SECONDARY PREDICATES

by

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Abstract

Although adjectival secondary predicates are pervasive in human languages, few theories are currently able to provide comprehensive accounts of their syntax that can also derive their major properties. Three such characteristics, extremely problematic but also crucial to a conceptual implementation of a minimalist design of human language are investigated in detail in this thesis. These are: i) restructuring configurations; ii) lack-of-reconstruction effects and iii) long-distance agreement patterns. It is shown that an enriched complex predicate analysis provides an adequate account of the nature of secondary predicates. The ingredients of the analysis are as follows: a) secondary predicates are introduced by a functional projection which specifies their relation to the main predicate; b) the shared argument is introduced by a functional projection called Situation and which provides the restricted spatio-temporal context under which the two predicates hold, as well as the evidential component necessary for the construction of main verbs which merge with non-clausal secondary predicates; c) a process of Simultaneous Multiple Agree is responsible for checking the uninterpretable phi-features of the two predicates, providing the conditions for restructuring; d) Case on secondary predicates is valued either by the secondary predicate introducer, or copied from the shared argument. A complex predicate analysis is able to further derive other conditions on depictive and resultative secondary predicate licensing, among which are the predicate-argument relation, as well as the predicate-predicate relation. Moreover,
it is also shown that well-known cross-linguistic variation in the domain of resultatives can be attributed to the selection specific languages make with respect to the various secondary predicate introducers. Regarding theoretical implementations in the domain of Case and agreement investigations, it is demonstrated that a sequential Agree approach to long-distance-Agreement patterns is untenable in its strictest form.
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# Abbreviations

111 = first person plural exclusive (Warlpiri)  
ABL. = ablative (Case)  
ACC. = accusative  
ADES. = adessive (Case)  
ADV. = adverbial (Case)  
ASP. = aspect  
c\(^0\) = complementizer  
CL. = clitic  
DAT. = dative  
DEC. = declarative  
DEP. = depictive  
DFT. = default  
EPENTH. V. = epenthetic vowel  
ERG. = ergative  
ESS. = essive  
F. = feminine  
GEN. = genitive  
HAB. = habitual  
HON. = honorific  
INDIC. = indicative  
IMPF. = imperfect (imperfective past in Romance, Latin)  
INF. = infinitive  
INSTR. = instrumental (Case)  
GEN. = genitive  
M. = masculine  
N. = neuter  
NOM. = nominative  
NPST. = non-past  
OBJ. = object  
OBL. = oblique (Case, in Australian languages)  
PASS. = passive  
PRES. = present  
Pl. = plural  
PART. = partitive (Case)  
PRF. = perfect  
PRF. = perfective  
PRT. = participle  
PST. = past  
REL. = relative  
REM. = remote  
RES. = resultative  
SE. = middle/resultative/impersonal SE/SI morpheme in Romance  
SG. = singular  
SPECF. = specific
S.P. = secondary predicate
SUBJ. = subject
SUBJNCT. = subjunctive
SUP. = supine
TOP. = topic
TRNSL. = translative
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1 CHALLENGING SECONDARY PREDICATES

1.1 The issue of adjectival predicates

A true challenge in theoretical linguistic formalization is to provide an adequate account of complexity. As elsewhere, primitive formatives and operations minimally construct basic units, which are computed compositionally in human language. But it is also the case that building blocks of the same (general) type can combine creating a yet larger, complex construction of the same broad nature, and making use of what might appear to be dedicated processes. This dissertation is an investigation in the domain of verbal complexity, with the goal of understanding how a verbal and a non-verbal (adjectival) predicate syntactically interact and compose.

Although the presence of verbal + adjectival predicate clusters is a pervasive property of human language, their structure and nature are among the most arcane issues in linguistic theory. Descriptively, adjectival secondary predicates are generally labelled secondary predicates, and are taken to come into two main sub-classes: the depictive (whose semantics indicates overlap of the secondary predicate with respect to the main predicate, as in 1, and the ‘complement’ type in 3), and the resultative (in which the secondary predicate rather signals an eventuality which is obtained as a result of the action of the main predicate, as in 2):

(1) **English - Depictive**
John left angry.
*Reading:* John left and he was angry when he left. (nothing is said about whether he was angry before/after he left)

(2) **English - Resultative**
John pounded the metal flat.
*Reading:* As a result of John’s pounding, the metal became flat.

