cannot delete those features on $P$. Crucially, I assume that an inactive element, which has deleted all its uninterpretable features and becomes inert for subsequent Agree operations, can still act as an intervener. In other words, although the inactive goal itself is unable to be subject to any further Agree operation, it can still block an Agree relation between a probe and another potential goal in its c-command domain. This is so-called defective intervention.

\begin{equation}
\alpha > \beta > \gamma \quad \text{(where the relation} > \text{designates c-command)}
\end{equation}

AGREE ($\alpha, \gamma$) fails when $\alpha$ is a probe and $\beta$ is a closer matching goal to $\alpha$ than $\gamma$, even if $\beta$ is inactive due to a prior Agree with some probe.

Moreover, as mentioned in chapter 1, I adopt the view that $C$ is the locus of nominative Case/agreement system (Chomsky 2005, Miyagawa 2004, Carstens 2003 and others). That is, the Agree- and Tense-features originate from $C$ whereas $T$ manifests these features only by inheritance.

Crucially, as proposed in various works on adpositional phrases (cf. Koopman 1997, den Dikken 2003, Svenonius 2007) several aspects of the morphology and the internal and external syntax of locative PPs suggest they are associated with rich functional structure. In particular, I assume with van Riemsdijk (1990, 1996) that locative phrases are special from other kinds of adpositional phrases in that they are actually
‘semi-lexical’ categories and they are extended nominal categories (as developed in Grimshaw (1991) and van Riemsdijk (1990)). As such, locative phrases are quipped with some φ-feature(s) (as a result of inheriting from the most deeply embedded N head) and thus are more referential (than other PPs) just as argued in Huang (1982) and Rizzi (1990).

Now let us consider how these tools help us derive the structure of English LI. As the tree diagram in (25) suggests, the locative PP first moves to [Spec, TP], by which it satisfies the EPP need of T. However, because English locative phrases are not nominal after all (although they do possess some φ-features), i.e. meaning not having full set of φ-features in this system, they cannot delete the uninterpretable Case/φ-features of C.

(25) The structure of English LI

\[
\text{CP} \quad \text{PP}_i \quad C' \quad C \quad TP \quad t_i \quad T' \quad \text{...DP...} \quad t_i
\]

After the first Agree action with the PP, the probe C is still stranded with its uninterpretable Case/φ-features and hence it has to keep looking for another potential goal in the complement domain. However, note that the fronted PP, after the first Agree operation, stands in between C and the next goal C can reach, i.e. the lower DP. The structure at this point would look like (26), which instantiates the defective intervention configuration that an Agree relation between the probe and a potential goal is blocked by the inactive PP at [Spec, TP].

(26) Defective Intervention in LI
Therefore, if no further operation is taken, C could not Agree with the postverbal DP due to the defective intervention effects and the derivation would crash. To solve this problem, I propose that movement of last-resort resort must take place in English so as to destroy such an offending structure. Specifically, the defective intervener PP must move out of the search domain of the probe C and undergo further movement to [Spec, CP]; this way, the Agree relation between C and the DP can be established. As a result, the preverbal PP in English LI undergoes two-step movement: it first moves to [Spec, TP], which is driven by the EPP property of T, and subsequently moves to [Spec, CP] in order to facilitate the Agree operation between C and the DP. Without the inactive intervener, the \( \omega \varphi \)-features on C can thus be checked and satisfied thanks to the long distance Agree relation it sets up with the postverbal DP; meanwhile, the postverbal DP can stay in-situ since the EPP property has been met by the fronted PP. I summarize the analysis I propose for English LI in the below.

**The proposal for English LI**

\[
[\text{CP} \ [\text{On the table}], \ C \ [\text{TP} \ \text{t}] \ T \ \text{sit} \ [\text{a frog}] \ \text{t}]
\]

a. The temporary presence of the locative PP at [Spec, TP]
b. Obligatory topicalization of the PP
c. Long-distance Agree of T and the postverbal DP

One possible immediate objection to such a proposal is that the preverbal PP occurs to the right of the complementizer *that* as below:

\[(27) \quad \text{I believe that on the table sits a frog.}\]

---

11 Therefore, the current proposal, if it is proven to be correct, argues against Rizzi's (2004) Criterial Freezing constraint. Specifically, in LI a phrase meeting a criterion (EPP Criterion in this case) is *not* frozen in place; instead, it can undergo further movement.
Since the PP follows the complementizer *that*, it appears to be implausible to posit that the PP is located in [Spec, CP]. However, this problem is only apparent. First, this is not a problem particular to LI but rather it is a general property of topicalized phrase:

(28) Bill said that Mary, John can’t stand.

In other words, a common topicalized phrase is preceded by the complementizer *that* as well. Therefore, the fact that the fronted PP in (27) follows *that* does not constitute a counterargument for treating it as undergoing topicalization because this restriction holds even for run-of-the-mill topicalization as well. Thus, whatever account that captures (28) should be applicable to (27) as well.

Second, if we expand the CP into more detailed projections (Rizzi 1997), we can say the complementizer *that* is situated in a higher position of the left periphery, for instance Force⁰ head (which view is supported by the analysis of the adverb effect in Boeckx 2006 and Lohndal 2007), and whenever the Force⁰ head *that* appears, it selects the lower C (for instance Fin⁰) head that takes a φ-complete T (as discussed in chapter 1). Meanwhile, the locative PP moves to a lower position than Force⁰, for instance Top⁰ head. This way, the grammaticality of (27) is not unexpected under the current proposal.

In the following two sections I present the empirical evidence supporting the current analysis. Section 2.3 is devoted to show the two-step movement of PPs in LI and section 2.4 discusses the probe-goal relation between T and postverbal DP. Section 2.5 presents arguments against the Null Expletive analysis, which shares many similarities to the current proposal. Section 2.6 discusses the behavior of expletives under such a system.

2.3 **Two-Step Movement of Preverbal PPs in English Locative Inversion**
I contend that English LI involves PP fronting to the subject position followed by obligatory A-movement to the [Spec, CP] position\(^\text{12}\). Empirical evidence comes from the observation that the distributional characteristics of locative PP in LI are perfectly mirrored by sentence-initial topic phrases. In other words, other things being equal, if the locative PP does occur in the C domain, whatever phenomena found in the examples involving regular topic phrases should also be expected with LI sentences. The prediction is borne out. Several empirical arguments, as I will show below, support this view.

First is the co-occurrence restriction with another topic phrase. As shown in (29), a DP subject, the incident in (a) and this person in (b), can simultaneously occur with another preposed topic phrase. However, from (30a) we can tell that a fronted topic phrase cannot appear after another sentence-initial topic. Along this line of reasoning, since the locative PP has moved to the topic position in my proposal, the same incompatibility with another topic should be expected to occur in LI. This prediction is met just as in (30b): a LI sentence cannot occur with another topicalized phrase. This restriction is puzzling if the locative PP in (30b) occupies [Spec, TP], under which approach we have no way to explain the contrasts witnessed above. Assume that topicalization of the PP in LI has taken place; the ungrammaticality in (30a) and (30b) can be viewed as instantiating illicit extraction from a Topic Island.

\begin{align*}
\text{(29) } & \text{Co-occurrence of a DP subject and a topic phrase} \\
& \text{a. [John], the incident shouldn't have bothered } t_i. \\
& \text{b. [Under the bed], this person hid } t_i.
\end{align*}

\begin{align*}
\text{(30) a. No stacking of topic phrases} \\
& *\text{John, the book, I gave } t_j \text{ to } t_i. \\
\end{align*}

\begin{center}
\text{\includegraphics{diagram.png}}
\end{center}

\begin{align*}
\text{b. Co-occurrence of a fronted topic phrase and LI} \\
& *\text{This person, under the bed, hid } t_j. \\
\end{align*}

\(^{12}\text{In the following discussion, I use only the cover term CP to refer to the left periphery of clauses without differentiating the fine-grained structure as proposed in Rizzi (1997).}\)
The second argument has to do with Exceptional Case Marking (ECM) constructions (see also Bresnan 1994). A typical ECM verb like *consider* selects a TP, as exemplified in (31). However, because topicalization necessarily forces a constituent to expand into a CP, we should expect that an ECM verb fails to take a complement clause involving topicalized phrases. The prediction is met. The embedded clauses introduced by *Mary* in (32a) and by *in that room* in (32b) fail to stand as the complements of *consider* since topicalization, which entails CPs, is implicated in both cases.

(31) **ECM verbs select TPs**
   a. John considers [TP Bill to have killed Mary].
   b. John considers [TP a frog to have sat in this room].

(32) **ECM verbs cannot take complement clauses involving topicalized phrases**
   a. *John considers [CP Maryi Bill to have killed ti].
   b. ??John considers [CP in that roomi to have sat a frog ti].

Interestingly, however, if we move the topic phrase or the locative PP out of the infinitival complement clause and to the sentence-initial topic position, the resulting sentences are improved. This is the case since the complement clause is now a mere TP, no violation being induced\(^13\).

\(^13\) A parallel structure to the pair of (31) and (32) can be found in French ECM construction.

(i) a. *On imagine [Josée être malade]
   We think Josée to be sick
   b. Josée, on l'imagine [t être malade]
      Josée we her-think to be sick
   c. Qui imaginent-t-ils [t être malade]?
      Who think-they to be sick

An ECM verb like *imagine* selects a TP. If we assume that the subject always has to raise from [Spec, TP] to [Spec, CP] (see Barbosa 1994), it follows that (ia) is bad. Again, if we raise the subject out of the infinitival complement to the matrix clause, just like what we have seen in (33), the resulting sentences are grammatical since the complement clause now will only be a TP.
(33)  *Topic phrases move out of ECM complement clauses*
   a. Mary, John considers Bill to have killed t.
   b. In that room, John believes to have sat a frog t.

The third argument concerns subject-auxiliary inversion in yes-no question. As discussed earlier, if the locative phrase is indeed the subject, it is not clear why it cannot be inverted with an auxiliary in yes-no question like a regular DP subject, as shown in (34). However, this is expected in the current analysis given that the locative PP in (35b), just like a common topic phrase in (35a), occupy [Spec, CP] and the auxiliary cannot possibly pass through it when it moves from T to C head.

(34)  *DP subjects in Sub-Aux inversion*
   Has the delay bothered John?

(35)  *Topic phrases and preverbal PPs in Sub-Aux inversion*
   a. *Has those facts the professor explained t?
   b. *Has into the room walked a stranger t?

However, another question immediately arises: what if the auxiliary (vacuously) moves from I to C as in (36)? Presumably, there is no passing over the [Spec, CP] but (36) (with the intended reading) is still bad. I will return to this problem in the discussion below.

(36)  *T to C movement in LI*
   *Into the room has walked a stranger*? (as a yes-no question)

The next piece of evidence comes from the constraints on Â-movement in LI. An embedded topic phrase contrasts with an embedded DP subject in that the former seems to block Â-movement from within its c-command domain as in (38a) but the latter does not as in (37). Again, locative PPs resemble topic phrases in blocking Â-movement as in (38b). We can account for the phenomenon by stating that the ungrammaticality of (38)
results from \textit{wh}-island configuration, where the $\bar{A}$-movement illicitly crosses a filled $\bar{A}$-position (i.e. $[\text{Spec, CP}]$)\textsuperscript{14}.

\begin{equation}
\begin{array}{c}
\text{(37) } \text{\textbf{D}P \text{ subjects \textit{do \textit{not \textit{block \bar{A}-movement \textit{from \textit{its \textit{c-command \textit{domain}}}}}}}} \\
\text{I \text{wonder \textit{who \textit{this \textit{story \textit{would \textit{please}}}}}}}.
\end{array}
\end{equation}

\begin{equation}
\begin{array}{c}
\text{(38) } \text{\textbf{T}opic \text{phrases \textit{and \textit{preverbal \textit{PPs block \bar{A}-movement \textit{from \textit{its \textit{domain}}}}}}}} \\
\text{a. } \text{??I \text{wonder \textit{[who\textit{j \textit{[the \textit{book\textit{j}]} I \text{gave \textit{\textit{t}} to \textit{t}}.}}}}}
\end{array}
\end{equation}

\begin{equation}
\begin{array}{c}
\text{b. } *\text{I \text{wonder \textit{[who\textit{j \textit{[under \textit{the \textit{bed\textit{j}]}} \text{i hid \textit{\textit{t}}.}}}}}
\end{array}
\end{equation}

A possible objection to the proposed analysis (i.e. preverbal PPs in LI behave as sentence-initial topic phrases so that they are analyzed as moving to $[\text{Spec, CP}]$) might be that, \textit{intuitively}, the preverbal locative phrases do not seem to bear the semantics that topics typically have. Nevertheless, such an objection cannot be sustained for at least two reasons. First, what matters in the current proposal is the syntactic position in the left periphery, which is higher than $[\text{Spec, TP}]$. As long as the locative PP leaves $[\text{Spec, TP}]$ and moves to some higher projection above $C$, the derivation can proceed successfully. Second, even in run-of-the-mill noninverted sentences, topicalization of PPs shows some semantic and/or pragmatic differences from topicalization of DPs. This is demonstrated in (39) and (40).

\begin{equation}
\text{(39) } \text{\textbf{P}P \text{topicalization}} \\
\text{a. } \text{Let me tell \textit{you \textit{a \textit{story}}}. \text{In \textit{the \textit{midst of \textit{the \textit{great Kansas prairies, a girl}}}}}
\end{equation}

\textsuperscript{14} However, as argued in Baltin (1982), sometimes it is possible to construct sentences in which both topicalization and \textit{wh}-movement have occurred.

(i) \text{He's a man to whom liberty we could never grant.}

Therefore, there should be more details needed to account for such contrasts (see the discussion in Baltin 1979, 1982). Nevertheless, to our purpose the main point here is to show that the preverbal PPs in LI and the topic phrases behave alike in the \textit{wh}-island configuration.
named Dorothy lived with Uncle Henry and Aunt Em.

b. Let me tell you a story. A girl named Dorothy lived with Uncle Henry and Aunt Em in the midst of the great Kansas prairies.

(40) **DP topicalization**

a. # Let me tell you a story. A little black dog Toto, a girl named Dorothy loved (him) dearly.

b. Let me tell you a story. A girl named Dorothy loved a little black dog Toto dearly.

As shown in the above, one way to test the (relatively) unmarked status of some particular word order is provided by the possibility of having the sentence to begin a story. In contrast with DP topicalization, PP topicalization can be used to introduce the narrative in the very beginning of a story, without altering the neutral information structure that is expected in such a context. In other words, topicalization of PPs intrinsically differs from topicalization of DPs in that, in addition to the possibility of carrying given information, it can carry neutral information with it as well, which is not possible for DP topicalization. Therefore, the fact that the preverbal PP in LI, which is analyzed as having obligatory topicalization, does not always carry old information cannot be held as an argument against the present proposal. Instead, its compatibility with neutral information structure is generally expected of PP topicalization in both inverted and non-inverted structures.

Crucially, data like these cast doubt on previous purely discourse-function-based approaches (Bresnan 1994), which propose that in LI the motivation for locative PPs to move into the CP domain is for them to take on a topic interpretation. Nevertheless, as we have seen above, expressing given or old information is not a prerequisite for the locative PP. By contrast, in the current proposal, the PP is compelled to move as a resolution for defective intervention and the oft-observed topic interpretation associated with the preverbal PP in LI can be simply viewed as a by-product of its movement to the left periphery. That is to say, the observation (the presentational focus property) that the postverbal DP in LI is often focused as new information can be regarded as a "bonus"
semantic effect brought out by PP topicalization\(^{15}\). Crucially, because this kind of semantic effect is a by-product under the current analysis, we expect that this association with certain fixed information structure is volatile. In any case, I suggest that the oft-observed information structure associated with LI is only an additional semantic effect that \(\bar{A}\)-movement of PP brings out but not the trigger for such a displacement. In addition, the discourse-based approaches do not seem to be general enough when more related constructions are taken into considerations. Anticipating from the discussions in chapter 3, I argue two-step movement of the fronted element is obligatory in English Quotative Inversion and Sentential Subject as well. However, there seem to be different information structures with these constructions; specifically, Quotative Inversion is compatible with the fronted quotation bearing focused or topocalized reading while sentential subjects seem to carry neutral interpretation in this regard. If we assumed purely discourse-function-based approaches, we would then have to posit three different discourse functions or features in the three constructions. This way, we would be missing a broad generalization that these constructions behave very similarly syntactically, as shown in chapter 3. On the other hand, in the current analysis, these differences in their discourse functions are not totally unexpected in that what makes the above construction similar is the additional \(\bar{A}\)-movement of the fronted element, triggered by intervention effects.

In addition to capturing the topic-locative parallelism, treating the locative PP as having undergone two-step movement to [Spec, CP] also gives us a coherent account for those apparently "subject" properties of LI. As discussed earlier, a remarkable subject-like property of the locative phrase is that it displays that-trace effect and T-to-C asymmetry in wh-questions. In the analysis I propose here, the two cases can be subsumed under the Empty Category Principle (ECP). We will first consider how ECP in

\(^{15}\)As a matter of fact, similar effects can be observed in other languages as well. For example, in Basque if the subject is focused, it has to be left-adjacent to the verb. In order to achieve this effect, one moves the object either by right- or left-dislocation. That is, the focus meaning of the subject is brought about by topicalizing the object (Arregi 2002). Thanks to David Pesetsky and Norvin Richards for pointing out the relevance to me.

(i) Neutral: Mirenek Jon ikusi rau
Miren.Ergative Jon.Absolutive see-PRF Aux.PR

(ii) subject focus: Jon, Miren.Mike ikusi rau
Jon.Absolutive Miren.Ergative see-PRF Aux.PR

(iii) subject focus: Miren.Mike ikusi rau Jon.
Miren.Ergative see-PRF Aux.PR Jon.Absolutive

'Miren saw John.'
'MIREN saw John.'
'MIREN saw John.'
the Government-Binding (GB) approach captures these effects and then briefly discuss how it works in the Minimalism framework.

(41) and (42) are run-of-the-mill examples of that-trace effect (Perlmutter 1971) and the T-to-C asymmetry (Koopman 1983).

(41)  
That-trace effect  
Whoi do you think (*that) ti met Sue?

(42)  
T-to-C asymmetry  
a. *Who did see Mary?  
b. Who saw Mary?

The GB account took both effects to be consequences of the local binding requirement on subject traces, regulated by the ECP.

(43)  
Empty Category Principle  
(Chomsky 1986b)  
Traces must be properly governed.  
A properly governs B if and only if A theta-governs B or A antecedent-governs B.  
A theta-governs B iff A governs B and A theta-marks B.  
A antecedent-governs B iff A governs B and A is coindexed with B.

According to this condition, a trace of wh-movement in [Spec, TP] could only satisfy the ECP by antecedent government. Therefore, that-trace effect arises because the presence of that intervenes between [Spec, TP] and [Spec, CP], impeding antecedent government. By the same token, the T-to-C asymmetry emerges since the fronted auxiliary verb, as did in (42a), is taken to have the same blocking property and thus the subject trace fails to be properly governed. Now consider the LI sentences in (44) and (45) and their corresponding structures under my analysis in (46a) and (46b).
(44)  
\textit{T-to-C asymmetry in LI}

*Down which hill did roll a small child?

(45)  
\textit{That-trace effect in LI}

*It is in these villages that we believe that can be found the best examples of this cuisine.

(46)

\begin{center}
\begin{tikzpicture}
  \node (CP) at (0,0) {CP};
  \node (Spec) at (-1.5,-1.5) {Spec};
  \node (C') at (1.5,-1.5) {C'};
  \node (C) at (-2.25,-3) {C};
  \node (TP) at (2.25,-3) {TP};
  \node (Spec') at (-2.25,-4.5) {Spec'};
  \node (T') at (2.25,-4.5) {T'};
  \node (T) at (2,-5) {T};
  \node (VP) at (0,-6) {VP};

  \draw [->] (Spec) -- (CP) node [midway, left] {Spec};
  \draw [->] (C') -- (CP) node [midway, right] {C'};
  \draw [->] (C) -- (Spec) node [midway, left] {C};
  \draw [->] (TP) -- (Spec') node [midway, right] {TP};
  \draw [->] (Spec') -- (T') node [midway, left] {Spec'};
  \draw [->] (T') -- (T) node [midway, right] {T'};
  \draw [->] (T) -- (VP) node [midway, right] {T}
\end{tikzpicture}
\end{center}

\begin{enumerate}
\item a. *[down which hill]_{i} \text{ did}_{j} \; t_{i} \; t_{j} \; \text{ roll a small child}
\item b. *[in these villages]_{i} \; \text{...that} \; t_{i} \; \text{ can} \; \text{ be found the best examples}
\end{enumerate}

In (46a) since PP has moved to [Spec, CP], it leaves a trace in [Spec, TP]; thus we now have the configuration with two potential governors for the trace: the topicalized locative phrase and the T-to-C moved auxiliary \textit{did}. The locative PP at [Spec, CP] cannot govern the subject trace because \textit{did} is an intervener in terms of minimality, but \textit{did} is neither a proper governor since it does not theta-mark the trace. Without a proper governor, the subject trace violates the ECP and thus (46a), a representation of (44), is ungrammatical. The same logic applies to (46b): \textit{that}-trace effect is induced due to ECP violation. In this account, the problem of (36) pointed out earlier is resolved in a unified way. That is, the reason why (36) cannot be taken as a yes-no question is also attributed to the ECP violation, where the fronted auxiliary blocks the proper government relation between the moved PP and the subject trace.
Next consider how the two effects observed in LI can be captured in the Minimalism framework. In particular, assume the system proposed by Pesetsky and Torrego (P&T 2001, 2004). In a nutshell, P&T propose that is not a complementizer (as generally assumed), but is actually an instance of T moved to C. On this view the impossibility of having that when the local subject undergoes A-bar movement becomes the very same fact as the impossibility of do moving to C. Assume that the declarative C has both uninterpretable T features (uT) and uninterpretable Wh features (uWh) when it hosts successive wh-movement. Both uT and uWh features have the EPP property so that something must be attracted to its specifier position. In (44), the nearest wh-phrase to C is the preverbal PP. Under this circumstance, movement of the preverbal PP to [Spec, CP] can simultaneously delete both uT and uWh on C given that nominative case is uT on D.

By the principle of Economy, the less economical derivation with two separate operations (wh-movement and T-to-C movement) is thus excluded. Since T in C is pronounced as did in (44), the result is the obligatory absence of did. By the same token, in (45) since T in C is pronounced as that, the consequence is the obligatory absence of that. Crucially to our purpose, to derive the T-to-C asymmetry and that-trace effect in P&T's system, the preverbal PP must undergo two-step movement as well: first to [Spec, TP] and subsequently to [Spec, CP], which conforms to the present proposal.

Next let us deal with other A-properties: subject raising and WCO. Under the current analysis, the fact that the preverbal PPs can undergo subject raising follows straightforwardly because the PP does move to [Spec, TP] temporarily. In other words, the raising argument does not necessarily guarantee that they are subjects, simply showing that it appears at [Spec, TP] at some point during the derivation. By the same token, the lack of WCO in LI cannot be held against the existence of A-movement. In our account, the absence of WCO is no surprise since the locative PP does not move to [Spec,
CP] in one fell swoop; rather, it first undergoes A-movement and subsequently Ā-movement. With a prior A-movement, WCO effect can thus be evaded.