The main challenge posed by these types of constructions is related mainly to their syntactic status: do secondary predicates project a clausal constituent (a small clause), or are they predicates? A comprehensive syntactic account has to provide the right type of structure from which four crucial properties of these constructions can be satisfactorily derived. On the one hand, there is the observation that the argument that controls the secondary predicate (called shared argument in this thesis) is normally restricted to interpretations pertaining to specificity, disallowing (what are called) existential/weak/narrow scope/non-specific readings. Williams’ (1983) classic contrast, given below in (3) and (4), is an indication in this sense. When the indefinite *a student*
is used with a secondary predicate, it can only be interpreted as making reference to a ‘specific’ student, who is salient in the context/discourse, or known to the speaker (at least, if not to the larger audience). This is called the strong indefinite reading; following May’s (1977, 1985) structural account of scopal interactions, specificity is obtained in such contexts by assuming that the indefinite takes scope over the existential component of the main predicate seem:

(3) SECONDARY PREDICATES

A student seems sick.

a) A specific student seems sick. a student >> seem
b) *Some student or other seems sick. *seem >> a student

(4) INFINITIVE

A student seems to be sick.

a) A specific student seems sick. a student >> seem
b) Some student or other seems sick seem >> a student

As the examples in (3) and (4) illustrate, secondary predicates are distinct from infinitives in that the latter do allow non-specific readings which are assumed to be obtained when the indefinite is interpreted below the main predicate. The debate small clause vs. predicate is not innocuous in this respect; if the shared argument is merged with the secondary predicate below the matrix verb, and further raises for Case reasons, one would expect the lower copy to be available for interpretation at L(ogical) F(orm), through a process of reconstruction/quantifier lowering, as represented in (5). Simply claiming that A-movement doesn’t feed reconstruction won’t easily solve the problem, given the dichotomy between interpretations of shared arguments with secondary predicates (3), and those of arguments of infinitives (4). The latter also exhibit A-movement, yet in their case readings which are taken to be obtained by reconstruction/quantifier lowering are possible (namely, the weak indefinite ones).

(5) …

V
seem

<shared argument> Secondary Predicate

COPY SHOULD BE AVAILABLE FOR INTERPRETATION

Yet, cross-linguistically, secondary predicates systematically exhibit what could be termed anti-reconstruction properties. An account in which the two predicates merge directly and the shared argument is introduced later, rejecting a small-clause status of the secondary predicate, derives
the data in (3) in a trivial manner. But it does that at a price – on the one hand, the theory will have to provide an adequate account as to the nature of the shared argument; on the other hand, it makes more cumbersome an explanation of the long-distance agreement patterns, which are a hallmark of these constructions. Moreover, if the two predicates do indeed form a complex predicate, by a process of incorporation or merger, there’s the problem of the *phrasal* status of the secondary predicate. If the latter is larger than a terminal/head (but smaller), how does it incorporate into a head?

An important claim of this thesis is that the complex predicate is the correct analysis for secondary predicates. Evaluating possible theory-internal alternatives by which the tension between their complex status and the complications deriving from this constitutes the core of this thesis.

On the other hand, secondary predicates are a prolific area of investigation at the syntax-morphology interface due to the fact that they exhibit very intricate patterns of (overt) agreement with their controller. For example, in the Russian depictive in (6) there has to be co-variance between the substantive features (gender and number, sets of phi (ϕ) features) of the argument and those of the secondary predicate. The match relation in some instances includes the identity in Case marking, too.

(6) **RUSSIAN DEPICTIVES: CASE AND ϕ-FEATURE AGREEMENT**

Ivan prišel domoj iz bol’nicy zdorovyj.

Ivan-NOM.SG. arrived home from hospital healthy-NOM.M.SG.

‘Ivan arrived home from the hospital healthy’.

Yet, in other instances, the secondary predicate bears a dedicated Case. The sentence in (7) is well formed, although under a slightly distinct interpretation, when the agreeing nominative Case is replaced with a mismatched instrumental Case, and the ϕ-features must covary:

(7) **RUSSIAN DEPICTIVES: DEDICATED CASE, AND ϕ-FEATURE AGREEMENT**

Ivan prišel domoj iz bol’nicy zdorovym.

Ivan-NOM.SG. arrived home from hospital healthy-INSTR.M.SG.

‘Ivan arrived home from the hospital healthy’.

The presence of Case marking on secondary predicates is not a quirk of Russian, but rather a general cross-linguistic tendency (as illustrated by data from a variety of languages spanning from Japanese to Finnish, and Hungarian, to Icelandic, Latin, Greek, or Arabic). The task is in specifying the correct mechanics that could generate the data in a straightforward manner.
The conflict between a small clause configuration and a complex predicate account is salient in another aspect of secondary predicate analysis, the specific conditions of their licensing and the problem of cross-linguistic variation. For example, depictives cannot be constructed from matrix predicates which are ‘simple statives’ (8 a); in order for the structures to be well-formed overt (temporal) delimitation has to be made available in the structure (8b). This is illustrated by the contrast in (8):

(8) a. *John owned a house young.  
b. John owned a house when young.

And yet, another crucial problem related to the nature of secondary predicates resides in understanding their complex patterns of cross-linguistic variation. It is a well-known fact that in many (families of) languages resultatives of the English type in (2) are absent, although depictives might be present. What factor is responsible for this non-occurrence? And more narrowly, can a comprehensive theory be articulated in such a way that it account for and derive all these characteristics straightforwardly? One of the main goals of this thesis is to evaluate and disambiguate between various hypotheses regarding the syntactic structure and licensing patterns of secondary predicates.

1.2 Aspects of events and their arguments

Secondary predicates constitute a rare opportunity in linguistic investigation. The theoretician is puzzled to see that although they are generally optional, the sentential structure is drastically modified when they do appear; comprehensive reconfiguration is imposed as compared to a context in which the main predicate only would be present. It is just hard to find a structural element which is left unaffected by their presence. As such they make an important contribution to the understanding of hotly debated subjects in linguistics, among which one can briefly enumerate (predicative, multiple, stacked) Case, (construction of) aspect, predication (predicate composition, and complex predicates), (sentential) complementation, control and raising, agreement and concord, feature hierarchies, endocentricity, reconstruction, topic (and information structure), focus, lexical semantics, adjunction, restructuring and reanalysis, argument structure, lexical categories, modification, event structure, nominal structure, the syntax-morphology-semantics interface, empty categories, etc. It is therefore unsurprising that (at least some subtypes of) secondary predicates have featured prominently in traditional and generative linguistics. Also it is not uncommon to see that due to the complicated nature of this class, syntactic theories have to
be enriched and modified in non-trivial ways (see the remarks in Chomsky and Lasnik 1995, Chomsky 1986b). And as everything seems to take on special characteristics when it comes to interacting with them, a common assumption is that their structure is of a special kind too – for example, they have provided the main impetus for the introduction of small clauses as formatives in grammar (Jespersen 1924, and for the generative tradition, Williams 1977, Stowell 1981, among many others).

In spite of the vast literature dedicated to them, one can nevertheless see that the challenges posed by secondary predicates are harder than ever, especially with the advent of the minimalist program. One problem is that most analyses are formulated for English; the recent years have seen various empirical investigations in other languages, with the renewed observation that the classic formulations (as seen in Chomsky 1981, 1995, Stowell 1981, 1983) are, at least, insufficient, to say the least. The general consensus is that the linguistic theory as formulated now misses important generalizations when it comes to explaining the cross-linguistic behavior of secondary predicates. Major questions related to their nature are still open. What precisely are secondary predicates? What is their structure? Why does one see the specific patterns of cross-linguistic variation they exhibit, and why are some facts unexpectedly stable?