As I have suggested in the proposal, because of the φ-deficient property of a locative PP in English, it has to leave the [Spec, TP] that it first moves to, then moving higher to the [Spec, CP] as avoidance of defective intervention. Theoretically speaking, the current proposal is in certain respects similar to Stowell’s (1981) Case Resistance Principle (CRP). For Stowell, the CRP, which states that CPs cannot occur in case-assigned position, is taken to be responsible for forcing sentential subjects to topicalize. However, here I would like to suggest another general way of viewing the problem. Rather than viewing this restriction as some specific prohibitions on certain “foredoomed” constituents occurring at [Spec, TP], (such as CPs in Stowell’s discussion and PPs in our case,) it would be fruitful to instead regard this restriction as resulting from some peculiarities of both the elements at the subject position and C.

In particular, suppose the occurrence of some syntactic object in [Spec, TP] is motivated by certain featural property of C. The inability of PPs (and CPs as we will see later in this work) to stay in [Spec, TP] can be taken to reflect their inability to interact with this featural property of C in the same manner that DPs, the canonical occupants of [Spec, TP], do. To put it differently, under our analysis, it is not that PPs are intrinsically unable to stay in [Spec, TP] but rather that, unlike DPs, PPs or more generally non-nominal categories are not appropriately equipped to satisfy the φ-features evaluation requirements of C.

Table 1 summarizes the tests we have used so far. If the proposed analysis is on the right track, we should expect to witness the same set of properties in this table to be displayed whenever there is a construction in which a non-nominal phrase undergoes inversion\(^{19}\). By contrast, when the construction in question involves a nominal phrase moving to [Spec, TP], we are then supposed to see it shows only the A-properties and displays negative results for the Ā-tests.

\(^{19}\) Specifically, I will argue in chapter 3 that English Quotative Inversion, CP subjects and French Stylistic Inversion are related constructions in that they have the same set of properties as described in this chart.
Table 1

<table>
<thead>
<tr>
<th>Property</th>
<th>English LI</th>
</tr>
</thead>
<tbody>
<tr>
<td>No co-occurrence with another sentence-initial topic</td>
<td>✓</td>
</tr>
<tr>
<td>Cannot be ECM complement</td>
<td>✓</td>
</tr>
<tr>
<td>No Sub-Aux Inversion</td>
<td>✓</td>
</tr>
<tr>
<td>Block Á-movement from its domain</td>
<td>✓</td>
</tr>
<tr>
<td>Agrees with the postverbal DP</td>
<td>X</td>
</tr>
<tr>
<td>Verbal agreement</td>
<td>✓</td>
</tr>
<tr>
<td>Raising</td>
<td>✓</td>
</tr>
<tr>
<td>That-trace</td>
<td>✓</td>
</tr>
<tr>
<td>T-to-C asymmetry in wh-extraction</td>
<td>✓</td>
</tr>
<tr>
<td>Lack of WCO effects</td>
<td>✓</td>
</tr>
</tbody>
</table>

2.4 Long-Distance Agree in Locative Inversion

The next essential issue to deal with is to see how the φ-features on C-T receive valuation. I suggest that, after failing to find a proper goal in its first step (i.e. checking against the locative PP), the probe continues to look for a potential goal in its complement domain until it successfully agrees with it.

The first supporting evidence is the verbal agreement. As we know, the most serious problem of treating the locative phrase as the subject is its agreement pattern. That is, the main verb always agrees with the postverbal DP but not with the preverbal PP. This problem vanishes in our proposal: the T actually finds the DP as its goal and agrees with it.

(47) Verbal agreement

On the table sit two frogs.
Crucially, the existence of long-distance Agree explains the great similarities between LI and the presentational-\textit{there} construction. Their affinities have been pointed out by a number of works (see in particular Postal 2004). For example, they both display verbal agreement with postverbal DP. Based on these facts, some works analyze LI as having a null expletive or \textit{pro} in [Spec, TP], thus differing from presentational-\textit{there} only in the "overness" of the expletive. Nevertheless, as I will argue immediately in section 2.5, the Null-Expletive approach does not grant us ways to predict and account for the differences between the two constructions despite its resemblance. In other words, even though many characteristics found in LI also hold for the presentational-\textit{there} construction, there are still some discrepancies. More important, the current analysis, unlike the Null-Expletive approach, does not need to make more stipulations than are necessary on independent grounds; i.e. it can use the mechanism that we need anyway elsewhere in the grammar to capture a variety of phenomena. But before we move unto that part, let us continue to look at the evidence for Agree between T and the postverbal DP in LI.

The second argument for the existence of long-distance Agree comes from the surprising incompatibility of postverbal CP in LI. For the following discussion, I assume CP subjects and CP complements receive different analyses; simply put, a CP subject undergoes two-step movement from [Spec, TP] to [Spec, CP], just as the PP in English LI, though differing from LI, a CP subject would leave a DP trace (which subsequently Agrees with the probe C) at its launching site. On the other hand, a CP complement stays at its base-merged position and does not involve any leftward or rightward movement. More details will be spelled out in chapter 3 and below I will leave the problem of CP subjects aside momentarily. Now consider (48):

\begin{equation}
\text{(48) \textit{No postverbal CP in LI}}^{20}
\end{equation}

\begin{itemize}
\item a. *In this very lab was discovered [that the cure for cancer is tomatoes].
\end{itemize}

\footnote{The sentences in (i) likewise show that there must be some DP in the sentence that is able to Agree with C:}

\begin{itemize}
\item a. *In the hill rained a lot.
\item b. *In the hill seemed to John to rain a lot. \hfill (Norvin Richards, p.c.)
\end{itemize}

\textit{20}
b. In this very lab was discovered [the fact that the cure for cancer is tomatoes].

Under the proposed analysis, the ungrammaticality of (48a) arises because the φ-features on C remain unchecked throughout the derivation, leading to its crash. Specifically, I follow Iatridou and Embick (1997) and assume that CP does not belong to nominal category (i.e. it is φ-incomplete). Therefore, the probe C in (48a) first fails in agreeing with the preverbal locative PP and subsequently fails again in agreeing with the postverbal CP as well. Notice that neither can C take the subject DP inside the complement clause, namely the cure, as its goal since C cannot access to operations inside the strong phase CP, given the Phase Impenetrability Condition (PIC) (Chomsky 2001). However, in (48b) the φ-features need is satisfied by the postverbal factive NP although the initial probe-goal matching aborts. Things get more interesting if we further compare (48) to (49):

(49)  Expletives and postverbal CPs in LI

a. *In this very lab there was discovered [that the cure for cancer is tomatoes]21.

b. In this very lab it was discovered [that the cure for cancer is tomatoes].

In (49) we see that two distinct expletives make a stark grammatical difference in the resulting sentences. Consider (49a) first. It has been argued that the expletive there is either φ-incomplete, possibly only specified in person (Chomsky 2000), or devoid of any φ-features (Chomsky 1995, Kayne 2006 and others). At any rate, the expletive there cannot check against the full set of φ-features on C. As a result, (49a) is bad because C cannot agree with there nor the postverbal CP. On the other hand, in (49b) the C probe can successfully fulfill its φ-needs since, unlike there, the expletive it is fully specified for agreement φ-features instead (Bennis 1986, Cardinaletti 1997 among others).

21 Note that the unacceptability of (49a) does not result from Definiteness Effect since the sentence is still bad if we change the definite subject inside the CP into an indefinite one:

(i)  *In this very lab there was discovered that a possible cure for cancer is tomatoes.
Therefore, in (49b) the uninterpretable φ-features on the C probe gets eliminated even without having to reach the postverbal CP. From the contrast shown in (48) and (49), we have good reason to believe that long distance Agree can be established between the C head and the postverbal constituent if the constituent moving to [Spec, TP] does not lead to appropriate Agree relation with C, just like in our LI case at hand.

To summarize, in this section I have demonstrated the existence of Agree in LI, which relation is established between C and the postverbal DP. With the establishment of the Agree relation, we can understand the similarities between LI and the presentational-there construction. It also enables us to understand the ban on the presence of postverbal CPs witnessed in LI.

2.5 AGAINST THE NULL EXPLETIVE HYPOTHESIS

In the literature there have been proposals, which I group under the name of Null Expletive Hypothesis (NEH), arguing that in LI the PP is in a higher TP-adjoined or left-peripheral topic position while an invisible expletive (Postal 1977, 2005, Coopmans 1989) is at [Spec, TP]. The covert nonthematic subject is allowed in this construction because the PP in the C domain is available to identify and license it. (50) represents the structure under such a proposal.

(50) *The Null Expletive Hypothesis*

[[pp On the table] [TP proExpl [T stood a trophy]]]

In practice, the current proposal is very similar to the NEH in that, first, the verbal agreement fact is captured since the Agree relation between C and the postverbal DP can be established in the same way as in there-presentational sentences with an overt expletive; second, the topicalization facts are expected since the locative PP is in a peripheral position. Accordingly, it is imperative for us to distinguish the two approaches. This section is thus concentrated on comparing these two approaches and I will explicitly spell out the reasons why the current theory is superior to the NEH: our approach relies
on some mechanism that is independently observed in the grammar (that is, topicalization) so it need not resort to additional stipulations to capture certain facts; moreover, it predicts language variation.

First and foremost, the NEH fails to capture the lack of WCO in English LI. Under the NEH, the preverbal PP is regarded as an Ā-moved topic in the left periphery; therefore, we should expect WCO effects to be observed since Ā-movement is involved on this view. This is contrary to the fact, as we have demonstrated previously.

Second, the current approach can capture the facts that the NEH tries to cover with principles that are independently argued to be operative in the grammar. One of the problems for the NEH is that it crucially relies on the concept of a covert subject in English; however, as is widely known, English is not a null-subject language. Although it is not impossible to posit the existence of a null subject and specify its licensing environment\(^{22}\), nevertheless it is still a construction-specific rule applying to a limited array of environments. Thus, if we can dispense with this additional assumption but instead rely on the principles needed on independent grounds in the grammar, it would be a desirable thing to do. The present analysis is such an account. Recall that in our approach we assume the occurrence of PP topicalization and a movement dependency established between the null element at [Spec, TP] and the PP at [Spec, CP]. These are general mechanisms required for other cases in the grammar and no special thing needs to be stipulated.

Third, the NEH fails to make correct predictions about language variation. Suppose we follow the NEH and posit a null subject with specific licensing environments. By the same token, the possibility of having a subject pro, which is licensed by an adjacent adjunct or topic, should be allowed in other languages as well, especially for languages that already entertain productive use of subject pro. However, this prediction is not borne out. It is known that Mandarin Chinese is a pro-drop language and its licensing depends on pragmatics (Huang 1982). Yet, anticipating somewhat from the discussion on Mandarin in section 3.1, the locative phrase in Mandarin LI is not an adjunct or topic but a grammatically subject in [Spec, TP]; in other words, it is not possible to place a null

\(^{22}\) For example, Hoekstra and Mulder (1990) formulate the pro-drop parameter in such a way that English pro is licensed precisely under LI.
argument in [Spec, TP] that gets identified by the locative phrase in Mandarin LI. As a result, the NEH is clearly inadequate in that it allows the existence of pro in a non-pro-drop language but, on the other hand, it cannot account for the impossibility of having subject pro in this construction in a pro-drop language. Under the NEH, the contrast between the two languages is rather surprising. In the present proposal, by contrast, this sort of language variation is totally expected. As outlined earlier in this work, the English PPs are θ-deficient so that its A-movement is obligatory as avoidance of defective intervention; on the other hand, the Mandarin locative phrase is a fully-fledged nominal phrase (which we will argue for later), so that it itself can satisfy the θ-need of C and stay at [Spec, TP] throughout the derivation.

Furthermore, even if we do grant the option of having pro in English and further propose some special licensing environment for its occurrence, as I show below, it does not suffice. Here I take the clearest case proposed in the literature to show that, even if one postulates certain licensing contexts for the occurrence of pro, the NEH is both too restrictive and too lenient. Take the definition provided in Coopmans (1989) for example:\(^{23}\):

(51) **Licensing condition of English pro**

Indexed COMP identifies 'pro': [i PP ]COMP pro\(_i\) (Coopmans 1989: 21)

The rule in (51) gives formal content to the notion of a topicalized PP in C which exceptionally triggers pro-drop in the subject position it governs. If such a rule existed in the grammar so that a structurally higher locative PP could license a covert expletive at [Spec, TP], it would be curious why inversion in general (i.e. not restricted to LI) exhibit similar behavior. For instance, as illustrated below, neither AP nor VP inversion can undergoes Sub-Aux inversion, exactly as happens in LI. It appears that, therefore, inversion constructions in general share a certain structural affinity.

\(^{23}\) One problem with the NEH is that the related works are not very explicit on how the identification between the PP and the covert element at [Spec, TP] works. The definition provided in Coopmans is, as far as I can tell, the most explicit one.

\(^{24}\) The notion of 'pro' in Coopmans is not the traditional one. In this paper, it is notated for invisible nonthematic subject, namely covert expletive.
(52)  *AP inversion
   a. Higher than the Prudential Tower is the John Hancock Tower.
   b. *Is higher than the Prudential Tower the John Hancock Tower?

(53)  *VP inversion
   a. Standing next to Mary is the president of MIT.
   b. *Is standing next to Mary the president of MIT?

This is unexpected in the NEH since in its formulation the licensing environment is
spelled out to be only sensitive to PP topicalization. Therefore, different types of
inversion would require different licensing rules in this account and a generalization on
inversion seems to be missing.

On the other hand, even if we want to save this account by loosening up the
licensing condition of the NEH to be that any topicalized XP can license a covert
expletive, this account becomes too liberal and makes wrong predictions. This is the case
since, for example, it would predict a topicalized NP/DP can be a licenser of null
expletive as well and accordingly a NP/DP inversion case should disallow Sub-Aux
inversion just as the above inversion cases. However this prediction is not borne out.
According to the NEH it should be logically possible for the preverbal NP/DP to be
topicalized and therefore license a null expletive, but, as shown in (54), Sub-Aux
inversion turns out to be possible in this case, unlike in AP and PP inversion. Therefore, it
is fair to conclude that the NEH is both too weak and too strong at the same time: it is too
strong in that it limits the rule to apply only to the PP topicalization and fails to capture
the general pattern of inversion and it is too weak in that, if we broaden the licensing
conditions, it fails to predict the possibility of Sub-Aux inversion in a case like (54).

(54)  *NP/DP inversion
   a. The president of the city council is a relative of John’s.
   b. *Is the president of the city council a relative of John’s?

25 Moreover, here verb agreement is clearly with the DP:

(i) The British kings are /*is an obsession of John’s.  (Norvin Richards, p.c.)
By contrast, the above patterns are expected in our account. AP and PP, being ϕ-
incomplete, cannot stay in [Spec, TP]; otherwise, it would induce intervention effects for
the Agree action of C. As a consequence, they are obliged to move to [Spec, CP]; due to
this further movement, the Sub-Aux inversion is inapplicable. However when a NP/DP
once moves into [Spec, TP], it is frozen at that position because all the features are
checked off. In other words, our account captures the similar patterns for inversion of
distinct categories by the same principles used in LI.

Finally, if LI involved an (invisible) expletive, we would expect that it patterns
exactly like the presentational-there construction (PTC) with a topicalized locative PP.
However, LI and PTC are not totally the same. For example, one dissimilarity concerns
the presence of Definiteness Effect (DE). DE, first noted in Milsark (1977), bans definite
expressions from appearing as themes in existential constructions.

(55) **Definiteness Effect**

There seems to be { a / *the / *every } man in the room.

Much work attempt to understand the nature of this effect (see for instance Safir 1985,
Belletti 1988). Not committing myself to any particular theory here, I will simply assume
that the restriction arises due to the existence of an expletive and its particular relation
with a definite NP. Now consider (56).

(56) a. **PTC**

*Into the room there walked the man that I met at the party yesterday**

b. **LI**

Into the room walked the man that I met at the party yesterday.

---

26 (56a) might be possible under a list-reading (see Rando & Napoli 1978 among others), which requires a
special discourse context. However, the point I want to make here still holds in that (56b) is perfectly
grammatical even without assuming a particular discourse background; therefore, there does exist a contrast
between the two.
From the contrast, it is evident that, unlike PTC, LI allows a definite DP post-verbally and does not display DE.

Crucially, I argue that long-distance Agree is not specifically a property of expletive constructions, but of constructions where the specifier of TP does not have a full set of φ-features. As a result, under the current account, the reason why LI and PTC look alike is because of the Agree relation between C and postverbal DP, not because of the existence of expletive, be it covert or overt. Although it may well be plausible to attribute the above differences to the ‘overtness’ of the expletive and to state that DE is sensitive only to the overt expletive, nevertheless, with this implementation, we are again positing an additional condition in order to rescue the NEH. Therefore the current analysis is preferable in that it relies on operations or conditions that are required on independent grounds.

In this section, I investigated the properties of English LI and proposed a unified account which consists of obligatory topicalization of the locative PP and the Agree relation between C and the postverbal DP. Crucially, I suggested that the inability of PPs to stay in [Spec, TP] is a result of their inability to interact with this featural property of C in the same manner that DPs do. Furthermore, different from the previous accounts, I attribute the obligatory topicalization of locative PPs to be the way around defective intervention effect: only when the inactive PPs stay out of the search domain can the probe-goal relation between C and postverbal DP be established.

2.6 Expletive there and Defective Intervention

Up to this point, I have not discussed how the expletive there should be treated in the proposed system. In an expletive construction, the probe C appears to φ-Agree with the postverbal DP because it is this DP, instead of the expletive, that determines verbal agreement. Under the current analysis, therefore, it seems that one should expect there, just like the preverbal PP in LI, to undergo two-step movement from [Spec, TP] to [Spec, CP]. However, this (apparent) prediction is not borne out. For instance, like regular DP subjects, there is compatible with Sub-Aux inversion and it can occur within the clausal
complement of ECM verbs. In other words, the expletive *there* behaves just like a typical DP subject in [Spec, TP], but not structurally higher. Now the question to ask is the following: why doesn’t the expletive subject *there* induce defective intervention effects?

(57) **Expletive there behaves like DP subjects**
   a. There is a dog barking in the garden.
   b. Is there a dog barking in the garden?
   c. I believe there to be a dog barking in the garden.

I propose that (defective) intervention effects are relativized (cf. Rizzi 1990): they are only sensitive to relevant types of features. In our case at hand, intervention is sensitive only to Case/ϕ-features because it is the uninterpretable Case/ϕ-features on C that triggers the action of probing. Therefore, I suggest that the reason why *there* does not show intervention is that it is not equipped with any Case/ϕ-features in the first place. In other words, the reason why *there*, which I assume to be externally-merged in [Spec, TP], can stay in [Spec, TP] is that it is devoid of any ϕ-features. Since its occurrence at [Spec, TP] would not block the Agree operation between C and the theme DP, *there* need not, and hence must not, undergo further movement.

This kind of view on the expletive *there* is similar in spirit to the so-called splitting-approach (Sabel 2000, Kayne 2006):

(58) **Splitting analysis of expletive there**
   [DP there [NP N]]

On this view, *there* is the overt realization of a D-feature (Chomsky 1995, Jonas 1996), which is moved from its base position inside the DP of its associate. Simply put, *there* is an overt bundle of D or deictic features; as a consequence, it does not induce defective intervention effects since it is composed of purely categorial features but does not have the relevant type of ϕ-features. Finally, if the current proposal is on the right track, one of the consequences that follows is that this seems to pose challenges for approaches that

---

27 This contradicts Chomsky (2001), where he proposes that *there* has PERSON feature.
take *there* to be ‘meaningful locative expletive’ (Moro 1997, Williams 1994) since they should expect *there* to induce intervention effects, contrary to the fact. I leave this issue for further investigation.

As an interim summary, in this section I started with the investigation of English LI and argued for an analysis based on the theory of Agree. I showed that the miscellaneous syntactic behavior of the fronted PP could be derived once we have proper understanding of how the featural composition of locative PPs influences on the Agree relation between C (and thus T by inheritance) and postverbal DP. In particular, I proposed that Ā-movement of PP is obligatory as avoidance of defective intervention effects. I further argued against the null-expletive approach and showed that long-distance Agree is not specifically a property of expletive constructions, but of constructions where the specifier of TP is ṽ-deficient. To conclude, I showed that with an appropriate characterization of the C-related properties and defective intervention effects in the theory of Agree, the apparently chaotic behavior observed in LI comes as no surprise. In the following sections, I will show that the cross-linguistic variation is captured by the system propose here and there is indeed a correlation between having nominal locative phrases and allowing locative subjects at [Spec, TP].

3. **Locative Inversion: When the Locative Phrase is Nominal**

Other than English, the LI construction is probably studied most extensively in Chichewa. One reason for this (we will turn to more details later) is that Chichewa shows very different agreement patterns in LI from English. Previous work, to the best of my knowledge, has not provided a unified account as to why there is such variation across languages. The present approach proposed there, however, can capture those language variations in a natural way based on the independently motivated principles, as I outlined in the introductory chapter. This section aims to provide a comparative study of LI in the
other group, where the locative phrases are nominal, and I will describe how the current theory brings out the predictions in these languages. I will start by investigating LI in Mandarin Chinese. In particular, the locative phrase in Mandarin is or can be nominal and thus it has a distinct way of interacting with the features located on T and C and thus generates a different structure from English. Subsequently, we look at Gungbe, which also belongs to the group that the nominal locative phrases can stay at the subject position in [Spec, TP]. Finally, a micro-parameter study of the Bantu languages (Chichewa, Kinande and Sesotho) will be presented to show that the proposed correlation is manifested within typologically very close languages.

3.1 Mandarin Chinese

A typical Mandarin Locative Inversion (LI) example is given in (59).

(59) Mandarin LI

\[ \text{tai-shang zuo-zhe pingshentuan} \]

platform-top sit-Dur judges

Lit. “On the platform sit the judges.”

At a first approximation, my proposal for Mandarin Chinese (or more broadly languages with nominal locatives) LI is represented in (60).

(60) The analysis of Mandarin LI

\[ [TP [Locative phrase];i T [\_v; t; v [ theme DP] t;]] ] \]

a. The locative phrase stays at [Spec, TP] and Agrees with T

b. The postverbal DP Agrees with v.

To begin with, I present the arguments showing that the locative phrase in Mandarin belongs to a nominal category.

Mandarin Chinese displays (apparently) two adpositions, as shown in (61).
(61) **Two apparent adpositions in Mandarin**

Lisi fang-le shu [zai zhuo shang]
Lisi put-Perf book AT table ON
‘Lisi put the book on the table.’

I propose that the apparent postposition (*shang* ‘on’ in (61)) is not an adposition but is more like a relation noun that specifies the relative location with respect to a certain object (cf. Li 1990). On the other hand, the preposition (*zai* in (61)) is indeed of the adposition category in the traditional sense\(^\text{28}\). In the following discussion, I will term the former *localizer* (L) and the latter *preposition* (P).

The distinction between the two can be demonstrated by Case checking properties and syntactic distribution as exemplified below. (62a) and (62b) show that the verb *kan* ‘look at’ can take either *yi-ben shu* ‘a book’ or *fangjian limian* ‘room-in’ as its complement. However, as (62c) indicates, the two complements cannot be realized simultaneously. This can be anticipated if we assume that the verb in question only has one Case to assign and crucially, for our purpose, that the constituent composed of NP and L (henceforth LP) is also a nominal phrase. The point can be made clearer when we compare (62c) and (62d): (62d) is acceptable because of the insertion of a real preposition, which assigns Case to the LP.

(62) **DP and LP compete for Case**

a. Lisi kan-zhe [yi-ben shu].
   Lisi look at-Dur a book
   ‘Lisi was looking at a book.’

b. Lisi kan-zhe [fangjian limian].
   Lisi look at-Dur room L in
   ‘Lisi was looking at the inside of the room.’

c. *Lisi kan-zhe [yi-ben shu] [fangjian limian]

\(^{28}\) There have been debates on the status of this Localizer category in Mandarin. See Ernst (1988), Li (1990) among others.
Lisi look at Dur a book room L.in
d. ?29 Lisi kan zhe [yi ben shu] [zai [fangjian limian]]
Lisi look at Dur a book P room L.in
Lit. ‘Lisi was looking at a book at the inside of the room.’

The fact that LPs are nominal can be further evidenced by its similarity to possessive constructions. As can be seen in (63a), the possessive marker30 de can be inserted between two nouns; the same can be applied to our case in question, where a NP fangjian ‘room’ and L limian ‘in’ are combined as in (63b).

(63) LPs, like NPs, take the possessive marker
   a. jichengche siji
      taxi driver
   a'. jichengche de siji
      taxi Poss driver
   b. fangjian limian
      room L.in
   b'. fangjian de limian
      room Poss L.in

Therefore, the LP in its entirety31 is a nominal expression, capable of taking NP modification marker just like a common NP. The argument can be further strengthened with its syntactic distribution.

29 (62d) is not perfect to some speakers, though it is much improved than (62c). This is so since Mandarin PPs prefer to occur before the verbs, therefore, the most natural way to expression the proposition of (62d) is to make the PP precede the verb:

(i) Lisi zai fanjian limian kan zhe yi ben shu
    Lisi P room L.in look at Dur a book

In spite of this, our point still holds.

30 The Mandarin possessive marker de is also used to link adjectives and relative clauses to nouns. There is rich literature on the multiple functions of de, about which I will not go into the details. Here I consistently mark them as Poss(essive) marker just for simplicity.

31 As a matter of fact, when the localizer is bisyllabic (due to the bisyllabic minimal word requirement of Mandarin phonology), it does not necessarily have to attach to a noun and can stand on its own.

(i) limian you yi ge hen chou de ren
    L.inside have one very ugly Poss person
    ‘There is a very ugly man inside.’
Generally speaking, Chinese NPs can occur after verbs but PPs cannot, as shown in (64).

(64)  NPs, not PPs, occur after verbs
   a. wo qu-le  [ta de jia].
       I    went     he Poss home
       ‘I went to his place.’
   b. ??wo qu-le  [cong  Taipei].
       I    went   Pl.from Taipei
   c. wo [cong  Taipei] qu-le.
       I    Pl.from Taipei went
       ‘I went (to someplace) from Taipei.’

It turns out that locative phrases, with or without another NP as complement, are like regular NPs in that they can occur after a verb (Li 1990).

(65)  LPs, like NPs, occur after verbs
   a. wo qu-le fangjian limian.
       I    went room  L.in
       ‘I went to the inside of room.’
   b. wo qu-le limian.
       I    went  L.in
       ‘I went inside.’

So far I have shown that Mandarin locative phrases are nominal\textsuperscript{32}. Given this fact and following our theory, it is predicted that the locative phrase can Agree with C and satisfy the EPP requirement of T in one fell swoop. That is, it should contrast with the cases in English, where the locative phrases must undergo a further step of topicalization as avoidance of defective intervention effects. Instead, Mandarin locative phrase should

\textsuperscript{32} As shown earlier, Mandarin also has English-type PPs, where a real preposition P is added. In that case, the PP cannot stay at [Spec, TP]. We will return to this issue in a minute.
stay at [Spec, TP] since the needs of both probe and goal are satisfied so that no further movement can be triggered according to activity condition. The prediction is borne out. In the following, I first use the battery of tests that were used earlier in English LI (i.e. Table 1 in section 2) to show that locative phrases in Mandarin LI do not exhibit A-properties. Furthermore, several language-particular tests are provided as well, which shows that the locative phrase is the grammatical subject in [Spec, TP] in Mandarin.

First is the co-occurrence restriction with another topic phrase. As exemplified in (66), the DP subject Lisi can simultaneously occur with another preposed topic phrase whereas, as shown in (67), a topic phrase cannot appear after another sentence-initial topic. Crucially, as shown in (68), the locative phrase behaves like a regular DP in that it can occur with another fronted topic phrase.

(66) **Co-occurrence of a DP subject and a topic phrase**  
Zhangsan, (a) [Lisi hen xinshang ti] (ne)  
Zhangsan Top Lisi very admire Particle  
‘Zhangsan, Lisi admires (him) a lot.’

(67) **No stacking of topic phrases**  
*[Lisi], (a) [zhe-ben shu], (a) Zhangsan gei-le ti (ne)  
Lisi Top this book Zhangsan gave Particle

(68) **Co-occurrence of a LP subject and a topic phrase**  
niurou (a) guozi-li dun-zhe (ne)  
beef Top cooker-L in stew-Dur Particle

The second argument has to do with Exceptional Case Marking (ECM) construction. A typical ECM verb like *renwe* ‘consider’ selects a TP, as exemplified in (69). Since topicalization entails the formation of CP, we expect that an ECM verb fails to take a complement clause involving topic phrases just as in (70). Crucially, LI sentences in Mandarin turn out to be able to serve as clausal complements as exemplified in (71). As a result, we can say that LI sentences in Mandarin are mere TPs.

65
ECM verbs select TPs
Zhangsan renwei [T\(\_\)Lisi hen xinshang Wangwu]
Zhangsan consider Lisi very admire Wangwu
‘Zhangsan considers Lisi to admire Wangwu a lot.’

ECM verbs cannot take complement clauses involving topic phrases
??Zhangsan renwei [CP Wangwu \(\_\) (a) Lisi hen xinshang t\(\_\)].
Zhangsan consider Wangwu Top Lisi very admire
Intended: ‘*Zhangsan considers Wangwu Lisi to admire (him) a lot.’

ECM verbs can take Mandarin LI sentences
Zhangsan renwei [T\(\_\) hu-li you-zhe yi-zhi da shui guai]
Zhangsan consider lake-L.in swim-Dur one big water monster
Lit. ‘Zhangsan considers the lake to swim a big water monster.’

The next piece of evidence comes from the constraints on \(\check{A}\)-movement in LI. As we showed earlier in section 2, an embedded topic phrase contrasts with an embedded DP subject in that the former blocks \(\check{A}\)-movement from within its c-command domain as in (72) but the latter does not as in (73)\(^{34}\). Here, as demonstrated in (74), Mandarin locative phrases resemble common DP subjects in not blocking \(\check{A}\)-movement.

DP subjects do not block \(\check{A}\)-movement from its c-command domain
Wo xiangzhidao [shei]; zhe-ge nuhai hui xihuan t\(\_\).
I wonder who this girl will like

\(^{33}\) Again, as we saw earlier in section 2, if we move the topic phrase or the locative PP out of the infinitival complement clause and to sentence-initial topic position, the resulting sentence is improved:

(i) Wangwu (a) Zhangsan renwei [CP Lisi hen xinshang t\(\_\)].
Wangwu Top Zhangsan consider Lisi very admire

\(^{34}\) Though wh-phrases in Mandarin Chinese usually do not undergo overt movement, it is sometimes possible to front the wh-phrases to force the focus reading on wh-phrases (Huang 1982, Wang and Wu 2005).
‘I wonder who this girl will like.’

(73)  *Topic phrases block A-movement from its domain*

??Wo xiangzhidao [shei] [zhe-ben shu] wo jie-le ti tj.

I wonder who this book I lent

‘I wonder who the book I lent.’

(74)  *Locative subjects do not block A-movement from its c-command domain*

Wo xiangzhidao [sheme] qiang-shang gua-zhe ti.

I wonder what wall-L.on hang-Dur

Lit. ‘I wonder what on the wall hangs.’

So far we have seen that the preverbal locative phrases in Mandarin do not exhibit the Ā-properties as seen in English LI. Next let us check how they behave in the tests of A-properties.

Similar to English, the locative phrases in Mandarin LI display subject-raising:

(75)  *LPs undergo subject raising*

a. chuang-bian sihu pa-zhe yi-dui mayi dajun.

window-L.by seem crawl-Dur one ant army

‘By the window seems to crawl an army of ants.’

b. cunzhuang-li hoaxiang zuoluo-zhe yi-dong jiaotang.

village-L.in appear locate-Dur one cathedral

‘In the village appears to be located a cathedral.’

In addition, no WCO effects are detected in Mandarin LI. Thus it is unlikely that locative phrases have Ā-moved (in one fell swoop).

(76)  *No WCO in LI*

Mei-ge-ren de zhuo-shang dou bai-zhe tade shu

Everyone Poss table-L.on all place-Dur his book
Lit. ‘On everyone’s table was placed his book.’

In Table 2 below, I summarize the results after applying the same set of tests to English and Mandarin. As clearly seen here, English and Mandarin differ significantly in that locative phrases in Mandarin LI do not exhibit any signs of having undergone A-movement.

Table 2

<table>
<thead>
<tr>
<th></th>
<th>English LI</th>
<th>Mandarin LI</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A-properties</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. No co-occurrence with another sentence-initial topic</td>
<td>✓</td>
<td>X</td>
</tr>
<tr>
<td>2. Cannot be ECM complement</td>
<td>✓</td>
<td>X</td>
</tr>
<tr>
<td>3. No Sub-Aux Inversion</td>
<td>✓</td>
<td>inapplicable(^{35})</td>
</tr>
<tr>
<td>4. Block A-movement from its domain</td>
<td>✓</td>
<td>X</td>
</tr>
<tr>
<td><strong>A-properties</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Verbal agreement</td>
<td>x</td>
<td>inapplicable(^{36})</td>
</tr>
<tr>
<td>2. Raising</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>3. <em>That</em>-trace</td>
<td>✓</td>
<td>inapplicable(^{37})</td>
</tr>
<tr>
<td>4. T-to-C asymmetry in <em>wh</em>-extraction</td>
<td>✓</td>
<td>inapplicable</td>
</tr>
<tr>
<td>5. Lack of WCO effects</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>

Because most of the tests for A-properties used in English are inapplicable in Mandarin, in what follows I provide more syntactic tests particular to this language to show the locative phrases in Mandarin LI are arguments that stay in [Spec, TP].

At the outset, as we briefly discussed in section 2, Definiteness Effect (DE) bans definite expressions from appearing as themes in existential constructions.

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\(^{35}\) The Sub-Aux rule does not apply in Mandarin.

\(^{36}\) No overt verbal agreement can be detected in Mandarin.

\(^{37}\) There is no overt complementizer and hence no that-trace effect can be observed in this language.
Definiteness Effect

There seems to be { a / *the / *every } man in the room.

Here I assume the presence of DE is pertinent to the existence of an expletive and DE is induced when an expletive, overt or covert, occupies [Spec, TP]. For our purpose, therefore, we can rule out the possibility of a covert expletive situated at [Spec, TP] by the test of DE, ensuring that the preverbal locative phrase is the subject. The relevant examples are in (78) and (79). In (78), DE is detected and it surfaces when the subject position is not overtly occupied; thus a covert expletive must be present. Interestingly enough, DE disappears with a preverbal locative (79). This is anticipated if the locative occurs at [Spec, TP]; in this way, there is no need to merge a covert expletive imposed by the EPP requirement, DE thus vanishing.

(78) Definiteness Effect in Mandarin

you {yiben shu / *naben shu / *zhanzheng-yu-heping} zai zhuo-shang
have one book that book War and Peace P table-L.on
‘There is a book/*that book/*War and Peace on the table.’

(79) No Definiteness Effect in Mandarin LI

zhuo-shang you {yiben shu / naben shu / zhanzheng-yu-heping }
table-L.on have one book that book War and Peace
‘On the table there is a book/that book/ War and Peace.’

Next is the anti-superiority effect. The anti-superiority effect refers to the phenomenon where a wh-adjunct such as why or how cannot c-command another wh-argument which takes the same scope (Saito 1994, Watanabe 1992). (80) is a Japanese example; (81) is Mandarin.

(80) Anti-superiority in Japanese


John-nom what-acc why bought Q
'Why did John buy what?

b. *John-ga naze nani-o katta no?  [*why > what]
   John-nom why what-acc bought Q

'What did John buy why?

(81) *Anti-superiority in Mandarin
   a. Lisi xiangzhidao shei zheme yang zhu-le zhe-dao cai  [who > how]
      Lisi wonder who how cooked this dish
   b. *Lisi xiangzhidao zheme yang shei zhu-le zhe-dao cai  [*how > who]
      Lisi wonder how who cooked this dish

(82) is a minimal pair (with (81)) constructed with an embedded LI sentence. Interestingly, anti-superiority effect is observed in (82) as well. As the comparison of (81) and (82) indicates, in LI an interrogative locative phrase cannot be commanded by another wh-adjunct in the same clause; therefore, the locative phrase in question behaves as a normal argument.\(^{38}\)

(82) *Anti-superiority in Mandarin LI
   a. Lisi xiangzhidao nali zheme yang gai-le xuduo fangzi  [where > how]
      Lisi wonder where how built many house
   b. *Lisi xiangzhidao zheme yang nali gai-le xuduo fangzi  [*how > where]
      Lisi wonder how where built many house

The last argument is to exclude the possibility of the locative argument in LI to undergo further movement to the topic position. Grammatical subjects in Mandarin are

\(^{38}\) Crucially, notice that once the real preposition is added to the locative phrase, no anti-superiority effect is detected. Precisely, both sentences become ungrammatical. This is so because, by inserting the preposition, we turn the locative phrase into an adjunct PP. In this way, the resulting sentences are subject-less, which leads to semantics anomaly and a violation of EPP.
sensitive to a Subject Specificity Condition (SSC) (Huang 1982); descriptively speaking, it regulates that a non-specific NP is forbidden to stand alone as the subject unless a verb or an auxiliary-like element is inserted in front of the NP as a licensing element, as the contrast shows:

\[(83) \quad \text{Subject Specificity Condition in Mandarin}\]

\[a.*\text{yi-ge ren xiao-le.}\]
\[\quad \text{one man laughed}\]
\[b. \text{you yi-ge ren xiao-le}\]
\[\quad \text{have one man laughed}\]

However, this condition does not necessarily apply to topics (84) or adjuncts (85).

\[(84) \quad \text{Subject Specificity Condition does not hold for topics}\]
\[\text{yi-bei jiu, ta dou he-bu wan.} \]
\[\quad \text{one wine he even drink-not finish}\]
\[\quad \text{‘A glass of wine, he can’t even finish drinking.’}\]

\[(85) \quad \text{Subject Specificity Condition does not hold for adjuncts}\]
\[\text{yi-ge ren, ta jiu ba gongzuo dou zuo wan le.}\]
\[\quad \text{one person he already BA work all do finish Perf}\]
\[\quad \text{‘He finished all the work on his own.’}\]

Now consider LI sentences in (86).

\[(86) \quad \text{Subject Specificity Condition holds in LI}\]
\[a. *\text{yi-ge luzi-shang dun-zhe niurou}\]
\[\quad \text{one stove-L.on stew-Dur beef}\]
\[b. \text{you yi-ge luzi-shang dun-zhe niurou}\]
\[\quad \text{have one stove-L.on stew-Dur beef}\]
\[\quad \text{Lit. ‘On a stove was stewed the beef.’} \]
The contrast between (86a) and (86b) indicates that SSC is observed with the locative argument: a non-specific locative phrase cannot appear alone. Thus, again, we see that Mandarin locative phrases behave on a par with normal DP subjects. Crucially, note that SSC is a condition that indicates the phrase in question is a grammatical subject and stays in [Spec, TP]. If it were possible for the locative phrase to first move to [Spec, TP], obtaining the marker *you*, and then further to [Spec, CP], we should expect *you*-marker to be compatible with topic marker. But this prediction is not borne out. As shown in (87), it is not possible for a phrase marked with *you* to be topicalized.

(87) *you yi-ge luzi-shang a, dun-zhe niurou
    have one stove Top stew-Dur beef
Lit. ‘On a stove, the beef was stewed there.’

As a result, it is safe to conclude that the locative phrase is the grammatical subject that stays in [Spec, TP] throughout the derivation.

On top of that, I would like to highlight a crucial fact: if the locative argument appears in the form of a real PP, namely by adding the true preposition, most of the grammatical LI sentences become unacceptable 39. This is a strong indication that only DPs can stay at the Spec position of T.

    P1 table-L.on have one book
b. *zai chuang-shang tang-zhe yi-ge bingren.
    P1 bed-L.on lay one patient

To sum up, Mandarin LI shows that the locative phrase, as long as it is nominal (i.e. equipped with appropriate grammatical features), can perfectly fit in the subject

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39 unless there is a possibility of having a pro-drop reading with the resulting sentence.
position\textsuperscript{40}; by contrast, when we turn the locative phrase into a full PP by adding the preposition, the resulting phrase has very different syntactic behavior and cannot occupy [Spec, TP].

3.2 GUNGBE

Gungbe\textsuperscript{41}, which is a Gbe language of the Kwa family, is spoken in Porto-Novo in Benin as well as Ogun state and Lagos State in Nigeria. It allows for a word order that manifests both head-final and head-initial patterns (Aboh 2004). For example, in DPs the head D must follow its NP complement while in PPs the head P must precede its DP-complement. In addition, the non-imperfective clauses manifest a SVO order as opposed to the imperfective and related clauses where the object necessarily precedes the verb and the word order is SOV.

Very similar to the Mandarin case, Gungbe (and more generally Kwa) involves two types of apparent adpositions: P and L, following our terminology used in Mandarin. Elements of the type P generally express source, direction or goal, and the category L, on the other hand, generally encodes location. Similar to the situation in Mandarin, P must precede L in Gungbe.

\[
\text{(89) } \text{kofi zé àmì ló tó távò ló ji} \]
\[
\text{Kofi take oil Det P table Det L.on} \]
\[
\text{‘Kofi put the oil on top of the table.’} \]

\textsuperscript{40} Another question emerges now: given Mandarin, like English, has locative PPs that are composed of P+LP, then we should expect the English-type LI pattern, where the locative PP moves to [Spec, TP] first and to [Spec, CP], to be also possible in Mandarin. However, this turns out to be a difficult test for implementation since Mandarin grammar entertains another option for satisfying the EPP need: pro. That is, in the underlying structure, whenever the subject position is empty, the language-particular preferred strategy is to fill this position with a pro. Therefore, under such circumstances, PPs in Mandarin cannot undergo two-step movement as in English since the EPP need is already satisfied.

\textsuperscript{41} Most data cited here are taken from the works of Aboh (2004, 2006) and some are provided by Enoch Olade Aboh. Thanks a lot to him for discussing the relevant issues with me and his help in the judgment.
As shown below (Aboh 2004), P involves case assignment, while L are nominalizing heads that take DPs as complement. The distinction between the two can be demonstrated by syntactic distribution, case assigning properties. To begin with, as what we saw in Mandarin, DP-L constructions in Gungbe are close to possessive constructions.

(90)  

(90)  

Moreover, as (91) shows, the LP constituent behaves as common DP arguments in that it can occur in the complement position of a transitive verb but cannot be realized simultaneously with another DP complement unless P is inserted.

(91)  

Next, consider the paradigm in (92) (taken from Aboh 2006). Sentence (92a) involves an intransitive verb, which can be separated from the P-DP-(L) sequence by an intervening adverb \( \text{hàджòкpoló} \) ‘immediately’. This contrasts with the ungrammatical sentence (92b), where the adverb cannot intervene between the transitive verb and the
immediately following locative phrase introduced by L. The grammatical example (92c) shows that the adverb must occur after the VP in such sentences.

(92) a. Mi fón hàqòkpoló [són zàn ló ji]
    2pl stand immediately P1 bed Det L.on
    ‘Get out immediately of the bed.’

b. *Mi bió hàqòkpoló [xò mè]!
    2pl enter immediately room L.in
    ‘Enter the room immediately!’

c. Mi bió [xò me ] hàqòkpoló!
    2pl enter room L.in immediately
    ‘Enter the room immediately!’

The pattern observed in (92) demonstrates that the [DP-L] constituent is treated as regular DP argument and, furthermore, that the Case adjacency condition (cf. Johnson 1991) seems to be active in this language. Because a Case dependency relation needs to be established between the verb and the DP complement, nothing can intervene between the two. This is why (92b) is ruled out. By contrast, in (92a) because P itself is a Case-checker, the P-DP-(L) sequence as a whole has no Case checking requirement; therefore, the adverb intervention will not cause any problem in this case.

Having proven that the LP constituent is a nominal category, we should expect that it can stand as a grammatical subject and occur at [Spec, TP]. This anticipation is met. As exemplified in (93), LPs occur in subject positions without any problem; nevertheless, when P is added, the resulting sentence is ungrammatical.

(93) a. [távò ló jí] nò zè
    table Det L.on Hab crack
    ‘The surface of the table habitually cracks.’

b. *[tó távò ló jí] nò zè
    P1 table Det L.on Hab crack
Finally, we should be able to see that Gungbe behaves the same as Mandarin regarding to the set of syntactic tests provided in Table 2 since they are languages with nominal locative phrases. Due to the insufficient data at hand, I leave this issue to be validated in the near future.

To sum up, we have seen that the complex location sequence P>DP> L in Gungbe, where P is true prepositions and L rather appears a nominal element that forms a larger phrase with the DP preceding it. Owing to their difference in category type, their ability to stand as grammatical subjects differ, just as the current theory predicts. Therefore, locative subject sentences in Gungbe again lend support to our hypothesis: there is a correlation between being a nominal category and being a grammatical subject.

4. MICRO-COMPARISON: CHICHEWA, KINANDE AND SESOTHO

It has been argued that locative phrases in Chichewa have the structure of NP headed by a nominal locative marker; that is, the apparent 'prepositions' in this language are not really prepositions that mark grammatical Case but, rather, class markers (for some discussion see Bresnan and Kanerva (B&K) 1989, Bresnan 1991, 1994). Moreover, they freely occur in the subject or object positions of semantically compatible verbs with their own modifiers and specifiers showing concord with the noun class of the head. Therefore, Chichewa locative phrases are unambiguously nominal. According to the present proposal, the locative in this language should thus perfectly serve as a goal for the C probe. This is validated since in Chichewa the verb agrees not with the post-verbal DP but with the locative argument; that is, noun class agreement holds between locative and the verb.
(94) pa-m-sika-pa pa-bádw-a nkhonya. (B&K 1989 ex. 22a)
16-3-market 16this SB IM.FUT-be born-IND 10.fist
‘At this market a fight is going to break out.’

(95) ku-mu-dzi ku-na-bwer-a a-lendo (B&K 1989 ex. 22b)
17 3-village 17.SUBJ.REC.PST.come-FV 2.visitor
‘To the village came visitors.’

Very similar patterns can be found in another Bantu language, Kinande. Locative expressions in Kinande clearly bear nominal features and occupy [Spec, TP]. Evidence for this is the fact that they can trigger subject agreement on the verb in LI structures.

(96) oko-mesa kw-a-hir-aw-a ehilanga.
loc.17-table 17S-T-put-Pass-Fv peanuts.19
‘On the table were put peanuts.’

Therefore, I suggest that, like Chichewa, locative phrases in Kinande are nominal and thus have all the appropriate features for C. This proposal crucially differs from Baker and Collins (2006), where they claim that locative phrases in Kinande are not full-fledged NPs thought they do bear some nominal features. Their evidence comes from ungrammatical sentences like (97).

(97) a. *Omo-ki-buga mu-li endeke (Baker and Collins 2006: ex. 24)
loc.18-7-playground 18S-be nice/good
‘It’s nice in the playground.’

b. *N-anz-ire oko-mu-longo.
1sS-like-Ext Loc.17-3-village
‘I like (it) at the village.’

Based on (97), they thus contend that locatives in Kinande cannot receive subject or object theta roles. However, the unacceptability of sentences like (97) may not be due to
purely syntactic problems. That is, what makes these sentences degraded can be pragmatic infelicity: (97) is odd when being uttered in an out-of-blue context whereas nothing is syntactically wrong as shown in (98). Given that the question part in (98) sets an appropriate discourse context, the answer, in which a locative phrase receives subject theta role, is perfectly acceptable.

(98) Q: nyi hire eritunda ryo hayi?
   1sS put fruit Lk where
   ‘Where should I put the fruit?’
A: oko-mesa ko kuwene.
   loc.17-table 17-be better
   ‘It’s better on the table.’

So far we have seen that locatives in two Bantu languages are of full-fledged nominal category and trigger agreement just like regular subjects do. Next, we look at another Bantu language, Sesotho.

Unlike Chichewa and Kinande (and most Bantu languages), Sesotho has lost its locative noun class prefixes (Demuth 1990). Rather than creating locatives through the use of a noun class prefix, Sesotho uses the preposition ká or the locative suffix -ng (data from Demuth 1990).

(99) ba-eti bá-il-é ká-ntlé
   2-travelers 2SM-go-M Prep-outside
   ‘The travelers went outside.’

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42 Thank you to Pierre Mujomba for being my Kinande informant.
43 The same holds for Mandarin as well. The Mandarin counterpart of (98A) would be awkward when occurring out of the blue.

(i) Q: wo gai ba shuigu fang zai nail?
   I should BA fruit put P.at where
   ‘Where should I put the fruit?’
A: zhuo-shang hao le.
   Table-L on gooe Inc
   ‘It’s good on the table.’
The travelers came to the village.

Importantly, when a locative is fronted, as demonstrated in (101), the verb still agrees with the theme argument *ba-eti* ‘travelers’; no grammatical agreement results between the topicalized locative and the verb. That is, the theme DP *ba-eti* ‘travelers’ still functions as the grammatical subject in (101). Any attempt to force grammatical agreement between the locative and the verb results in ungrammaticality as in (102).

(101) 3-village-Loc 2-travelers 2SM-come-PERF -M
'To the villages the travelers came.'

(102) *mo-tse-ng mo-tl-il-e ba-eti 3-village-Loc 3SM-come- PERF-M 2-travelers
'To the villages came the travelers.'

Therefore we can conclude that the locative phrases in Sesotho cannot satisfy the φ-features requirement of the probe and thus cannot stay at [Spec, TP]; the crucial point pertinent to our discussion here is that the relevant grammatical differences found between Chichewa/Kinande and Sesotho are attributed to the different categorial type of locatives. Moreover, we predict that, like English, the Sesotho locatives would undergo further movement to the left periphery of the C territory according to our account. Due to the insufficient data at hand, I will leave this matter for further validation.

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44 The question mark in (101) is to indicate that it is somewhat stilted and the speakers still prefer the locative to be final like in (100).
5. **LOCALITY AND VERB MOVEMENT IN INVERSION**

In the previous sections I have discussed the syntactic positions of the locative phrases in LI. I have proposed that, thanks to EPP satisfaction by the fronted phrases, the logical subject can and thus must stay in situ. So far, however, we have not addressed two other important issues in the inversion structure: locality and overt verb movement. First, it is assumed in the generative grammar that movement is constrained by locality as I outlined in chapter 1; roughly put, each movement step must be as short as possible. In the current proposal the PP raises from its base-generation position within VP to [Spec, TP]. This movement poses a potential locality problem since the argument PP moves past a structurally higher argument, the theme DP. Second, in all the inversion cases we have seen, the main verbs always precede the logical subject DPs, which suggests that, if our analysis is on the right track, the verbs necessarily undergo further movement at least to T so that it can precede the in-situ DP. As a result, we should ask the following questions: How is the locality violation evaded? Why does the verb in the inversion constructions have to move overtly while it does not have to in non-inversion cases? In what follows, I propose that the verb must move overtly in inversion in order to resolve the potential locality issue. Let us start by looking closely at the auxiliary restriction in inversion.

5.1 **AUXILIARY RESTRICTION AND EQUIDISTANCE**

The auxiliary restriction (henceforth Aux restriction) in inversion refers to the fact that auxiliaries and modals are disallowed or not preferred in English inversion. This is illustrated in (103) and (104). (Note that, anticipating from the discussion in the next chapter, I include English Quotative Inversion sentences in the demonstration of the Aux restriction since Aux restriction holds in Quotative Inversion as well and some speakers
report that this restriction holds stronger for the Quotative Inversion cases than the LI cases.)

(103) a. Down this hill rolled John.
    b. ??Down this hill has rolled John.
    c. ??Down this hill has John rolled.
    d. ??Down this hill was rolling John.
    d. ??Down this hill will roll John

(104) a. “Where is my key?” asked John.
    b. *“Where is my key?” has John asked.
    c. *“Where is my key?” has asked John.
    d. *“Where is my key?” was asking John.
    e. *“Where is my key?” would ask John45.

Noteworthy is that the restriction holds only when the inverted order (Verb-Subj) is involved; as shown in (105), no ungrammaticality results from the presence of auxiliaries and modals when we have non-inverted Subj-Verb order. Therefore, it appears that the Aux restriction results due to some particular syntax associated with the inverted Verb-

45 The Aux-restriction, however, does not seem to hold for copula.

(i) a. On the table was placed a book.
    b. Under the mat will be a key.

A possible reason for its exemption from the Aux-restriction is that copula can raise higher even when there is a preceding auxiliary. Consider the following VP ellipsis examples:

(ii) a. John will be happy but Mary won’t (be).
    b. John will devour it but Mary won’t (*devour).

From the above contrast we see that copula is optionally included in the elided phrases; in other words, it seems to be able to optionally undergo raising out of the elliptical site even in the presence of the modal. Crucially, however, notice that copula in LI seem to behave differently regarding VPE; they obligatorily raise out of the VP ellipsis site:

(iii) Under the mat will be a key and inside the mailbox will *(be) too.

In other words, for some unclear reasons, copula in LI always raises higher even when there is an Aux; this is probably why it does not observe the Aux-restriction. More detailed research on this issue is needed.

Thanks very much to Norvin Richards in the relevant discussions here.
Subj order rather than due to some inherent oddness of tense/aspect-related modification in the inversion constructions.

(105)  a. “Where is my key?” John asked.
       b. “Where is my key?” John has asked.
       c. “Where is my key?” John was asking.
       d. “Where is my key?” John would ask.

Crucially, I would like to point out that this effect is strongly reminiscent of the restrictions observed in Scandinavian Object Shift (OS), namely Holmberg’s Generalization (HG) effects. In the literature, there has been a debate concerning the correct characterization of HG. Following Anagnostopoulou (2003), Bobaljik (2003), Chomsky (1995) and others\(^{46}\), I assume that (at least a subgroup of) this phenomenon is exclusively tied to V-raising. The core data are exemplified in (106) (from Swedish):

(106)  a. Jag kysste henne inte [vp t_v t_o]
        I kissed her not
        b. *Jag har henne inte [vp kysst t_o]
        I have her not kissed

(106a) is fine since both the main verb and the object precede the negation, which delineates the left edge of the VP domain. Therefore OS is allowed since the main verb also moves. On the other hand, (106b) is ungrammatical since the presence of the auxiliary blocks the movement of the main verb; without the overt verb movement OS is disallowed. The main point pertinent to our discussion here is the similarity between the Aux restriction in inversion and the HG effects in OS: the occurrence of the auxiliary/modal blocks OS and subject inversion. I propose that the two phenomena can

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\(^{46}\) In addition to the V-raising approach, there are two other approaches on the HG effects. The second approach (Holmberg 1999) argues that the verb movement requirement is part of a more general PF condition preventing OS across any phonologically visible category within VP, except adjuncts. According to the third approach (Müller 2000, Williams 2003, Fox and Pesetsky 2005), HG reflects a requirement of order preservation as a result of which OS is prohibited to revise the order of the constituents in the VP.
be subsumed under the Minimal Link Condition (MLC) account\textsuperscript{47}: the Aux restriction arises because the occurrence of auxiliaries/modals blocks the verb movement. Thus the verb fails to raise higher to create an equidistant environment for resolving the locality violation.

The common problem faced by OS and subject inversion is that a structurally lower argument has to move over a structurally higher one; this movement presumably would violate Relativized Minimality (henceforth RM; Rizzi 1990)\textsuperscript{48}, given that there is an A-position intervening in between, namely SpecvP/SpecVP, hosting the subject. Following Chomsky (1995, 2000), Collins (1997), Bruening (2001) and Anagnostopoulou (2003) and others, I assume the version of equidistance in (107) (Chomsky 2001) so that an XP may raise across a c-commanding YP in apparent violation of RM provided appropriate environments.

\begin{align*}
\text{(107)} & \quad \text{a. Terms of the same minimal domain are equidistant to the probe.} \\
& \quad \text{b. The minimal domain of a head } H \text{ is the set of terms immediately contained}\textsuperscript{49} \text{ in the projection of } H. \\
\end{align*}

Under such definitions, an XP can move over a c-commanding YP if both arguments belong to the minimal domain of the same head. In other words, two items within the same minimal domain are equidistant: they are equally close to another category. Given these assumptions, OS is predicted to be possible only if V has (at least) raised to Agr: when V raises to Agr, creating the minimal domain \{SpecAgr, SpecV (Subj), CompV (Obj)\}, then Obj can raise to SpecAgr, crossing Subj without violating RM. In the same fashion, V in English subject inversion cases has to overtly move at least to T in order to form the minimal domain \{SpecT, Specv (Subj), CompV\} and allow raising of the lower argument to [Spec, TP]. To conclude, this is why inversion is dependent on V-raising: if the verb had not moved higher, the lower argument movement to [Spec, TP] would induce locality violation.

\textsuperscript{47} I will compare two other potential accounts shortly.

\textsuperscript{48} which informally says that movement is always to the nearest position of the relevant type.

\textsuperscript{49} By merging the objects α and β, forming the new object K(α, β), Immediate Contain holds of \( (K, α) \) and \( (K, β) \).
Moreover, this analysis captures the Aux restriction, repeated here as (106).

       b. *“Where is my key?” has John asked.
       c. *“Where is my key?” has asked John.
       d. *“Where is my key?” was asking John.
       e. *“Where is my key?” would ask John.

(108a) is fine since the verb overtly moves to T and makes possible the movement of the direct quote complement over the agent DP; (108b) is bad because the presence of auxiliary blocks expansion of the minimal domains. (108c)-(108e) are ungrammatical because we would have to move non-constituents together in order to generate such word orders. It seems that, consequently, Aux restriction in inversion can be seen an English-type HG effect.

One prediction following from the analysis is that if the lower argument does not move to an A-position, but to an Ā-position, the verb in that sentence does not have to move to T since now no RM violation needs to be saved. This is so because, under such circumstances, the kind of movement that the lower argument undergoes is of Ā-type and accordingly an higher argument at an A-position would not constitute an intervener. As a result, the non-inverted order as in (109) does not observe Aux restriction since the direct quote can move to the left periphery in one fell swoop.

(109)  a. “Where is my key?” John asked.
       b. “Where is my key?” John has asked.
       c. “Where is my key?” John was asking.
       d. “Where is my key?” John would ask.

Next I discuss the Mandarin LI data to show that the same verb movement restriction holds in Mandarin as well. The data here will turn out to be crucial when we evaluate other alternative accounts.
One remarkable property of Mandarin LI is that the verb must occur with an aspect marker in this construction though aspect marking is usually optional in this language, as seen in (110). Crucially, all aspect suffixes can occur in LI (Lin 2001)\(^{50}\), as evidenced in (111). Now we should ask the following question: why is aspect marking obligatory only in Mandarin LI? I propose that the overt presence of aspect markers in Mandarin LI signals the obligatory verb movement, which, just as in English, arises as a resolution of potential locality violation.

(110) Zhangsan tou-(le) dongxi . . .(de shiqing)
ZS steal-PERF stuff of thing
‘(the thing that) Zhangsan stole something’

(111)  
\( \begin{align*} 
\text{a. } & \text{tai-shang } zuo-\ast(zhe) \text{ pingshentuan} \\
& \text{platform-L.on sit-Dur judges} \\
& \text{Lit. “On the platform sit the judges.”} \\
\text{b. } & \text{gonglu-shang kai-\ast(le) yi-tai tankeche.} \\
& \text{highway-L.top drive-Perf one tank} \\
& \text{Lit. “On the highway drives a tank.”} \\
\text{c. } & \text{Zhezuoshan-li faxian-\ast(guo) yi-ge da baozang.} \\
& \text{This-mountain-L.in discover-Exp one big treasure} \\
& \text{Lit. “In this mountain discovered a big treasure.”} 
\end{align*} \)

To show the obligatory verb movement in Mandarin LI, we turn to adverb facts. It is widely observed that there are two types of adverbials outside VP: functional/temporal adverbials vs. manner/instrumental adverbials and the latter delineate the domain of vP (see Bobalijk & Jonas 1996 among many others). The same holds in Mandarin as well. As shown in (112) and (113), the manner adverbial \textit{bujibuxude} ‘leisurely’ and

\(^{50}\) In this respect, I disagree with Pan’s (1996) analysis that -\textit{zhe} in LI suppresses the external agent argument just as English passives do. There are conceptual and empirical problems in his proposal. Conceptually, Mandarin is known to lack observable morphological processes; \textit{zhe}-suppression is a very unique one. Also, it is not clear why an imperfective marker would trigger such a process. Empirically, as we have seen, as a matter of fact, all aspect markers can occur in a locative subject sentence. This contradicts Pan’s prediction that verbs without -\textit{zhe} should not be able to take locative argument.
chuiqibuyidi ‘abruptly’ and must precede main verbs but not modals; that is, it signals the edge of vP.

(112) a. Zhangsan bujibuxude kai yi-tai tankeche.
   ZS leisurely drive a tank
b. *Zhangsan kai bujibuxude yi-tai tankeche.
   ZS drive leisurely a tank
c. Zhangsan keyi bujibuxude kai yi-tai tankeche
   ZS can leisurely drive a tank
d. *Zhangsan bujibuxude keyi kai yi-tai tankeche
   ZS leisurely can drive a tank

(113) a. Zhangsan chuqibuyi da Lisi.
   ZS abruptly hit LS
b. *Zhangsan da chuqibuyi Lisi.
   ZS hit abruptly LS
c. Zhangsan hui chuqibuyi da Lisi.
   ZS will abruptly hit LS
d. *Zhangsan hui da chuqibuyi Lisi.
   ZS will hit abruptly LS

Now consider the LI examples in (114) and (115):51

(114) a. *Gonglu-shang bujibuxude kai-zhe yi-tai tankeche.
   highway-top leisurely drive-Dur a tank
b. %Gonglu-shang kai-zhe bujibuxude yi-tai tankeche52.

51 Some speakers find (114b) and (115b) are not perfect but even those speakers still report the fact that (114b) and (115b) are much better than (114a) and (115b). Also crucially, in run-of-the-mill sentences, when the verb precedes the manner adverbial, the resulting sentences (like (112b) and (113b)) are helplessly bad.

52 Since the distinction between adjective and adverb is sometimes unclear in Chinese, one may wonder if bujibuxuđe ‘leisurely’ is actually used as an adjective here and modifies the following NP yi-tai tankeche ‘one tank’. However, this objection cannot hold since, as shown below, this kind of modification relation is
From the contrast between (114a) and (114b), we can see that the verb in LI must precede the manner adverbial. In other words, the verb has moved out of the vP domain, whose edge is indicated by the manner adverb. The minimal pair (with (114)) in (116) highlights our point of emphasis here: the verb has to move overtly only in inversion.

In addition, the Aux-restriction is attested in Mandarin LI as well. (117) demonstrates that when the modal occurs in a LI sentence, the resulting sentence is degraded; this is expected in our proposal: (117) is bad since the presence of modal blocks verb raising and, accordingly, the domain expansion. By contrast, the use of modal in a non-inverted sentence like (117) is perfect.

impossible. That is, the phrase bujibuxude cannot be taken to be an adjective either attributively or predicatively. Therefore, it is safe to assume that in (49) the phrase bujibuxude indeed serves as adverb.

(i) *zhe-tai tankeche (shi) bujibuxude.
   This tank be leisurely
(ii) *Zhangsan kai-le yi-tai bujibuxude tankeche.
   ZS drive-Perf one leisurely tank

Highway-top drive-Dur leisurely a tank

(115) a. *Qiang-shang chuqibuyidi hua-le ji-ge yuanquan.
   wall-L.on abruptly draw-Perf some circles
b. %Qiang-shang hua-le chuqibuyidi ji-ge yuanquan.
   wall-L.on draw-Perf abruptly some circles
   Lit. ‘On the wall there were abruptly drawn some circles.’

In addition, the Aux-restriction is attested in Mandarin LI as well. (117) demonstrates that when the modal occurs in a LI sentence, the resulting sentence is degraded; this is expected in our proposal: (117) is bad since the presence of modal blocks verb raising and, accordingly, the domain expansion. By contrast, the use of modal in a non-inverted sentence like (117) is perfect.

(117) *mingtian zhe-ge shihou, gonglu-shang hui kai yi-tai tankeche.
   tomorrow this time highway-L.on will drive one tank
‘There will be a tank driving on the highway at this time tomorrow.’

(118) mingtian zhe-ge shihou, Lisi hui kai yi-tai che lai zhao ni.

tomorrow this time LS will drive one car to find you

‘Lisi will drive a car to find you at this time tomorrow.’

Given this array of facts, suppose the (partial) clausal structure in Mandarin is [TP [ AspP [ vP [ VP ]]]] and the aspect marker is Asp head, which attracts the verb to raise. Consequently, when a verb moves to T, it must have picked up the aspect marker on its way and this is why we have obligatory aspect marker in LI structure.

To summarize, we have shown that, just like in English, in Mandarin LI the verb has moved higher out of the VP to T(-related) position, which can be demonstrated by the obligatory presence of the aspect marker and the occurrence of Aux-restriction. Since the locality constraint is presumably universal, it is reasonable to assume that overt verb movement in Mandarin LI is used to expand the minimal domains and form equidistant environments, which is triggered by the need to avoid potential locality violation (since we move a lower argument over a higher one); otherwise, it is mysterious why Mandarin aspect is indispensable only in inversion construction but optional elsewhere in the grammar.

Some implications follow from the preceding discussion. It is often claimed that Mandarin is a language without syntactic Tense. The arguments for such a claim mostly come in two sorts: first, Mandarin does not have obligatory morphological marking of past events and, second, the temporal interpretation of sentences is often determined by temporal adverbs or the discourse context. However, this view is sometimes doubted and various works have suggested that this language has a possibly empty Inflection or Tense node (Huang 1982, Li 1990, Sybesma 2007). In our discussion, I have shown that Mandarin does have an T(-related) node and I also argue that the overt formal evidence for such a node can be observed in Mandarin locative inversion constructions.

\[53\] Crucially, the current proposal also predicts that when there is an aspect marker that appears on the verb, it does not mean the verb is in TP.
Before ending this section, I would like to point out some interesting facts in our discussion of inversion structures. As shown in (119), in non-inversion sentences with complex phrasal verbs, which consist of verbs and verb particles, a DP object can either occur after the verb particle, as in (119a), or in between the verb and the particle, as in (119b).

(119)  
a. John wrote down the numbers on the inventory sheet.  
b. John wrote the numbers down on the inventory sheet.

However, in LI, the post-verbal DP can only occur after both the verb and the particle, as in (120a). The option of having the post-verbal DP to precede the particle is unavailable as in (120b).

(120)  
a. On the inventory sheet were written down the numbers.  
b. *On the inventory sheet were written the numbers down.

Similar situation can be witnessed in (121) as well.

(121)  
a. On the platform stood up several men.  
b. *On the platform stood several men up.

It thus appears that the post-verbal DP in LI (and more broadly in inversion structures) is more restricted than the post-verbal DP in non-inversion sentences. Crucially, the ungrammaticality of (120b) and (121b) is apparently unexpected under our proposal because in the above (b) instances the main verb has already raised higher, satisfying the requirement of domain expansion but the resulting sentences are nevertheless bad. The above patterns suggest at least two possibilities: either the postverbal DP in LI has to undergo (possibly independent) movement to the rightmost position or the complex phrasal verb, for some reason, is required to move as a whole in inversion structures. I suggest the latter might be the right approach to take. As exemplified in (122), the

54 Thanks a lot to Noam Chomsky for extensive discussions with me on this particular phenomenon.
requirement that the complex verb move as a unit is broader than witnessed above and can also be observed in passives:

(122) a. The numbers were written down on the inventory sheet.
    b. *The numbers were written on the inventory sheet down.
    c. The numbers were written down by John.
    d. *The numbers were written by John down.

Consequently, there appears to be an independent requirement that nothing should intervene between the verb and the verb particle whenever one of the VP arguments is moved to the sentence-initial position. Notice that this is the case no matter whether there is another DP that remains in the postverbal VP or not (as seen in (122)); therefore, we could exclude the possibility of having the postverbal DP undergoing movement to the end of the sentence in (120) and (121) (cf. Doggett (2004)). As a result, I propose the particular restriction that arises in the verb particle constructions is an independent condition that complex verbs must undergo wholesale movement in these constructions and thus the ungrammaticality of (120b) and (121b) should be accounted for along this line and does not affect our equidistance approach discussed in this section. Nevertheless, the emergence of such non-constituent movement as witnessed in the above needs further investigation and I leave it for future studies.


5.2.1 BOBALJIK (2002)

Bobaljik (2002) argues for a system which attributes HG to be the result of a morpho-phonological constraint on verb inflection, requiring merger under PF-adjacency. He proposes that the correct characterization of these environments is not syntactic in
nature, but rather morpho-phonological; an apparently syntactic operation appears to be blocked just in case it would interfere with a post-syntactic operation. (123)-(124) exemplify how the system works. When the main verb is finite, I\(^{0}\) has to be adjacent to the main verb as in (123a), and this blocks object shift in those cases where a shifted object would intervene between the two as in (123b). Similarly, when the main verb is a participle, it is Prt\(^{0}\) that has to be adjacent to the main verb as in (124a), and this blocks object shift in those cases where the overt shifted object would intervene between Prt\(^{0}\) and the main verb as in (124b).

\begin{align*}
(123) & \quad \text{a. Det är troligt [att [IP de -te [VP läs den]]]} \\
& \quad \text{it is probable that they +Pst read it} \\
& \quad \text{O -------- O} \\
& \quad \text{b. *Det är troligt [att [IP de -te den_i [VP läs ti_i]]]} \\
& \quad \text{it is probable that they +Pst read} \\
& \quad \text{Adjacency disrupted: \quad O ----- * ----- O}
\end{align*}

\begin{align*}
(124) & \quad \text{a. [CP/IP Hann hefur [PartP les-ið [AgrOP bókina [VP tverb bókina]]]]} \\
& \quad \text{He has read-Prt book.the} \\
& \quad \text{O ----- O} \\
& \quad \text{b. *[CP/IP Hann hefur [PartP -ið [AgrOP bókina [VP les-bókina]]]]} \\
& \quad \text{He has Prt book.the read} \\
& \quad \text{Adjacency disrupted: \quad O -------- * -------- O}
\end{align*}

Now let us see how this proposal works in English inversion. (125a) shows that if the verb does not move overtly, the in-situ subject would intervene between I\(^{0}\) and the main verb. Therefore, as in (125b)\(^{55}\), the verb raises so that I\(^{0}\) is adjacent to the verb. It now seems that the PF-merger theory makes correct predictions about the obligatory verb movement in inversion.

\(55\) As a matter of fact, the derivation shown in (125b) is not readily permissible in his original proposal. Instead, do-support is argued to apply in such a context. However, the extension of his proposal as in (125b) is necessary; otherwise, his system can never derive grammatical inversion sentences.
However, this system cannot accommodate the LI data in Mandarin. Specifically, because Mandarin generally allows the verb to bear no inflection at all in a sentence, there should not be any concern for PF-merge of stranded affixes; however, in LI, just as we show earlier, the aspect marker is bound to appear. As a result, this property falls totally unexpected under the PF-adjacency story.

5.2.2 Fox & Pesetsky (2005)

Fox & Pesetsky (2005) (F&P) present a theory which links HG (and an inverse HG effect) to the same considerations that force movement to be successive cyclic cross-linguistically, in particular in English. At the core of their system is the establishment of inviolable ordering statements at intermediate stages of the derivation. While the syntactic operations beyond the phase can affect elements within the previous phase, the relative order among the members of that previous phase is immutable. A principle of order preservation as (126) is at work in grammar. The relevant phases are CP, VP and DP.

(126) Order Preservation

Information about linearization, once established at the end of a given Spell-out domain, is never deleted at the course of a derivation

Without going into too many details, here I simply show how the theory captures the HG effect (i.e. OS is dependent on V-raising) with the following (simplified) example.
(127) *OS without V movement (the symbol "<" roughly means precede\textsuperscript{56})

a. VP: \([vp \ V \ O]\)
Ordering: V<O

b. CP: \([cp \ C \ [tp \ S \ O; \ adv \ [vp \ V \ t]\] \]
Ordering: C<S
\quad S<O
\quad O<adv
\quad adv<VP \rightarrow adv<V

In the first Spell-out domain, VP, the ordering statement produced at Spell-out of VP regulate that V precedes O. This order cannot be altered according to (126). In the second step, the ordering statements produced at Spell-out of CP do contradict the earlier statement "V<O": given "O < adv" and "adv < V", O must precede V, which contradicts "V<O" (from the first Spell-out domain), thus instantiating an unacceptable sentence.

Next, let us consider how this theory might apply to English inversion.

(128) V movement in English QI

a. VP: \([vpQuote V tQuote]\)
Ordering: Quote< V

b. CP: \([cp \ Quote \ [tp \ tQuote \ V \ [vp \ NP \ [vp tQuote \ tV tQuote ]]]]\]
Ordering: Quote< V
\quad V<NP

When VP is spelled out, it is established that the quote precedes V. In the next step, Quote continues to precede V and V precedes NP in the CP spell-out domain. Crucially,

\textsuperscript{56} Here is the complete definition of the relation ‘<’: An ordering statement of the form \(\alpha<\beta\) is understood by PF as meaning that the last element dominated by \(\alpha\) and not dominated by a trace precedes the first element dominated by \(\beta\) and not dominated by a trace.

\textsuperscript{57} To make this account work for inversion cases, crucially, the lower argument (the quote in this case) should first move to the edge of the lower Spell-out domain. However, it is not clear what regulates when a constituent can first move to the edge of a Spell-out domain. This insufficiency is noted by the authors as well (p. 38): "out proposal say nothing in themselves, however, about the circumstances under which movement to these left-edge position is allowed or prohibited." I leave this problem for further investigation.
note that even if we do not overtly move $V$, there would be no contradictory ordering statement, as shown below. From (b') we can see that even without verb raising, it still does not produce contradictory ordering statement. In other words, $V$-raising is not predicted by this theory.

(128)  b'. CP: $[\text{CP Quote} \ [\text{tp Quote} \ [\text{VP NP} \ [\text{VP Quote} \ V \ \text{Quote }]]]]$

Ordering: Quote < NP
NP < V

Furthermore, in order to capture the Aux restriction, some more complex mechanisms might need to be filled in this system. This is so since, in this theory, auxiliaries and modals are outside of the lower Spell-out domain. As a result, auxiliaries and modals are allowed to show up in inversion because ordering statement about auxiliaries and modals only exists in the higher Spell-out domain and no linearization problem would possibly arise.

In this section, we dealt with locality and verb movement in inversion. I suggested that the two facts are actually two faces of the same coin. Potential locality violation is salvaged by verb raising, which expands the minimal domain and creates an equidistant environment; the verb movement is obligatory since it is triggered by the independent syntactic need to save a derivation from crashing. Moreover, we compared two alternative accounts and showed that the equidistance approach might be a better option in capturing the properties of inversion construction.

6. CONCLUSION

The study of LI provided in this chapter has shown us that the argument structures and the mapping principles are virtually identical within languages. However, it is the syntactic categories that reflect a profound typological difference: in Mandarin, Chichewa, Kinande and Gungbe locatives are (or can be) represented by nominal categories; on the
other hand, in English and Sesotho, they are characteristically represented by non-nominal categories. Crucially, because of such categorial differences, the LI constructions show distinct syntactic behavior in these languages accordingly.
CHAPTER THREE

MORE INVERSION CONSTRUCTIONS

1. OVERVIEW

In this chapter we study other kinds of inverted constructions, which I argue to be very similar to English Locative Inversion and could be subsumed under the same set of principles. I show that whenever a non-nominal or \( \varphi \)-deficient phrase moves into [Spec, TP], additional operations will necessarily be triggered to make the derivation converge. We will investigate the following three constructions: English Quotative Inversion (1), English sentential subjects (2) and French Stylistic Inversion (3) respectively.

(1) **English Quotative Inversion**
“Where is my key?” asked John.

(2) **English Sentential Subjects**
That John showed up was annoying.

(3) **French Stylistic Inversion**
A qui a téléphoné ton ami?
to whom has telephoned your friend
‘To whom has your friend telephoned?’

I will show that the mixed A- and \( \ddot{A} \)-properties, which are observed in English Locative Inversion, are attested in English Quotative Inversion and sentential subjects as well. On
the other hand, since the array of syntactic diagnostics used in chapter 2 is inapplicable in French due to language-particular reasons, I will make use of other tests available to show that French Stylistic Inversion also displays a mixture of subject-like and non-subject-like features, as the current proposal predicts.

(4) When the inverted XP is $\varphi$-deficient, it undergoes two-step movement.

```
CP
XP_i C'
  C TP
    t_i T'

...(DP)... t_i
```

2. **Quotative Inversion in English**

Quotative Inversion (QI) is found with verbs of saying that have a direct speech complement (Collins and Branigan 1997, Collins 1997, Suñer 2000). This construction appears in the written language more than the spoken language, but it is often found in spoken narrative as well. Examples are in (5).

(5) *English Quotative Inversion*

a. “There's your five dollars, Joe!” shouted Eddie.

b. “Never lose touch with the Tsar,” whispered the old man to his grandson.

c. “There has been no finer feat in the war than this sudden landing in the dark and storming the heights” reported the correspondent.

d. “We're hoping when our 100th birthday comes around in 2012 that we can declare victory and say that Fenway is going to be here for another
generation," said the senior vice president of planning and development for the Red Sox.

As seen in the above examples, a direct quote occurs pre-verbally\(^1\) while the DP argument of the verb occurs after the verb.

I argue that English QI be analyzed in a similar way to what I proposed for LI. The structure is represented in (6).

\[
(6) \quad \text{The analysis of English QI} \\
[\text{CP [Quote]}; C [TP t_i T [vP Subj ... t_i]]]
\]

The direct quote complement, which is initially base-generated within the VP, moves to [Spec, TP] and checks off the EPP on T. However, because the quote is not a nominal category, i.e. not equipped with sufficient \(\varphi\)-features\(^2\), it cannot satisfy the \(\varphi\)-features need of C. In case it stands in the way of C's second probing action with another potential goal, the quote subsequently undergoes obligatory topicalization to [Spec, CP] so as to evade intervention effects. As a consequence, C could then Agree with the postverbal DP and delete all its uninterpretable features. On the other hand, being deprived of movement motivation, the logical subject can and thus must stay in situ, presumably in [Spec, vP]. In what follows, I will motivate the necessity of this analysis.

### 2.1 PROPERTIES AND ANALYSIS

I demonstrate in the below that English QI has identical characteristics to English LI with regard to the A- and \(\bar{A}\)- tests.

\(^1\) As I already argued in chapter 2, overt verbal movement in QI is triggered by the need to evade potential locality violation. In other words, the main verb raises so as to expand domains, the consequence of which is that the lower argument can move past a structurally higher argument. See details in chapter 2.

\(^2\) It is yet to be determined exactly what kind of (partial) \(\varphi\)-features direct quotes have and I do not have an answer at this point. The crucial point here is that, however, they do not possess a complete set of \(\varphi\)-features to eliminate the uninterpretable \(\varphi\)-features on C so that further operations are bound to take place.
First, just like common sentence-initial topic phrases, direct quotes in QI sentences cannot occur with another topicalized phrase. As argued earlier, the ungrammaticality in (7) is expected following the current proposal: because the direct quote complement has undergone topicalization in QI, (7) can be viewed as instantiating illicit extraction from a topic Island.

(7) \textit{QI cannot occur with another topicalized phrase}
* John$_i$ ["where is my key?"] said $t_i$.

Second, as shown in (8a), an ECM verb like \textit{consider} selects a TP. As predicted, QI sentences fail to stand as the complements of \textit{consider} as in (8b), since topicalization, which entails expanding sentences to be CPs, is implicated in QI.

(8) \textit{ECM verbs do not take QI complements}
\begin{enumerate}
  \item John considers $[\text{TP Bill to have asked "where is my key?"}]$
  \item *John considers $[\text{CP "where is my key?" to have asked Bill}]$.
\end{enumerate}

Third, QI disallows Sub-Aux inversion.

(9) \textit{Sub-Aux inversion is impossible in QI}
\begin{enumerate}
  \item "Leave me alone!" shouted the girl.
  \item *Did "Leave me alone!" shout the girl?
\end{enumerate}

Next, as argued earlier in chapter 2, an embedded topic phrase contrasts with an embedded DP subject in that the former blocks $\tilde{A}$-movement from within its c-command domain. Again, the quote complements in QI resemble common topic phrases in this regard.

(10) \textit{The fronted quote blocks $\tilde{A}$-movement from its complement domain}
* I wonder [who], ["Leave me alone!"]$t_i$ shouted $t_j$. 
As shown in (11), the preposed quote cannot control verbal agreement; instead, it is the postverbal DP that determines agreement.

(11)  *Verbal agreement*

a. “We already left by that time,” say the girls.

b. *“We already left by that time,” says the girls

On the other hand, direct quotes in QI exhibit A-properties as well; they undergo subject-raising and display that-trace effect.

(12)  *Raising*

“Leave me alone!” seemed to shout the little girl.

(13)  *That-trace effect*

a. *It is “Leave me alone!” that we believe _ shouted the girl.

b. *It is “Leave me alone!” that we believe that _ shouted the girl.

Table 3 summarizes the results so far. As can be clearly seen in this table, English LI and English QI display exactly identical properties regarding these tests (except for the tests that are not applicable to QI). Therefore, it is reasonable to provide the same analysis to the two constructions: because the elements raised to [Spec, TP] are not nominal, they have to raise further to the left periphery; as a result, both A- and Á-properties are detected in the constructions.

**Table 3**

<table>
<thead>
<tr>
<th></th>
<th>English Locative Inversion</th>
<th>English Quotative Inversion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Æ-properties</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. No co-occurrence with another sentence-initial topic</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td>2. Cannot be ECM complement</td>
<td>√</td>
<td>√</td>
</tr>
</tbody>
</table>
3. No Sub-Aux Inversion
4. Block Ā-movement from its domain

<table>
<thead>
<tr>
<th>A-properties</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Verbal agreement</td>
</tr>
<tr>
<td>2. Raising</td>
</tr>
<tr>
<td>3. (\text{That})-trace</td>
</tr>
<tr>
<td>4. T-to-C asymmetry in (wh)-extraction</td>
</tr>
<tr>
<td>5. Lack of WCO effects</td>
</tr>
</tbody>
</table>

There is one more advantage of positing the current QI analysis: it accounts for some possible language variation(s) in this construction. Consider (14) (data from Suñer 2000).

(14) **Spanish QI**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>a. *“No, no es un enanito”, el viejo rectifica.</td>
<td>(non-inverted S-V)</td>
</tr>
<tr>
<td>“No, he is not a gnome”, the old man corrected.</td>
<td></td>
</tr>
<tr>
<td>b. “No, no es un enanito”, rectifica el viejo.</td>
<td>(inverted V-S)</td>
</tr>
<tr>
<td>“No, he is not a gnome”, corrected the old man.</td>
<td></td>
</tr>
</tbody>
</table>

From (14) we see that in Spanish QI the subject can never appear preverbal. The ungrammaticality of (14a) is, at first sight, surprising since Spanish is a null subject language that usually allows more than one subject position: subjects can be preverbal (15a), postverbal (15b), and ‘free inverted’ (15c)

(15) **Subject positions in Spanish**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Finalmente, <strong>el preso</strong> confesó su culpa.</td>
<td></td>
</tr>
<tr>
<td>Finally the prisoner confession his guilt</td>
<td></td>
</tr>
<tr>
<td>b. Finalmente, confesó <strong>el preso</strong> su culpa</td>
<td></td>
</tr>
</tbody>
</table>

\(^3\) I use the traditional ‘free inverted’ label as a mere descriptive term to refer to subjects that appear at the end of the sentence. It should not be inferred from this that the subject is moved rightwards (as in Rizzi 1982).
Finally confessed the prisoner his guilt

c. Finalmente, confesó su culpa el preso.

Finally confessed his guilt the prisoner

It is then curious why the word order in (14a), which resembles the grammatical word order of (15a), is prohibited.

Under our account, the ungrammaticality of (14a) is expected since [Spec, TP] is already occupied by the trace or copy of the direct quote that once moves into it so that there is simply no position for the logical subject el preso⁴ to dwell in. However, this analysis seems to raise another problem: if this is really what happens in Spanish, why does the corresponding English sentence as (16) turn out to be grammatical?

(16)  *Subj-V and V-Subj orders in QI⁵*

   a. “Don’t talk to me!” the little girl said.  (non-inverted S-V)
   b. “Don’t talk to me!” said the little girl.  (inverted V-S)

I suggest that non-inverted (16a) and inverted (16b) QI involve entirely different structures. In particular, the non-inverted version of English QI in (16a) is derived from pure topicalization instead. That is to say, what is going on there is that the direct quote undergoes topicalization in one-fell-swoop fashion to the left periphery, with the subject-verb order unchanged. On the other hand, this derivation option is possible only in English but not in Spanish because Spanish topicalization is further required to be Clitic Left Dislocation (CLLD), which is a typical form of topicalization in Romance languages (see Cinque 1990, Iatridou 1995, Anagnostopoulou 1994 among others). Specifically, in

⁴ Actually the same thing can sometimes be witnessed in English QI as well:

(i) a. “John was in danger,” was repeated over and over by Bill.
(ii) b. *“John was in danger”, it was repeated over and over by Bill.

⁵ Note that there is another kind of statement involving direct quotation and the quote is not fronted:

(i) The little girl said, ‘Don’t talk to me!”

I will not discuss this type of quotation here and assume it involves a very different syntax from those with preposed quotations. Simply put, it is of the run-of-the-mill Sub-Verb-Comp structure.
almost all of the Romance varieties with the exception of Portuguese, the clitic, which is 
coreferential with the topicalized constituent, is obligatory when the topicalized element
is a direct object. Therefore, as in the Spanish example (17), when a direct object
undergoes topicalization, it forces the occurrence of a clitic so that left dislocation can
occur with a resumptive element in the main clause.

(17) CLLD in Spanish

Estos zapatos, los compré en Madrid
These shoes, I bought them in Madrid

Yet the CLLD-ed version of QI as in (14a) is impossible to be generated since there is no
such kind of clitic that is employed to double the quote. As a result, (14a) is
ungrammatical because no presence of a corresponding clitic could accompany the
topicalization of the direct quote. On the other hand, there is no such requirement on
English, though it is possible (but not obligatory) to have a regular person pronoun as the
resumptive element. Therefore, pure topicalization of a direct quotation in English as in
(16a) is legitimate. To summarize, we showed that non-inverted and inverted QI involve
distinct structures and the present approach explains why only the latter variant is
available in Spanish.

2.2 PREVIOUS ANALYSES

One of the significant questions raised by QI is whether the quote is a part of the
syntactic structure of the QI sentences, namely whether it itself can be subject to syntactic
operations. Various attempts have been made to tackle this problem. In recent accounts
couched in the earlier Minimalist framework, Collins and Branigan (1997) and Collins
(1997) (and Suñer (2000) in more or less the same spirit) suggest that it is not the quote
per se that occupies the syntactic position, but instead what participates in the syntactic
operation is a null quotative operator, which is related anaphorically to the actual quote.
In other words, it is not the quote that moves at all but the quote simply identifies the semantic content of the empty quotative operator. (18) is an exemplifying representation of their analysis.

(18) The QI proposal by Collins and Branigan (1997)

"When on earth will the fishing begin again?" [CP OP_i [AgrP asked Harry t_i]]

(Collins and Branigan 1997: 10)

In other words, the quote itself is external to the clause, semantically controlling the operator. The motivation for the ‘independent quote’ approach is to account for the various positions the quote can occupy in inversion structures. Consider (19):

(19) Various positions of the quote in QI

a. “When on earth will the fishing begin again?” asked Harry.
b. “When on earth”, asked Harry, “will the fishing begin again?”
c. Asked Harry: “When on earth will the fishing begin again?”

(19a) is the most common type of QI, in which the quote appears in initial position. It is also possible to have a ‘wrapped-around’ or sandwiched style of QI as in (19b). Finally the quote can also appear sentence-finally, providing a somewhat formal flavor. Based on its diverse distribution, particularly due to the presence of the sandwiched type in (19b), it is claimed that a pure movement analysis that treats the quote as the moving object in QI, is difficult to be maintained. However, there are several problems with such reasoning and hence the conclusion.

To begin with, there is some evidence showing that the quote itself is somehow visible for some syntactic operations within the clause. First, as pointed out in Partee (1973), the quote can license one-pronominalization (20a), serve as an antecedent for Verb Phrase Ellipsis (VPE) purpose (20b), and certify the use of opposite (20c). Given these observations, it seems that something inside the quote can license certain syntactic

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6 The quotative verb raises obligatorily to AgrP (in Collins and Branigan (1997) or T (in Collins (1997)) to “support” the operator and to check the feature [+quote]. The subject remains in-situ and does not raise to [Spec, IP] since they suggest that the quotative C selects an IP with weak N features.
operations, which shows that the quote is not structureless and should be integrated as a part of the structure rather than being simply juxtaposed or adjoined to the clause.

(20)  The quote is visible for syntactic operations
   a. When the surgeon said “Give me the scalpel”, she handed him the wrong one.
   b. When he said “Leave!”, she wouldn’t ___.
   c. When he said “Turn right”, she did the opposite.

Moreover, in some languages such as Korean a special quotative complementizer (lako) is used when a quote is selected as shown in (21). Thus the direct quote imposes certain selectional restriction on the sentence-level grammar.

(21)  The quote selects a quotative complementizer
   John-i [sikan-i myet si- i -ya] -lako mul-ess-ta
   John-Nom time-Nom what-number hour-be -Q -Comp ask-Past-Dec
   ‘John asked “what time is it?”’

Finally, the discontinuity is not random at all in the sandwiched type QI construction. Crucially, it appears that the quote cannot be infringed anywhere but only at a major (prosodic) boundary:

(22)  Placement restrictions of the quote
   a. “When on earth”, asked Harry, “will the fishing begin again?”
   b. *“When”, asked Harry, “on earth will the fishing begin again?”
   c. *“When on”, asked Harry, “earth will the fishing begin again?”
   d. *“When on earth will”, asked Harry, “the fishing begin again?”

Note in particular its parallel patterns to common parentheticals:

---

7 Thanks to Soo-Yeon Jeong for the data.
Although I do not have an answer for how the placement restrictions for such parentheticals are determined, which itself is an ongoing debate (see Corver & Thiersch 2002, Emonds 1973, McCawley 1982, Potts 2002, Haegeman 1988, Ackema & Neeleman 2004), crucially, to our purpose, the above patterns suggest that if the quote merely serves the semantic purpose of identifying the content of the operator, it is not clear why such restrictions should hold at all. Again, it seems to show that it is wrong to immediately jump to the conclusion that the direct quote in QI is independent of narrow syntax simply based on the occurrence of the sandwiched type QI, as previous works did. More important, in those ‘independent quote’ approaches we cannot tell how the quote and the quotative expression, which are taken to be generated independently, come together. In other words, the pertinent literature did not address the issue of when and where the co-reference relation between the quotative operator and the quote is accomplished. Therefore, the displacement contrasts in (22) and (23) are mysterious in such accounts.

To sum up, we have seen that the materials inside the quote can be subject to syntactic operations and that the main argument (i.e. the various places that the quotes can appear) for treating the quote as independent from the clause is doubtful. Consequently, I suggest that in QI it is the quote, rather than some covert constituent, that undergoes movement. Crucially, I have shown that the direct quote complement has to undergo two-step movement, just as the locative PP in LI: from inside the VP to [Spec, TP] and further to [Spec, CP]. This is the case since the quotation, being inactive after its uninterpretable features are eliminated, has to avoid staying in the complement domain of C so that the probe C can Agree with the postverbal subject. The fact that English LI and QI display similar mixed A- and Á- features follows from the current proposal.
Before finishing this part, I would like to point out that QI exhibits the transitivity constraint, which is highly reminiscent of what we have seen in LI; that is, inverted QI constructions are ungrammatical when the verb also takes an indirect object as in (24a). However, as demonstrated in (24b) when the indirect object is contained in a PP, the result is improved. Note that this condition does not arise when no inversion is involved as exemplified in (25).

\begin{enumerate}
\item \textit{Transitivity constraint in QI}
\begin{enumerate}
\item *“Where is my key?” asked John Mary.
\item “Where is my key?” asked John of Mary.
\end{enumerate}
\end{enumerate}

(25) John asked Mary “Where is my key?”

We will address this property separately in chapter 4.

3. \textbf{Sentential Subjects}

Early generative analyses such as Rosenbaum (1967) and Emonds (1972) take the sentential subjects or CP subjects in English, as illustrated in (26), to be structural subjects occurring in the position standardly occupied by DP subjects.

(26) That John showed up was annoying.

However, Koster (1978) later (see also Kuno 1973 and Stowell 1981) argues that sentential subjects are not true structural subjects. Rather, this kind of CP is claimed to be externally merged in a left-peripheral topic position and linked to a phonetically null DP that occurs in [Spec, TP]. This section is aimed to support (most part of) Koster’s analysis of sentential subjects. In particular, I argue that the fact that CP subjects are not true grammatical subjects but topics follows from the current system.
A significant implication following from our proposal, as I have been trying to show, is that whenever an argument that bear some \( \varphi \)-feature(s) and is selected by the verb could be active and a potential attractee of C. However, it might be obliged to be further topicalized if it is not \( \varphi \)-complete. Sentential subject is one possible candidate if we follow Iatridou and Embick (1997) and assume that a CP does not belong to a nominal category and only bears partial \( \varphi \)-features. In what follows, I argue that this is the case: the CP argument moves to [Spec, TP] at some point in the course of derivation; however, because of its defective \( \varphi \)-features, it has to move up to the C domain just like English LI and QI. In other words, the structure of (26) looks like (37): evasion

\[
(27) \quad \text{The analysis of sentential subjects (in English)}
\]
\[\text{[CP [That John showed up], C [TP e_1 was e_1 annoying]]}\]

Again, the mixed A- and Ā-properties, which are anticipated on such a view, can be demonstrated by the same set of tests that we used for LI and QI, as illustrated below.

First, sentential subjects, like topic phrases, cannot occur after other topicalized phrases.

\[
(28) \quad \text{No co-occurrence with another sentence-initial topic}
\]
\[\text{*[John], [that Bill quit the job] shouldn’t have bothered t_i.}\]

CP subjects cannot occur as the complement clauses of ECM verbs.

\[
(29) \quad \text{ECM verbs do not take complements with CP subjects}
\]
\[\text{??John considers [that Bill is sick] to be more than obvious.}\]

Third, subject-auxiliary inversion is disallowed.

\[
(30) \quad \text{No Sub-Aux Inversion}
\]
\[\text{*[Has that he failed in the exam bothered John?}\]

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Next, sentential subjects contrast with common DP subjects in that they block Ā-movement from within its c-command domain.

(31) It Blocks Ā-movement from its domain  
*I wonder [who], [that Bill quit the job] shouldn’t have bothered ti.

Meanwhile, CP subjects exhibit A-properties as well: they undergo subject-raising and are not subject to WCO.

(32) Raising  
*That Bill quit the job seemed to have bothered John.

(33) Lack of WCO  
*That every dog’s pen got flooded annoyed itsi owner.

Crucially, however, CP subjects differ from English LI and QI in their verbal agreement patterns. Consider (34):

(34) Verbal agreement  
a. That John showed up was annoying.  
b. *On the table was fine.  
c. *“Where is my key?” was curious.

As demonstrated in (34), CP subjects seem to possess the ability to control verb agreement and take nominative Case, unlike preposed PPs and quotes. This point can be further illustrated in (35). As pointed out in McCloskey (1991), plural verb agreement is sometimes possible with coordinate sentential subjects as long as certain semantic requirement is controlled⁸.

---

⁸ Specifically, he observes that “plural agreement is possible just in case the conjoined propositions are contradictory or incompatible, or, more generally, when they specify a plurality of distinct states of affairs or situation-types.”
That he’ll resign and that he’ll stay in office {are/*is} at this point equally likely.

To account for this fact, I suggest that the sentential subject leave a DP trace in the subject position, which it binds as a variable and the trace is a null definite expression (cf. Webelhuth 1992). As a result, it is this DP that subsequently Agrees with C after the topicalization of the CP. Note that the current proposal differs from Koster in that I argue the empty DP at [Spec, TP] results from movement whereas for Koster the null DP is base-generated in [Spec, TP] and somehow gets linked to the base-generated CP in a left-peripheral topic position. Two pieces of evidence in favor of the view that the topicalized CP always leaves a DP trace are given below.

To start with, consider constructions where a DP is in general unlicensed (cf. Safir 1985). For example, as shown in (36a) and (36b), a verb like *remind does not take DP complement thought it can have a CP complement. Interestingly, if we front the CP complement to topic position, the resulting sentence is deteriorated, as in (36c).

(36)  
\begin{enumerate}
\item a. *John reminded me [this fact].
\item b. John reminded me [that I should pay Bill a visit].
\item c. *[That I should pay Bill a visit], John reminded me.
\end{enumerate}

At first sight, it is puzzling why topicalizing the CP would make such a dramatic difference. However, if we assume that the topicalization of a CP necessarily leaves a DP trace, the ungrammaticality of (36c) follows from the fact the verb in question do not tolerate a DP object. Similar paradigms are observed in cases where some DPs and APs take CP but not DP complements, as demonstrated in (37) and (38).

(37)  
\begin{enumerate}
\item a. *John made the claim [this fact].
\item b. John made the claim [that aliens do exist].
\item c. *[That aliens do exist], John made the claim.
\end{enumerate}
Another argument comes from preposition stranding facts in English. It is known that English prepositions do not take CP complement as in (39a), but (39a) can be ameliorated by topicalizing the CP as in (39b). This is anticipated assuming that the topicalization leaves a DP trace and that the configuration $[PP [DP e]]$ is licensed in English as exemplified in (39c) and (39d).

At this point we should ask the following deeper theoretical question: why should CP subjects differ (from the preposed PPs and quotes) in this way? That is, why can’t PPs or direct quotes leave DP traces after topicalization? I do not have an answer to this question now and would like to leave this open for further research. Nevertheless, the crucial thing is that whatever accounts turn out to work for such a contrast, the main point of the preceding discussion still holds: CP subjects in English indeed undergo two-step movement from [Spec, TP] to [Spec, CP], just as the current system predicts. Table 4 summarizes the results for the three constructions in English, which have been argued to involve similar structures.

<table>
<thead>
<tr>
<th>A-properties</th>
<th>English Locative Inversion</th>
<th>English Quotative Inversion</th>
<th>English sentential subjects</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. No co-occurrence with</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>

Table 4
4. French Stylistic Inversion

French Stylistic Inversion (SI) is the term used to refer to the syntactic computation responsible for the postverbal position of the subject DP like in (40) and (41) (examples from Kayne & Pollock (1978); Kayne & Pollock (2001)):

(40) a. A qui a téléphoné ton ami? 
   to whom has telephoned your friend 
   ‘To whom has your friend telephoned?’

9Three types of inversion can be distinguished in standard French: Complex Inversion, Pronominal Inversion and Stylistic Inversion. Stylistic Inversion is the only variant without the clitic.

(i) Quand Marie est-elle venue? (Complex Inversion) 
    when Marie is-she come 
(ii) Quand est-elle venue? (Pronominal Inversion) 
    when is-she come 

10 French SI does not seem to observe the Aux-restriction. This might have to do with its different structure in the INFL component from English (Pollock 1989). Specifically, the main verb in French always raises higher even in the presence of a modal.
b. Quand partira ton ami?
when leave your friend
‘When will your friend leave?’
c. Je me demande quand partira ton ami.
I self wonder when leave your friend
‘I wonder when your friend will leave.’
d. La maison où habite cet homme est très jolie
the house where lives this man is very pretty 

(41) a. Je souhaiterais que téléphone ton ami.
I would-wish that telephone-subj your friend
‘I wish your friend called.’
b. Qu’ait téléphoné ton ami me surprend.
that has-subj telephoned your friend me surprises
‘That your friend has called, surprises me.’

As can be seen here, there are in essence two possible structural configurations that allow for SI. One is instances of wh-movement (40), the other subjunctive clauses (41). The former holds for matrix, embedded\textsuperscript{11} wh-questions and relative clauses. Subjunctive environments are introduced by verbs like wish as in (41a) and sentential subjects (41b).

What makes SI particularly interesting is that, unlike many other Romance languages, French does not freely allow postverbal subjects in most cases. Thus, post-verbal subjects in indicative sentences (42) and non-wh-questions (43) are impossible:

\begin{enumerate}
\item[(42)] a. *A téléphoné ton ami.
has telephoned your friend
b. *J’ignore si a téléphone ton ami.
I Neg.know if has telephoned your friend
\end{enumerate}

\textsuperscript{11} In embedded questions the SI option coexists with the option with no inversion. We will return to this point later.
4.1 THE ANALYSIS

The analysis I argue for SI is represented in (44): this construction involves similar C-T interaction as seen in English LI, QI and CP subjects.

(44)  

a. A qui a téléphoné ton ami?
    ‘to whom has telephoned your friend’

b. $\begin{array}{l}
[\mathrm{CP} [\mathrm{wh-phrase}]]
\quad [\mathrm{TP} \; t_i]
\quad [\mathrm{T}]
\quad [\mathrm{vP} \; \mathrm{Subj} \ldots \; t_i]
\end{array}$

Specifically, French wh-phrase (regardless of subject- or object- extraction) can satisfy the EPP of T and move to [Spec, TP]\(^{12}\); nonetheless, it cannot fulfill the $\varphi$-feature requirement. Accordingly, it must move to [Spec, CP] to allow Agree between C and the postverbal subject. Meanwhile, because the wh-phrase temporarily occupies [Spec, TP], the EPP property of T gets fulfilled and thus the subject ton ami, deprived of its movement motivation, stays in VP/vP and agrees in-situ with C. On the other hand, if we use the logical subject ton ami to satisfy the EPP of T instead, the wh-phrase has to stay in-situ. This is how the in-situ counterpart in (45) is derived.

(45)  

Your friend has telephoned to whom

\(^{12}\)The suggestion that question operators target [Spec, IP] has been made for Catalan (Vallduvi 1992, Bonet 1990), Iberian Spanish (Contreras 1991, Zubizarreta 1998) and Romanian (Dobrovie-Sorin 1994). Specifically, in these accounts it is proposed that the wh-criterion (Rizzi 1990) in Romance languages can be checked against the highest Infl head.
Because the syntactic tests employed earlier (except WCO facts) cannot apply to French (due to language-particular restrictions), independent tests are provided in support of the present proposal.

The first argument comes from some interesting observations in successive cyclic application of wh-movement. In Kayne and Pollock’s (1978) argument for successive cyclic movement of wh-phrases\textsuperscript{13}, they show that SI can be used to indicate where a wh-word originates. Consider (46) and (47).

(46) Où/Quand Marie a-t-elle déclaré que Paul était mort? (K&P 1978: 600)
Where/when Marie declared that Paul was dead
‘Where/when Marie declared that Paul was dead?’

(47) Où/Quand Marie a-t-elle déclaré qu’était mort Paul?
Where/when Marie declared that was dead Paul

(46) is ambiguous with two readings: the wh-phrase can be taken to modify either the event of Mary’s declaration or that of Paul’s death. Put differently, the wh-word can have originated either in the matrix clause or in the embedded sentence. By contrast, (47) has only one interpretation, where the wh-word originates in the embedded clause. This is so since in the embedded clause of (47), SI has taken place; in other words, the wh-word must have originated in the lower clause so that it can find its way to trigger SI. Given this as background, let us consider sentences with longer-distance extraction (data from Kayne & Pollock 1978).

Suppose we have a three-cycle sentence as in (48)-(50). In (48) no SI takes place. In (49) SI only occurs in the lowest, most deeply embedded clause as can be seen from the inverted order of V-S. The particularly interesting case is (50): in (50) only the intermediate cycle exhibits SI. Under the current analysis, we predict (50) to be bad because it would constitute a case of improper movement: the wh-phrase first moves to

\textsuperscript{13}This set of data only shows that wh-phrase doesn’t go directly to the highest SpecCP but it doesn’t necessarily show the immediate positions are [spec TP] or [Spec CP] or both.
an A'-position\textsuperscript{14} ([Spec, CP] of the lowest clause) since there is no inversion and then to
an A-position ([Spec, TP] of the second clause) because SI applies. The prediction is
borne out. As a result, the contrast in (48)-(50) supports our analysis that in SI the wh-
phrase undergoes two-step movement: first to [Spec, TP] and then to [Spec, CP].

\textbf{(48) No inversion}

Les files avec qui tu disais que cette pauvre femme pr\^etendait que
The girls with whom you were saying that poor woman claimed that
son mari sortirait sont toutes l\'a.

\begin{quote}
her husband would go out are all here
\end{quote}

\begin{quote}
'The girls who you were saying that the poor woman was claiming that her
husband would go out with are all here.'
\end{quote}

\textbf{(49) Inversion in the lowest clause}

Les files avec qui tu disais que cette pauvre femme pr\^etendait que
The girls with whom you were saying that poor woman claimed that
sortirait son mari sont toutes l\'a.

\textit{would go out her husband} are all here

\textbf{(50) Inversion in the intermediate clause}

*? Les files avec qui tu disais que pr\^etendait cette pauvre femme
The girls with whom you were saying claimed that poor woman
que son mari sortirait sont toutes l\'a.

\begin{quote}
that her husband would go out are all here
\end{quote}

As a matter of fact, we would predict that SI is always only possible in the most deeply
embedded clause, which conclusion appears to be true. Consider (51). In (51), in addition
to the most deeply embedded clause, SI has also applied in the middle S, and the result is
still unacceptable (K&P 1978: 606).

\textsuperscript{14} This step is forced by an independent requirement that movement must apply in a local fashion; therefore,
in order to move the wh-word to a higher position, it must first move to an edge position.
Inversion in the intermediate clause

(51) *? Les filles avec qui tu disais que prétendait cette pauvre femme
The girls with whom you were saying claimed that poor woman
que sortirait son mari sont toutes là.
that would go out her husband are all here

Another argument for the current analysis of SI is the person restriction found in this construction. As illustrated in (52), SI is sensitive to the person feature of the postverbal subject (data from Kayne & Pollock 2001\textsuperscript{15}). In particular, the first- and second- strong pronouns are excluded.

(52) a. Qu’a mangé lui?
What has eaten him
b. Quand ont téléphoné eux?
When have telephoned them
c. *Quand ai téléphoné moi?
When has telephoned me
d. *Qu’as mangé toi?
What have eaten you
e. *Quand avez téléphoné vous?
When have telephoned you
f. *Qu’avons mangé nous?
What have eaten us

Crucially, the patterns witnessed in (52) are reminiscent of the familiar requirement that certain DPs be 3\textsuperscript{rd} person in the syntactic literature. For instance, Sigurðsson (1991) observed a restriction on nominative objects in Icelandic quirky subject constructions; the formulation is given in (55) and examples in (56):

\textsuperscript{15} K&P use the data to argue that there is a connection between SI and the possibility of having silent clitics instead.
The person restriction on nominative objects

Context: Clauses in which the nominative object agrees with the verb

Observation: In the presence of a dative subject, the nominative object has to be 3rd person.

(54) a. Henni leiddust þeir
    She-DAT was bored-by-3pl they-NOM
    ‘She was bored by them.’

b. *Henni leiddumst við
    She-DAT was bored-by-1pl us-NOM
    ‘She was bored by us.’

Anagnostopoulou (2003, 2005) develops an account of Person-Case effects (cf. Bonet (1991)) and attributes these effects to the nature of multiple Agree operations by a single Probe (see also Béjar and Rezac 2003). The basic idea is that multiple Agree is involved in such constructions; specifically, the first Agree operation does something to the Person feature of the probe (for example, the first Agree operation somehow values its Person feature). Consequently, the probe is disabled to Agree with other DPs that have a Person feature, since this feature would contradict the Person feature already established on the probe by the first Agree operation. Furthermore, following many works in morphology (Noyer 1992 and others), Anagnostopoulou assumes that 3rd person DPs lack a Person feature. As a result, the second Agree operation must be with 3rd person DPs so that no conflict in Person feature will result.

Assume the above account is on the right track. In this light, the fact that the postverbal DP in SI is restricted to 3rd person strong pronouns seems to indicate that multiple Agree is implicated in SI as well; in particular, the restriction results from split checking: the first Agree operation involves the probe C and the wh-phrase and thus the second Agree operation must be with 3rd person postverbal subjects. Our proposal correctly predicts the emergence of person restriction in this construction accordingly.
The third piece of evidence for the present proposal has to do with the occurrence of the expletive *il*. It has been widely assumed that the function of expletives is to satisfy the EPP requirement of T; if no such requirement arises, the expletive need not occur. Following the SI analysis proposed here, we should expect that the presence of an expletive is not required since the *wh*-phrase has moved to [Spec, TP] at some point and thus fulfills the EPP need. The prediction is met. As demonstrated below, French SI allows the absence of *il* (from K&P 1978).

(55) *(?) Quand sera mis fin au conflit?*

When will be put end to the conflict
‘When will the conflict be put an end to?’

(56) *(?) Quand penses-tu que sera mis fin au conflit?*

When do you think that will be put end to the conflict

Crucially, when a *wh*-word does not trigger SI, it does not allow the absence of *il*:

(57) *Qui t’a dit que sera mis fin à ce conflit?*

Who told you that that will be put end to the conflict

Likewise, in an embedded interrogative not introduced by a *wh*-word, *il* has to appear.

(58) *Je me demande si sera mis fin au conflit.*

I wonder if will be put end to the conflict

As a result, the present proposal makes correct predictions in the interaction of SI and expletives. A brief digression is needed here though. Given the reasoning spelled out above, one legitimate question to ask is the following: why does English LI, but not French SI, permit the occurrence of the expletive *there*, in which structure I also argue to involve moving the locative phrase first to [Spec, TP]? In other words, if our proposal for English LI is on the right track, then why doesn’t the existence of (59a) block (59b)?
(59)  
a. On the table sits a frog.
   b. On the table *there* sits a frog.

I suggest that the patterns exhibited above do not stand as counterarguments to our analysis. Instead, the apparent alternation between English LI (59a) and *there*-presentational with preposed locative (59b) is simply *accidental*, as I have demonstrated in section 2.5. The reason why the expletive *there* can occur in such environments is that such contexts happen to be compatible with the presence of *there* and the two sentences should be analyzed as involving different structures. That is to say, we predict the alternation with *there* to be impossible when the sentence involves a context that is incompatible with the expletive. This prediction is borne out as shown in (60).

(60)  
a. Into the room (*there) ran Mother.
   b. Out of the hall (*there) steps John Smith.
   c. Inside the park (*there) walk these two guys.

By the same logic, the reason why French sentences in (55) and (56) do not permit the occurrence of the expletive is because the distribution of French expletive *il* is far more restricted than English *there*. To sum up, our theory accounts for the prohibition of the expletive *il* in French SI and also captures the different compatibility of expletives in English LI and French SI in a straightforward way.

Another prediction that follows from the current analysis is that, since the *wh-*word moves to the matrix [Spec CP] position via [Spec TP], it is supposed to evade the WCO, which is an indication of pure A’-movement. The anticipation is met: the SI structure in (a) is perfect while the non-inverted version in (b) is ruled out.

(61)  
Whoi does hisi mother love?
   a. qui_i aime sa_i mère?
      who love his mother
   b. *qui_i sa_i mère aime?
The final argument comes from the peculiar behavior of the *wh*-word *pourquoi* 'why' in French SI. As can be seen in (62), *pourquoi* fails to trigger inversion. Under the current analysis, its apparent exception is expected. More specifically, following Rizzi (1990) and Bošković (2000), I assume that the reason *wh*-adverbial *pourquoi* is an adverb which is externally-merged (i.e. base-generated) in [Spec, CP]. Because *pourquoi* is initially merged outside of TP, it can never find its way to move into [Spec, TP] and trigger SI. In this situation, as a result, the EPP position will never been filled by *pourquoi* and the subject cannot stay in its base-generated position but is obliged to move to [Spec, TP] so as to fulfill the EPP requirement of T.

(62)  *Pourquoi parle Pierre?*

why speaks Pierre

In this section, I have presented several arguments to support the analysis that in French SI it is the *wh*-phrase that satisfies the EPP property of T so that the logical subject is left in situ and creates the inverted word order. Next we look at the previous accounts of SI in the literature and we will see that, in addition to their incapability of dealing with the arguments brought up in this section, these accounts have some other insufficiencies as well.

### 4.2 Previous Analyses

In the literature there have been three main lines of approach to SI. In what follows I will briefly introduce them and point out some of the potential problems for each respectively.
To begin with, Kayne & Pollock (1978) propose that SI is derived by a syntactic rule that moves the subject to the right\textsuperscript{16} as long as the structural description is met. Empirically, the rightward movement account is unattainable. For instance, this can be shown by the quantifier floating paradigm in French. As argued in Sportiche (1988), quantifier floating in French consists in stranding of the quantifier by its associated DP that undergoes movement\textsuperscript{17}. According to this, the quantifier marks the pre-movement position of the DP, as the following demonstrates:

\begin{itemize}
  \item[(63)]
    \begin{itemize}
      \item a. Tous les enfants ont vu ce film \quad \text{(Sportiche 1988:426)}
      \text{All the children have seen this movie.}
      \text{'All the children have seen this movie.'}
      \item b. Les enfants ont tous vu ce film.
      \text{The children have all seen this movie}
      \text{'All the children have seen this movie.'}
    \end{itemize}
\end{itemize}

However, in SI quantifier floating under is impossible, as pointed out in Déprez (1990):

\begin{itemize}
  \item[(64)]
    \begin{itemize}
      \item a. *Qu’ont tous fait les enfants? \quad \text{(Déprez 1990:56)}
      \text{What have all done the children}
      \item b. *Quand ont tous fini les enfants?
      \text{When have all finished (their work) the children?}
    \end{itemize}
\end{itemize}

(64) shows that in SI \textit{les enfants} ‘the children’ does not move to the right periphery and strand \textit{tous} ‘all’ in its pre-movement position. This fact suggests that postverbal subjects do not move to the right in narrow syntax.

The second alternative is symmetry-motivated in the sense of Moro’s (2000, 2007) approach to unlinearizable phrase markers. In this line, researchers have proposed that syntactic movement is triggered as a resolution of unstable structures. For instance, it is

\textsuperscript{16} In their subsequent work in 2001, they gave up this analysis. Instead, they derive similar results by moving the postverbal subject to the left first and applying subsequent VP remnant movement. In other words, the postverbal subject is in a high (rather than base-generated) Spec position and the verb gets to the left of the subject DP through phrasal movement.

\textsuperscript{17} For more studies on quantifier floating, see Bobaljik 2003, Fitzpatrick 2006 among others.
suggested that the configuration in (65) gives rise to unstable structure in which one of its elements must raise (Chomsky 2005). To be precise, the problem with (65) is that ‘minimal search’ (i.e. picking up the less complex element and treat it as a head) cannot decide labeling between XP and YP, so the system requires ‘deeper search’ for label determination, which presumably departs from optimal computation. As a result, asymmetries are always needed when establishing dependencies.

(65) \{XP, YP\}

Following this view, Mayr (2007) proposes that French SI is a result of symmetry resolution. In a nutshell, the representation in (65) is the point where the derivation encounters the symmetry problem in SI. The crucial point\(^\text{18}\) in this part of the derivation is that V and v enters a relation and V becomes invisible for probing purposes. As a result, subject and direct object stand in a symmetrical relation so that both subject and direct object cannot be “seen” and probed by the higher probe, causing the derivation to crash. To save the derivation, therefore, it is the wh-direct object (DO), which moves in order to resolve the symmetry and this movement makes it unnecessary for S to be externalized too.

\[
(66) \quad \begin{array}{c}
\text{vP} \\
\text{v} \quad \text{VP} \\
\text{v} \quad \text{V}_i \quad \text{Subj} \quad \text{VP} \\
\text{t}_i \quad \text{Obj}
\end{array}
\]

One problem this proposal suffers from is that it fails to account for SI with wh-PPs. Specifically, according to the types he specifies for syntactic objects (SOs) in this

\(^{18}\) One crucial assumption in this proposal is that the direct arguments are base generated within the VP, where the external argument does not receive its \(\theta\)-role from v, but rather from V.
system, PPs are of type \(<p, p>\) and DPs are of type \(p\). Therefore, there shouldn’t be any symmetry problem (because the two SOs are in fact of different types) after \(V\) adjoins \(v\) and leaves the subject and PP within the VP; that is, we should not expect SI takes place under such a scenario. Nevertheless, this is contrary to the fact. As shown in (67), when the \(wh\)-phrase in question is a PP, SI is still possible.

(67) A qui a téléphoné \(ton\ ami\)?

‘to whom has telephoned your friend’

The last analysis of this phenomenon reviewed here hinges on movement of the verb to \(C\) (and the \(wh\)-phrase to [Spec, CP]). Works such as Deprez (1990) have proposed that SI is due to overt Infl raising to the C-system, represented as in (68).

(68) a. Que fait Jean?

‘What is John doing?’

b. \([cP\ que\ [c\ fait\ [\ldots\ Jean\ ]\ ]\]\)

Under this approach, the inversion in question is analyzed on a par with English Sub-Aux inversion. In this way, French (and broadly Romance) and English would share the same strategy in questions: I-to-C movement applies, creating the required Spec-head configuration involving the \(wh\)-element and the inflected verb:

(69) What (*John) has John said?

Although it is tempting to give a unified account of English Subject-Aux inversion and French inversion, a straightforward extension faces problems. To begin with, it fails to cover the range of facts we presented in the last section (including the improper movement case in multiple embedding, the incompatibility of SI and expletives, the presence of person restriction, the lack of WCO). Second this approach runs into difficulties for cases of analytic verbal morphology and for infinitives under modals.
Following the Infl-raising approach, we should expect the order of Aux-Subject-V to be possible, contrary to the fact. This is shown in (70) and (71); the subject cannot intervene between Aux/Mod and V. In other words, the Infl-raising approach can only account for cases where there is one lexical finite verb.

(70) Ou est (*Jean) alle Jean?
where is gone Jean
‘Where did Jean go?’

(71) Quand peut (*ton ami) partir ton ami?
when can leave your friend
‘When can your friend leave?’

Notice that although it is possible to say that the above pattern is a reflection of an independent requirement that the verbal forms be moved as a unit in inversion structures, just as we discussed in section 2.5 and it should not constitute a counterargument for the Infl-raising analysis, these patterns still pose challenge for this approach in that this is an approach that solely relies on the verbal movement to derive all the effects seen in this construction. More crucially, it misses the very parallelism it attempts to achieve in the very beginning, that is, French and English would share the same strategy in questions: I-to-C movement applies, creating the Spec-head configuration. It still fails to explain why French and English differ in whether they allow the analytic verbal forms to move as a whole in question formation.

In this section I have shown that French SI is not a result of rightward movement of the subject, nor a resolution of symmetry problem, nor a construction with English-style I-to-C movement in interrogatives. Instead, SI in French, just like the inversion cases discussed in the last two sections, demonstrates the interaction of EPP and φ-feature in the theory of Agree. Specifically, what happens in this construction is that the wh-phrase moves to satisfy the EPP need of T; however, since the wh-phrase cannot φ-Agree with C, it is obliged to undergo further movement to [Spec, CP].
5. **Conclusion**

In this chapter I demonstrated that various inversion constructions – English QI, CP subjects and French SI – conform to our proposal that whenever a non-nominal or φ-incomplete element moves to the subject position, it cannot stay there but must be further topicalized. Accordingly, mixed A- and Ā- properties are bound to emerge in such constructions.

As discussed in chapter 1, many researchers argue that the EPP is the only principle that drives syntactic movement whereas (abstract) Case should be eliminated from the grammar altogether. However, I believe that, in addition to the EPP, Case plays an important role in driving syntactic movement in the computational system as well. I argue for the view that Case has an independent status in the computational system. In other words, EPP is not the only principle that drives syntax and (at least for the cases presented here) the movement trigger can not be reduced to the EPP-related reasons only. In particular, I have tried to show that the abstract Case requirement triggers obligatory topicalization of the fronted phrases in English LI, QI, CP subjects and French SI. In the following chapter, I will provide further evidence showing that argument externalization in the verbal domain is also driven by Case requirement.
CHAPTER FOUR

ARGUMENT EXTERNALIZATION

1. INTRODUCTION

This chapter aims to propose an account for the placement restrictions on the number of arguments inside the verbal domain, namely the transitivity constraint witnessed in inversion constructions. The empirical basis consists of subject inversion cases where overt subject or object movement is not required for EPP-related reasons. Specifically, a number of inversion constructions where subject and object with (undeleted) structural Case are not allowed to remain in their externally-merged position so that one of the arguments must vacate the vP. The generalization is as in (1) (Alexiadou and Anagnostopoulou (A&A) 2001, 2006). I will refer to the condition in (1) as the Argument Externalization Condition (AEC) in the following discussion.

(1) Argument Externalization Condition (AEC):

By Spell-Out, vP can contain only one argument with structural Case feature.

In what follows, I first present the constructions which demonstrate the AEC in (1). We investigate the transitivity constraint on subject inversion and transitive expletive constructions, including Locative Inversion (LI) in English, Quotative Inversion (QI) in English, Stylistic Inversion (SI) in French and Transitive Expletive Construction (TEC) in English. I will argue that argument externalization is due to Case-related concerns and
its emergence exhibits a very similar configuration we have seen in the inversion cases. In particular, I show that the movement requirement in the AEC is compulsory because of potential defective intervention effects (Chomsky 2001): if the subject stays in its base-generated position, it checks off all its uninterpretable features in situ and becomes inactive; as a consequence, it will prevent the C probe from Agreeing with the lower argument and thus leave the uninterpretable Case feature of the other lower argument undeleted. Therefore, to circumvent this problem, either the subject or the object is obliged to vacate their first-merge position. The overall theoretical implications of this proposal is that, first, there are two distinct formal features manipulated by the computational system, one triggering EPP-related phenomena and one triggering argument externalization; second, the existence of defective intervention effects cannot be reduced to other sources but must be acknowledged in the Agree theory (cf. Nevins 2004 and Frampton and Guttman 2004).

Section 2 presents the data that fall under the generalization in (1). In section 3, I propose the account that captures the AEC and in section 4 I discuss other alternative explanations in the literature. Section 5 shows that the proposed theory can be extended to account for the so-called linker constructions that are attested in several African languages (Baker and Collins 2006). I will show that linker constructions involve a very similar configuration with the AEC cases and the appearance of linker is an overt manifestation of a functional category made available by UG to avoid defective intervention effects.

2. THE PATTERNS

2.1 LOCATIVE INVERSION IN ENGLISH

As mentioned in chapter 2, LI in English is compatible only with non-transitive verbs. More examples are in (2).
The AEC in English LI

a. *Into the room pushed the little girl the cart.
b. *On the stove burner cooked the maid stew beef.
c. *In the farm cultivated the woman the potatoes.

In the LI literature there has been a debate over whether this construction permits unergative verbs or not. Although it is often the case that LI is found with unaccusative and passive verbs (Bresnan and Kanerva (1989) and Hoekstra and Mulder (1990)), a number of works have pointed out that LI sometimes occurs with representatives of several subclasses of unergative verbs. Some examples taken from Levin and Rappaport (1995) are listed in (3).

Unergative verbs in LI

a. On the third floor WORKED two young women called Maryanne Thomson and Ava Brent …

[L. Colwin, Goodbye without Leaving, 54]

b. Above them PRANCED the horses on the Parthenon frieze …

[P. D. James, A Taste for Death, 352]

c. … and in this lacey leafage FLUTTERED a number of grey birds with black and white stripes and long tails.

[Z. Grey, Riders of the Purple Sage, 62]

Crucially to the purpose of our discussion, LI is not found with active transitive verbs although the presence of an external argument in the post-verbal position is quite restricted. This falls under the AEC: as long as there are no two (or more) overt arguments with structural Case inside the verbal domain, the resulting sentences are fine. Notably, as A&A (2001) pointed out, the fact that LI can be found with some unergative verbs suggests that we cannot attribute the transitivity constraint simply to locality¹. If we

¹ In Collins 1997, for example, the locality approach is taken. Thus, the unaccusative characterization is crucial for such an account.
proposed that the transitivity constraint holds because the structurally lower locative PP could not move over the external argument based on some version of Relativized Minimality (Rizzi 1990), we should expect the same logic to apply to the case of unergative verbs, which also have an external argument. However, this expectation is not met, as we just illustrated above.

2.2 Quotative Inversion in English

I argued in chapter 3 that the logical subject in QI, being void of movement motivation, must stay in situ at its first-merge position. Similar to LI, when the direct quote induces inversion in sentences with transitive verbs containing another object DP, the resulting sentence is ungrammatical. Crucially, notice that, first, as shown in (4b), when the indirect object is introduced as a PP, no ungrammaticality arises; second, the transitivity restriction does not hold in the absence of (Subj-V) inversion², as shown in (4c).

(4) The AEC in English QI
  a. *“What time is it?” asked Mary John.
  b. “What time is it?” asked Mary of John.
  c. “What time is it?” Mary asked John.

The transitivity restriction can be further shown by the contrast in (5) and (6):

(5) NO AEC when one of the complements is a PP
  a. “I am really happy for you,” Mary said to John.
  b. “I am really happy for you,” said Mary to John.

² I have argued in chapter 3 that sentences like (4c) should be analyzed as having the direct quote undergone pure topicalization. Therefore, the subject Mary in (4c) actually occupies the [Spec, TP] position and thus no AEC is detected.
These examples show that the verb *say* allows QI but not the verb *tell*. The difference between these two verbs is that *tell* takes both an indirect object and a direct object while *say* takes a direct object and a PP complement. Consequently, we can say that the AEC is observed in QI as well: the subject can stay at VP-internal position only when there is no other VP-internal DP argument.

### 2.3 Stylistic Inversion in French

It was argued in chapter 3 that the subject remains VP-internal in French SI. As shown in (7), SI is prohibited when the verb is transitive and both arguments remain to the right of the verb (Kayne & Pollock 1978, Valois and Dupuis (1992) and others):

(7)  

<table>
<thead>
<tr>
<th>The AEC in French SI</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. <em>Je me demande quand acheteront les consommateurs les pommes.</em></td>
</tr>
<tr>
<td>I wonder when will-buy the consumers the apples</td>
</tr>
<tr>
<td>b. <em>Je me demande quand acheteront les pommes les consommateurs.</em></td>
</tr>
<tr>
<td>I wonder when will-buy the apples the consumers</td>
</tr>
</tbody>
</table>

Nevertheless, if the direct object argument either moves out from the VP (*wh*-extracted in (8a) or cliticized in (8b)) or surfaces as a PP as in (9), the resulting structures are ameliorated (Kayne 1972, Kayne & Pollock 2001):

(8)  

<table>
<thead>
<tr>
<th>No AEC in French SI when only one DP stays in the VP</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Qu’a montré Jean?</td>
</tr>
<tr>
<td>what has shown Jean</td>
</tr>
</tbody>
</table>
b. A qui l’a montré Jean?
   to whom it has shown Jean

(9) ?Quand ecrira ton frere a sa petite amie?
   When will write your brother to his little friend

The French facts clearly show that in order for a subject to remain VP-internal, either the DP object must be externalized (i.e. moving out of the VP) or the object must be a PP, simply a similar state of affairs found in English inversion constructions.

2.4 **ENGLISH TRANSITIVE EXPLETIVE CONSTRUCTION**

In English (and some other languages like French), the transitivity constraint can also be observed in constructions with an expletive in matrix subject position. This restriction is shown in (10) and (11): whereas expletive constructions are well formed with intransitive verbs, transitive expletive constructions are often ungrammatical.

(10) *The AEC in English expletive constructions*
   a. There arrived a student.
   b. *There solved a student the problem.

(11) *The AEC in French expletive constructions*
   a. Il est arrivé un homme.
      it is arrived a man
      ‘There has arrived a man.’
   b. *Il a lu un élève le livre.
      it has read a student the book
      ‘There has read a student the book.’
Bobaljik and Jonas (1996) and Déprez (1990) (and references therein) have argued that in (10b) and (11b) the subjects remain in VP-internal positions. As a result, we can attribute the ungrammaticality of (10b) and (11b) to the familiar fact that two DP arguments stay inside the VP in those cases. Note that, interestingly, English sometimes marginally allows a kind of transitive expletive construction if the subject is displaced to the right (Chomsky 2001):

(12) a. There entered the room a strange man.
    b. There hit the stands a new journal.

On the surface, the sentences in (12) appear to be counterexamples to the AEC, but as I will show later, they are still captured by the AEC and the account proposed here can explain the contrast whereas some alternative accounts cannot.

One last crucial point worth stressing is that, as is clearly demonstrated, the AEC-related phenomena crucially involve both the subject and the object. This condition simply states at least one of the DP arguments must be externalized and it does not matter which one. Moreover, note that in all of the cases discussed above, the EPP feature has been independently satisfied (by the fronted XP in LI/QI/SI and by the expletive in TEC). In other words, the requirement for at least one DP argument to be externalized is totally independently of the EPP. Therefore it seems to be reasonable to conclude that this generalization shows that EPP is not the only principle that drives syntax.

3. THE PROPOSAL

The data presented in section 2 show that, in a transitive verb construction, whenever the EPP movement trigger for the logical subject is satisfied by some other mechanism(s) in the structure so that the subject is forced to stay in situ, the resulting structure is illegitimate. I therefore propose that the AEC, the necessity of externalizing at
least one DP which bears uninterpretable Case feature in the vP, is a resolution of defective intervention effects. Let us consider the reasons in the following.

I assume that the direct arguments are base generated as in (13). As formulated by many researchers (see McCloskey (1997) and references therein), it seems reasonable to separate out the functions of the lexical and functional layers. Specifically, the lexical layer is the phrase structural domain in which argument realization takes place and the inflectional layer is the phrase structural domain in which morphosyntactic features are licensed. All arguments, including the subject, are initially realized within a lexical projection. The probe v* is merged above VP as usual and the derivation in question would proceed as follows.

(13) a. Merge v*

\[
\begin{align*}
\text{v*} & \rightarrow \text{VP} \\
\text{Subj} & \rightarrow \text{VP} \\
\text{V} & \rightarrow \text{Obj}
\end{align*}
\]

First, based on strict cyclicity, at the stage of the v*P phase, the features on v* need to be checked before proceeding to the next phase. Therefore, v* starts probing in its complement domain and the closest goal it reaches is the in-situ subject. Recall that, under this circumstance, the subject is left in-situ because the EPP requirement of T is satisfied by some other fronted element. The two (v* and the subject) Agree and both

---

3 As a matter of fact this should also hold true for cases where there is only one Case checker but two in-situ uninterpretable Case bearers in the VP structure as well (cf. Baker and Collins’ (2006) Multiple Case Condition). We will return to the relevant facts in Section 5.

4 I assume with McCloskey’s (1997) (and references therein) for a lower origin/position of the subject.

5 As for the problem of θ-role assignment, I assume with Hale & Keyser (1993), where θ-relations are established structurally.

6 I will soon address how the operation proceeds in noninverted SVO sentences.
eliminate their uninterpretable feature(s). Subsequently, we merge the next phase in the structure.

b. Merge C

At this point, the probe C needs to check its Case/\( \varphi \)-feature. When it searches in its complement domain, the possible goal it reaches is the in-situ frozen subject. However, this DP argument has already eliminated all its uninterpretable features (against \( v^* \)), and thus becomes inactive and incapable of accessing any further Agree operation. As a result, the probe C cannot successfully Agree with it. In principle, after this failure in Agreeing with the subject, C could proceed probing until it finds another goal, the object. However, this Agree relation between C and the in-situ object cannot be established as well due to the defective intervention effects: the inactive subject now stands as a defective intervener between the probe C and the DP object. In other words,

---

7 Actually the first goal that C meets in inversion cases is the fronted element (PP in LI, quote in QI, \( \text{wh-phrase} \) in SI), which is \( \varphi \)-deficient and thus moved to [Spec, CP] as we have argued for. In other words, after C’s first failure in Agreeing with the fronted element, the next thing C can reach is the in-situ subject in this case. To simplify the discussion here, I only focus on the two arguments that are left in the VP domain.
the AEC holds because the inactive subject would cause Case-related problems to C and the in-situ object. Under such formulation, it can be easily understood why this restriction is always observed with constructions where the subject stays at its merge position.

Note that in the common noninverted cases with the Subj-Verb-Obj order, this problem will not arise because the subject always has to first raise to the edge position of the v*P phase (due to the Phase Impenetrability Condition (Chomsky 2001)) so as to move to [Spec, TP] position later in the derivation and satisfy the EPP on T. Under this circumstance, the v* probe can successfully Agree with the object without any intervening element in between. In other words, movement of the subject to the edge of v* is forced by an independent requirement that movement must apply in a local fashion, as it ensures that long movement proceeds phase-edge by phase-edge. Therefore, this step is not induced by Case/ϕ-features of v*.

As a result, defective intervention effects would inevitably ensue in inversion constructions with transitive verbs. This is why the AEC arises: if both of the DP arguments stay at their first-merge position, only one of them can eliminate its uninterpretable Case features. We can salvage the offending structure at least in two ways: first, externalize the subject so that it does not constitute a defective intervener; second, externalize the object so that it can satisfy its own need somewhere else in the structure.

The account proposed above has one immediate prediction: as we just said above, if the defective intervener, for some reason, has been moved out of the way of C’s probing domain, the resulting sentence is predicted to be grammatical since the lower DP would be able to eliminate its uninterpretable features under such a scenario. The prediction is indeed borne out. As noted earlier, English transitive expletive construction is sometimes possible if the subject is displaced to the right; the possibility of (14) is anticipated under our account. Because the subject has left it base-generated position and thus destroys the potential offending intervention configuration, the DP the room in (14a) and the stands in (14b) can accomplish their Agree relation with the C probe.

(14) a. There entered the room a strange man.
    b. There hit the stands a new journal.
By contrast, the fact that sentences in (14) are permitted in English does not seem to receive a proper explanation in the previous approaches in the literature, as we will see immediately. Moreover, another advantage of our account is that we seem to have a coherent theory in capturing all the inversion-related facts. That is, if what I proposed in the previous chapters is on the right track, we are now using the exact same set of principles to capture the AEC. In what follows, I will examine some alternatives proposed in previous works.

4. **ALTERNATIVE ACCOUNTS**

In a sense the current proposal can be said to be Case-oriented in that I attribute the emergence of the AEC to the problem of some constituent’s failure in eliminating its Case/\(\phi\)-features. The approach adopted in the works of A&A (2001, 2006) is essentially Case-related as well and thus in Section 4.1 we will first look at their theory and see how it differs from the analysis proposed here. In Section 4.2 and 4.3 I will review two other types of approach – symmetry-oriented and linearization-oriented.

4.1 **CASE**

In A&A (2001, 2006) it is first proposed that a condition like the AEC described in (1)\(^8\) applies universally in the grammar. They argue for this claim through a discussion of a number of word order patterns across languages, including Icelandic Transitive Expletive Constructions, VSO orders in Celtic and Arabic and VOS orders in Italian and Catalan, where they show that, cross-linguistically, either the subject or the object (or both) are parsed into a VP-external position. Sequences in which both arguments are shown to remain VP-internal seem to be absent.

\(^{8}\) with different terminology (the Subject-in-situ Generalization (SSG)) in their works.
Their proposed answer for the existence of such a condition is that there is a link between v-to-T raising and the ban on multiple DPs within the verbal domain. Specifically they argue, in the configurations that violate the AEC, it is always the case that v and T fall together. As a result, the Case-features of the arguments must be checked after v-to-T raising takes place, which creates a complex head with two active Case features as in (15):

(15) \[ \begin{array}{c}
T_{\text{max}} \\
T \langle \text{Case} \rangle \\
v \\
v \langle \text{Case} \rangle \\
V
\end{array} \]

However, the complex head in (15), with two active (i.e. undeleted) Case features, is an illicit syntactic object. One potential problem with such a configuration is that the complex head $T_{\text{max}}$ is prohibited to have more Case features than underived heads. Consequently, only one of the two Case features can be passed up to $T_{\text{max}}$ in (15) and the other Case feature fails to enter into any checking relation, leading the derivation to crash. Another possibility, according to them, is that (15) creates a fatal ambiguity configuration since the Case features on $T_{\text{max}}$ can be either those of T or those of v. In any case, under their analysis, the AEC results from the improper amalgamation of two Case-bearing heads v and T, as stated in (16):

(16) v and T cannot both bear active Case features when they form a complex head. (A&A (2001): 46b)

\[ \text{However, this reasoning seems to be contradictory to their assumptions in this work: “We assume that the Case feature of v and the Case feature of T are formally identical in the strictest possible sense: that is, there is no nominative Case feature distinct from an accusative Case feature. There is just a Case feature on v and a Case feature on T” (A&A 2001: p.211). If this is the case, it is curious why the computation should know how to distinguish between the two Case features after the v-T conflation. In other words, if there is no distinction on different Cases in the first place, there should not be any ‘ambiguity’ problem at all.} \]
As a consequence of (16), it is imperative that at least one Case feature be checked before the complex head is formed:

(17) $T^{<\text{Case}>}$ or $v^{<\text{Case}>}$ must be eliminated before the complex head is formed.


This is the reason why at least one of the DP arguments must be externalized from the VP in A&A’s account.

One significant support for their analysis comes from the VSO orders in Greek and Romanian, which, on the surface, appear to present counterexamples to the AEC. In the Greek example (18), for instance, both arguments remain vP internal, as is evidenced by the fact that they follow manner adverbs that have been argued to mark the left edge of the vP:

(18) an ehi idi diavasi $[v_P \text{prosektika} [o \text{Janis to vivlio}]]$ (A&A 2001:57)  
if has already read  carefully  the-John-NOM the book-ACC  
‘If John has already read the book carefully’

Nonetheless, they argue that such orders do not pose challenge to the AEC, because the Case feature of the in-situ subject is realized instead on the pronominal verbal agreement which has the status of a clitic and checks overtly its Case/$\varphi$-feature on T as a result of verb-raising (cf. Alexiadou & Anagnostopoulou 1998). As a result, the inverted in-situ subject does not have an unchecked structural Case feature in the first place, despite its appearance to the contrary. In this way, the aforementioned property of Greek verbal subject agreement can be linked to the clitic doubling parameter which permits the formation of such feature-chains between clitics and in-situ DP arguments in clitic doubling languages like Greek.

Despite the insights of their works, one critical problem of A&A’s proposal is that the ban on multiple DPs in vP can be observed even when no v-T conflation occurs. This is exemplified in (19).
As can be seen in (19), the verb is not amalgamated with T but the presence of two DPs within vP still leads to ungrammaticality. In other words, the correlation of v-to-T raising and the emergence of the AEC does not appear to exist. Since A&A’s explanation crucially relies on the v-T conflation, which results in an illegitimate syntactic object, the fact that sentences like (19) are ungrammatical falls mysterious under such a proposal. On the other hand, the unacceptability of (19) is expected under the account proposed in this work since the fact that a student constitutes a defective intervener is not altered at all no matter v-raising takes place or not.

4.2 SYMMETRY

Another alternative account for the AEC is to suggest that the offending structure has an inherently instability so that one of the unstable element must raise (Chomsky 2005, Moro 2000, 2007, Gallego 2006). As discussed in chapter 3, what goes wrong in the occurrence of multiple DPs in vP is that a structure like (20) with labeling difficulties would be generated.

\[ \{XP, YP\} \]

Specifically the problem of (20) is that the computational system will encounter difficulties in deciding the label between the two syntactic objects of the same size so that no dependency can be established between XP and YP and we are stuck at this point of the derivation.

A fatal problem of this symmetry approach is that it fails to capture the fact that DPs and PPs behave very differently in face of the AEC. As we mentioned earlier, there is a contrast between the following:

\[ \text{a.}^{*}\text{“What time is it?” asked Mary John.} \]
b. “What time is it?” asked Mary of John\textsuperscript{10}.

All the problematic cases in the empirical coverage of the AEC, as we have seen so far, have to do with two or more DPs, not just any two XPs. Specifically, it is not clear why (21b), which also apparently involves two maximal projections as (21a), would be permitted in the grammar. Furthermore, under the symmetry proposal, the derivation should go wrong when there are, for example, two PPs occur in the VP domain, contrary to the fact:

(22) “What time is it?” asked Mary of John in a low voice.

Therefore, under this approach, it is not unclear why PPs would systematically differ from DPs because in label determination what matters should simply be that no two syntactic objects of the same size are merged together.

4.3 Linearization

Richards (2006) proposes a general theory to capture the ban on multiple objects of the same type that are too close together in different languages\textsuperscript{11}. According to this theory, the effects of the AEC can be explained as linearization failures inside the vP phase. In particular, linearization fails whenever the objects to be linearized in a strong phase are insufficiently distinct. In what follows I introduce how this system works in a nutshell.

In this theory, linearization makes reference only to node labels. All and only those nodes within a phase must be linearized (Kayne 1994) and there is a condition on linearization like (23) in the grammar:

\textsuperscript{10} Note that, since the PP in (21b) is an argument, rather than adjunct, we can thus exclude the possible interference that some people have proposals about the different status of adjuncts in this regard (for example, the timing when adjuncts come into the structure).

\textsuperscript{11} Richards (2006) is in fact much more ambitious than the current project in that it discusses more empirical facts that we do not cover here such as multiple sluicing, DP-internal arguments. Therefore, in the discussion here we only focus on the evaluation of its implications on the AEC.
Distinctness

If a linearization statement \(<a, a>\) is generated, the derivation crashes.

This Distinctness condition rejects trees in which two nodes that are both of type \(a\) are to be linearized in the same phase and are in an asymmetric c-command relation. Thus it follows that syntactic nodes with the same label must not be located too close together. To be precise, there is a ban on objects with the same labels within the same Spell-Out domain\(^{12}\). Objects of the same type, therefore, need to be separated by a phase boundary; otherwise they cannot be ordered with regard to each other. Three more assumptions are needed in this proposal. First, following Nissenbaum 2000, it is assumed that the phase edge is linearized with the material in the higher phase. Second, DP is not a phase. Thirdly, Distinctness violation does not involve lexical heads. Next let us consider the abstract cases in (23) for example. Suppose XP is a strong phase.

The tree in (24a) is unlinearizable because it would generate two objects with the same labels (i.e. \(<\text{DP, DP}>\)) within the same Spell-Out domain; on the other hand, no linearization problem arises in (24b) since the two DP nodes are now separated by a phase boundary.

(24) a. XP

\[ \text{YP} \]
\[ \text{DP} \]

\[ \text{DP} \]

---

\(^{12}\) Spell-Out occurs several times in the course of a syntactic derivation. It occurs as soon as a strong phase has been constructed. Spell-Out domains (i.e. strong phases) assumed in this account include CP, \(v^*P\), PP, KaseP, LinkerP.
Next let us consider how Distinctness would capture the AEC. To account for (25), following Distinctness condition, all the post-verbal material should be in the same Spell-Out domain, which might consist of the tree in (26)\(^{13}\):

(25) *"It's cold," told John Mary.

(26) \[
\begin{array}{c}
\text{vP} \\
\text{v}' \\
v \\
\text{VP} \\
\text{DP} \\
\text{John} \\
\text{Mary}
\end{array}
\]
The tree in (26) is unlinearizable. Its linearization statement will include <DP, DP>, which represents the relation between the DP John and the DP Mary. However, by hypothesis, the information that one of these DP nodes dominates John and the other dominates Mary is unavailable to the linearization process; as a result, the linearization statement will cause the derivation to crash.

Here I would like to point out a potential problem in this account\(^{14}\). As pointed out in A&A (2006), the VSO orders in clitic-doubling languages such as Greek and Romanian cannot receive a satisfactory explanation in this theory. Specifically, these languages show that multiple DPs are allowed inside the vP as long as there is other resort (such as clitic-doubling) for their Case property, as we have discussed earlier.

\[(27) \quad \text{an ehi id} \ diavasi \ [vP\ prosektika\ [o\ Janis\ to\ vivlio]] \]
\[\quad \text{if has already read carefully the-John-Nom the-book-Acc} \]
\[\quad \text{‘if John has already read the book carefully’} \]

The fact that multiple DPs are able to occur within the vP in clitic-doubling languages cannot be explained by the linearization approach. In order to capture such facts, one plausible solution would involve saying that certain types of agreement allow the grammar to distinguish the agreed-with DP from other DPs, making linearization statements successful (cf. Richards 2006 fn. 3). However, although this is not impossible to do, it will necessarily make the proposal more complex than it seems and crucially, with the reference to abstract agreement, we seem to lose the fundamental generalization this proposal would like to achieve: the ban on multiple DPs within the vP is a result of linearization problem at PF, similar to the Obligatory Contour Principle (OCP) in phonology.

\(^{14}\) To make fair comparison, I focus only on the facts regarding the AEC in the current discussion. As said earlier, the empirical coverage of Richards (2006) is admittedly much wider than the present project; there might be some problem regarding other facts that are not related to the AEC. For example, Chinese seems to pose a counterexample in his account of multiple sluicing since Chinese multiple sluicing allows multiple DP remnants but it is a language with no case marking on nominals. I will leave the evaluation of other parts of the proposal for further investigation.
5. EXTENSION: LINKER CONSTRUCTIONS

In this section I show that the AEC is actually a broader generalization than
initially presented and the domain of its application can be further extended to the linker
constructions observed in various languages, including (but not limiting to) Jul’hoansi
(Khoisan)\(^{15}\), Kinande (Bantu) and Baule (Akan) (Collins 2003, Baker & Collins 2006).

\(^{15}\) Baker & Collins (2006) assumes that linker exists in ‡Hoan (Khoisan), N\(\)uu (Khoisan) as well. They
further argue that these linker languages differ in whether they permit free order within the VPs. That is, in
some languages (Jul’hoansi, Kinande) it does not matter which phrase appears where, but in other
languages (‡Hoan, N\(\)uu) the order does matters:

(i) a. Uto dchuun-a |\(Kaece\) ko \(n\!ama n\!ang\) (Jul’hoansi)
car hit-TRANS |\(Kaece\) Lk road-in
‘A car hit Kaece in the road.’
b. Uto dchuun-a \(n\!ama n\!ang\) ko |\(Kaece\)
car hit-TRANS road-in Lk \(Kaece\)

(ii) a. Ma’\(a\) cu \(Jefo\) ki \(setinkane\).
1sg Prog give Jeff Lk hand-harp
‘I am giving Jeff the hand-harp.’
b. *Ma’\(a\) cu \(setinkane\) ki \(Jefo\).
1sg Prog give hand-harp Lk Jeff

As one can tell from the above contrast, in ‡Hoan only the higher DP can move to the left of linker but in
Jul’hoansi it does not matter which DP precedes the linker. Nevertheless, I disagree with their view for
treating \(ki\) in ‡Hoan as a linker on a par with \(ko\) in Jul’hoansi. Instead, I argue that the apparent linker in
‡Hoan and N\(\)uu are pure prepositions or Case assigner. In particular, I suggest that, unlike Jul’hoansi (the
analysis of which will be immediately discussed), the linker in ‡Hoan (and N\(\)uu) bears Case features,
which checks against the additional (locative, instrumental, benefactive) argument. Thus \(ki\) in ‡Hoan has a
different function and a distinct initial-merge position from \(ko\) in Jul’hoansi. One crucial piece of evidence
is that in ‡Hoan \(ki\) is inserted when an additional phrase is added in the structure, regardless of whether the
sentence involves an intransitive or transitive verb.

(iii) Tsi a-kyxai ki !oa na. (Collins (2003): ex.31)
3pl Prog-dance Lk house in
‘They are dancing in the house.’

This is in sharp contrast to Jul’hoansi, where \(ko\) is inserted only when there are both direct object and an
additional argument in the VP.

(iv) a. Lena koh \(djxani-a\) tju \(n\!ang\)
Lena PAST dance-TRANS house-in
‘Lena danced in the house.’
b. *Lena koh \(djxani-a\) ko tju \(n\!ang\)
Lena PAST dance-TRANS Lk house-in
Collins (2003) and Baker and Collins (2006) discuss the existence of a particle, called linker, that appears between the direct object and a secondary object or nominal adpositional phrase. Some examples illustrating the linker construction in Ju‘hoansi are provided in (28). In (28a) the linker ko appears between the theme and a locative phrase, in (28b) between the theme and an instrument and in (28c) it occurs between the two objects of a double object construction, the beneficiary and the theme (data from Collins 2003). Crucially, as can be clearly seen here, the linker construction always involves two (or more) VP complements. What’s more interesting is that, as illustrated in (29), exactly one phrase appears before the linker and it does not matter which one.

(28) a. Uto dchuun-a |Kaece ko n!ama n!ang (locative)
car hit-TRANS |Kaece Lk road-in
‘A car hit Kaece in the road.’
b. Mi ba ||ohm-a !aihn ko |’ai (instrumental)
my father chop-TRANS tree Lk axe
‘My father chopped the tree with an axe.’
c. Besa komm |’ama-’an Oba ko tcisi (benefactive)
Besa EMPH buy-give Oba Lk things
‘Besa bought Oba some things.’

(29) a. Uto dchuun-a n!ama n!ang ko |Kaece (locative)
car hit-TRANS road-in Lk |Kaece
‘A car hit Kaece in the road.’
b. Mi ba ||ohm-a |’ai ko !aihn (instrumental)
my father chop-TRANS axe Lk tree
‘My father chopped the tree with an axe.’
c. Besa komm |’ama-’an tcisi ko Oba (benefactive)
Besa EMPH buy-give things Lk Oba
‘Besa bought Oba some things.’
In the following discussion I will mainly concentrate on Ju’hoansi for illustration and argue that the existence of linker presents particularly clear evidence that our proposed theory regulates not only the placement of subjects and objects in the vP domain but also the placement of two objects in the VP domain. Moreover, the proposed account captures the free variation of the object placement in such constructions. In particular, I suggest that the linker is the overt manifestation of a functional category made available to avoid the defective intervention effects. It is used to insert an extra layer and provides an extra specifier as an escape hatch so that defective intervention effects are not induced. Crucially, because its function is to save a derivation from inducing intervention and causes Case problems, its use is necessarily of last resort nature and applies only if the derivation would otherwise result in an illicit representation. I introduce the detailed implementation of this account in the below.

Two noticeable properties can be observed in Ju’hoansi linker constructions. First, the –a suffix, termed “transitivity suffix” in Collins (2003), appears whenever a locative/instrumental phrase appears.

\[
(30) \begin{align*}
\text{a.} & \quad \text{Uto dchuun-}(*a) \mid \text{Kaece.} \\
\text{car hit-Trans} & \mid \text{Kaece} \\
\text{‘The car hit Kaece.’} \\
\text{b.} & \quad \text{Uto dchuun-}(*a) \mid \text{Kaece ko n!ama n!ang.} \\
\text{car hit-Trans} & \mid \text{Kaece Lk road in} \\
\text{‘A car hit Kaece in the road.’}
\end{align*}
\]

Second, the linker ko only appears with transitive verbs.

\[
(31) \begin{align*}
\text{Ha ku u-a} & \quad (*ko) \text{Tjum!kui} \\
\text{3SG Asp go-Trans} & \text{Lk Tjum!kui} \\
\text{‘He was going to Tjum!kui.’}
\end{align*}
\]
I propose that the “transivity suffix” –a is the applicative head that is used to introduce an additional argument in the structure and, crucially, it bears Case/φ-features. Furthermore, because the linker ko only appears when there is more than one direct object in the sentence, its function is to resolve the potential Case problems of the two direct arguments. The trees in (32) represent the derivations of ungrammatical sentences under this account. First, based on strict cyclicity, after we merge $V_{Appl}$, the features on $V_{Appl}$ need to be eliminated before proceeding to the next stage. Therefore, $V_{Appl}$ probes and Agrees with the closest goal, which is the direct object, and both discharge their uninterpretable feature(s).

(32) *Uto dchuun-a |Kaece n!ama n!ang
    car hit-Trans |Kaece road-in
    ‘A car hit Kaece in the road.’

a. Merge $V_{Appl}$

```
  VAppl
   VP
      Obj1 |Kaece
          VP
            V
              Obj2 (Loc)
                n!ama n!ang
```

Subsequently, we merge v* in the structure.

---

16 Therefore $V_{Appl}$ is a phase in this account.
At this point, \( v^* \) needs to check its Case/\( \varphi \)-feature. When it searches in its domain, the first possible goal it reaches is the direct object. Unfortunately, however, this DP argument has already eliminated all its uninterpretable features and thus cannot fulfill the featural requirement on \( v^* \); moreover, it becomes inactive due to its prior Agree operation with \( V_{\text{Appl}} \) and thus it constitutes a defective intervener for the Agree relation between \( v^* \) and the lower locative argument\(^{17} \). As a result, the derivation will inevitably crash under such a circumstance and this is why the sentence (32) is unacceptable.

To avoid this problem, the strategy available to the linker languages is to make use of the linker projection, which provides an extra potential landing site, so that one of the object complements can be externalized. Specifically, the linker is merged between the \( v^*P \) and \( V_{\text{Appl}}P \) projections in the structure:

\(^{17}\) Locative arguments in this language have Case features to check. See the arguments for its nominal status in Collins (2003).
Let us next see how exactly the proposed structure (and thus the presence of linker projection) saves the otherwise illicit derivation.

(34) is the linker construction with the theme argument preceding the linker. As illustrated in the tree diagram, the presence of LkP creates an externalization space for the theme argument. After the movement of |Kaece into [Spec, LkP], the V_{Appl} head is able to reach the locative argument n!ama n!ang without any intervener in between and thus the Agree relation is accomplished\(^{18}\). Meanwhile, there is no Case problem for the argument |Kaece since it can eliminate its uninterpretable features against the probe v*.

---

\(^{18}\)One might wonder if this operation is legitimate due to its countercyclic nature. However, this kind of operation is seen elsewhere too, for example, in Icelandic. As shown in Holmberg and Hársdóttir (2003), raising of the embedded subject across the dative NP is impossible; however, once the dative NP is wh-moved, raising is again possible.

(i) *Hestarnir virðast mér [t\textsubscript{NP} vera seinir] the-horsesNOM seem meDAT be slow

(ii) Hverjum hafa hestarnir virst twh [t\textsubscript{NP} vera seinir]? whoDAT have the-horsesNOM seemed be slow

Thanks to Norvin Richards for pointing out the relevance to me.
There is one more possible derivation associated with the linker structure, shown in (35). The theme argument |Kaece first Agrees with the $V_{Appl}$ probe and is rendered inactive. As a consequence, the locative argument is forced to be externalized; otherwise, it cannot eliminate its uninterpretable features due to intervention just as we described earlier in (32). Therefore, it moves out of the c-command domain of |Kaece and to [Spec, LkP], where it can Agree with $v^*$ probe without further ado.
Finally, as the theory predicts, the use of linker is a last-resort strategy and thus its occurrence is prohibited unless the potential intervention configuration is at stake (i.e. more than one VP argument is involved in the sentence). (36) exemplifies such a situation. Since the locative argument Tjum!kui checks its Case with the applicative head -a and there is no Case/∅-features associated with the intransitive verb, no further operation or projection is needed. Under this circumstance, the occurrence of the linker projection would be unwanted.
As an interim summary, I have proposed that the use of linker is a last-resort strategy to evade the potential intervention problem when both the VP-internal arguments stay in situ. Specifically, the lower argument would fail to enter into an Agree relation with an upper probe so that uninterpretable features would remain in the structure, leading the derivation to crash. The linker strategy resolves this problem by creating an extra projection to enable one of the arguments to move into its Spec position and facilitate the Agree operations. Crucially, the account we provide for linker constructions is essentially identical to the account we offered for the earlier cases that involved externalization of either the subject or the object. They fundamentally involve similar structures, where an Agreed in-situ argument would possibly lead to Case/∅-features related problems in the derivation. Next I discuss another alternative account for this phenomenon\(^{19}\).

\(^{19}\) A&A (2006) also talks about linker constructions. They argue that similar configuration is involved as the one they argued for the vP-type AEC cases. They arrive at the formation of a complex conflated head with more than one structural Case features, which is argued to be illicit object. The two configurations differ only in that the complex head of the vP-type AEC cases is formed by v-raising, while the formation of a complex head in linker constructions is derived by suffixation of the transitive marker -a to v as shown below.
Collins (2003) and Baker & Collins (2006) propose a constraint which forces movement of object out of the VP-domain in order to account for the linker constructions:

(37) Multiple Case Condition (MCC)$^{20}$

By Spell-Out, VP can contain no more than one argument with an undeleted Case feature.

They suggest that linker is a last resort mechanism and is inserted to provide a landing site for movement in constructions that would otherwise violate the Multiple Case Condition (MCC). Being a last resort operation, linker-insertion is triggered only if a violation of the MCC would ensue, which explains why linker is obligatorily absent with intransitive predicates. Note that however, crucially different from our proposal, they treat the linker itself to be Case-bearer so that it is inserted in the structure to check off the Case features of one of the object arguments. With the linker Agreeing with one of the arguments, it eliminates the uninterpretable Case feature on this one argument so that it leaves only one argument stranded with undeleted Case feature in the VP, conforming to the MCC.

One insufficiency of this account is that it seems to simply restate the problem. By stating a condition like the MCC, it is still unclear why such a constraint should hold in the grammar at all and the existence of MCC does not seem to be motivated independently elsewhere in the grammar. In other words, the deeper question of why

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![Diagram](image)  

$^{20}$ Baker & Collins (2006) actually has a revised, more complex formulation than the one spelled out above, to account for the Kinande data. Here I use the simplified version of their MCC for the discussion.

(i) The Multiple Case Constraint (revised) (Baker & Collins 2006: 35):  
By Spell-Out, if the VP complement of v contains a DP with a Case feature, then VP cannot contain any other nominal expression (includes augmentless NPs, semi-nominal locatives, and DPs with Case features).
more than one undeleted Case feature would lead to ungrammaticality is yet to be answered. More importantly, it misses a crucial generalization that there is an evidently clear association between the linker constructions and the externalization cases discussed earlier in this chapter, namely the cases where either subject or object must move out of the vP. By contrast, our proposed account can unite the two arrays of data and linker constructions can be captured by some general and individually attested principles of the grammar, not pertinent to particular constraints.

6. CONCLUSION

In this section I discussed the generalization concerning the placement restrictions of arguments by Spell-Out. The discussion centers on the principles that force arguments to leave the vP and VP in languages and the empirical domain consists of constructions where subject movement is not required for reasons that have to do with the EPP and linker constructions where object movement is obligatory. In these environments and whenever a sentence contains either both a subject and a direct object in vP or two (or more) VP objects in VP, one of the arguments must vacate the relevant domain. I argued that argument externalization is related to Case. It is forced because movement of either or both arguments could prevent the formation of defective intervention effects.
In this dissertation I have addressed various important questions surrounding inversion structures. I first showed that it is the syntactic categories that determine the profound typological differences in Locative Inversion. In languages that have nominal locative phrases, such as Mandarin, Chichewa, Kinande and Gungbe these locatives exhibit pure A-properties in Locative Inversion, whereas in languages that lack such nominal locatives, such as English and Sesotho, the locative phrases display a mixture of A- and Ā- properties in Locative Inversion. I have argued that such systematic cross-linguistic differences could be derived once we properly understand how the featural composition of locative phrases influences on the probe-goal relation between C and postverbal DP in the theory of Agree. In particular, a φ-defective element at [Spec, TP] not only fails to delete the uninterpretable Case/φ-features on C but also constitutes a defective intervener for the subsequent probing action, it can not reside in [Spec, TP] but must undergo further Ā-movement.

I have also demonstrated that various inversion constructions – English Quotative Inversion, CP subjects and French Stylistic Inversion – conform to our proposal that whenever a non-nominal or φ-incomplete element moves to the subject position, it cannot stay there but must be further topicalized. I suggest that we should treat these as related constructions since they both display A- and Ā- properties with regard to a battery of syntactic tests.

In addition, I discussed the generalization concerning the placement restrictions of arguments by Spell-Out, in particular the principles that force argument externalization from the vP and VP. The discussion centers on the principles that force arguments to leave the vP and VP in languages and the empirical domain consists of constructions where subject movement is not required for reasons that have to do with the EPP and
linker constructions where object movement is obligatory. In these environments and whenever a sentence contains either both a subject and a direct object in vP or two (or more) VP objects in VP, one of the arguments must vacate the relevant domain. I argued that argument externalization is related to Case.

One of the conclusions we obtain towards the end is that Case plays an important role in driving syntactic movement in the computational system, in addition to the EPP. I argue for the view that Case has an independent status in the computational system. In other words, EPP is not the only principle that drives syntax and the movement trigger cannot be reduced to the EPP-related reasons only. In particular, I have tried to show that the abstract Case requirement triggers obligatory topicalization of the fronted phrases in English Locative Inversion, Quotative Inversion, sentential subjects and French Stylistic Inversion. I have also provided further evidence showing that argument externalization in the verbal domain is also driven by Case requirement.

Moreover, I argued that locality should be defined over minimal domains. I showed that a study of inversion constructions across languages also supports the necessity of relativizing the notion of closeness in locality theory and, in particular, it provides a plausible analysis for overt verb movement observed in the inversion structures.

Finally, we have shown that Spec-Head agreement should be eliminated in the computational system and C is the locus of nominative agreement system in the theory of Agree.
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