The purpose of this thesis is to present a theory of adjectival predicates which is able to account for the two ranges of facts. It moreover purports to fill a research and typological gap in that it constitutes a much needed attempt at integrating various cross-linguistic data into a unified analysis in the generative linguistic tradition, under its more recent minimalist instantiation. The section below will introduce the basic assumptions which will be used (and further modified) in the thesis.

1.2.1 Theoretical background

The minimalist program, as initiated by Chomsky’s papers at the beginning of the 1990s, is a research stream which explores the possibility of providing a principled explanation for the human linguistic capacity. Its main distinction from the precursory Principles and Parameters framework (Chomsky 1981, 1986a and b) resides in assuming not only methodological minimalism, but also the more stringent ontological minimalism. The latter papers (Chomsky 2005, 2007, 2008, Berwick and Chomsky 2011) take the “strong minimalist thesis” (SMT) as a prerequisite research guideline. More specifically, the Faculty of Language (FL) is conceived as “an optimal
solution to interface conditions” (Chomsky 2008, p. 135). Renewing a tradition that goes back to Aristotle’s conceptualization of human language as a system which connects sound and meaning, a minimalist computational component of FL is required to encompass only those properties and operations which are independently motivated by interface conditions. The far-reaching implication is that an inquiry into the mechanisms and nature of human language requires an understanding and inspection of the “third factor” - “principles of structural architecture and developmental constraints that are not specific to the organ under investigation, and may be organism independent” (Chomsky 2008, p. 133). In this sense, minimalism goes beyond explanatory adequacy, conceived as the theoretical goal in the Principles and Parameters (P&P) era.

Conceptual refinements, as well as the emphasis on the congruence of bare output conditions, have profound implications on what a theory of human language should look like. The introduction of highly complex and redundant theoretical apparatus, as was characteristic in the P&P era, doesn’t find its place in minimalism. “Any postulation of descriptive technology that cannot be given a principled explanation…merits close examination, to see if it is really justified” (p. 135). Similarly, if “the basic principles of language [can be] formulated in terms of notions drawn from the domain of virtual conceptual necessity” (Chomsky 1993), minimalism requires that internal levels through which computation proceeds be eliminated. This thesis crucially assumes this picture of the computational system of human language: Deep Structure (DS), Surface Structure (SS), are not made use of (Figure 1). What the computational system (narrow syntax) manipulates is objects drawn from the lexicon, via a preliminary subselection – a lexical array.
The simplest assumption is that the computational system takes two (and not more than two, as two should be enough, unless there is evidence to the contrary) syntactic objects from the lexical array and constructs a new syntactic object. This is the operation Merge; there is rich argumentation in linguistics that it is always specified as binary (Kayne 1984, 1994, Chomsky 1995, 2005, etc.). As secondary predicates represent one well-known argument to the contrary – namely that Merge can be ternary (at the extreme, it has to be ternary if at least some types of secondary predicates are to be adequately understood, as argued for in Carrier and Randall 1992), supporting its strict binary nature is also one of the interests of this thesis.

Another important minimalist postulate embraced here is Inclusiveness, which prohibits the introduction of descriptive or theoretical apparatus not independently motivated at the interfaces or by the third factor (considerations pertaining to parsimony, simplicity, conceptual elegance). The working definition is taken from Chomsky (1995):

(9) **Inclusiveness Condition**

Any structure formed by the computation is constituted of elements already present in the lexical items selected for the Numeration; no new objects are added in the course of the computation, apart from rearrangements of lexical properties (in particular, no indices, bar levels in the sense of X – bar theory, etc.)  (Chomsky 1995: p. 228)
The *Inclusiveness Condition*, as well as the general constraint on eliminating superfluous formatives, will be invoked repeatedly in this dissertation, providing strong motivation for the elimination of PRO as a grammatical formative with its own “set” of rules and principles. That PRO is not a necessary element in the construction of a theory of grammar has been previously claimed elsewhere, mainly in minimalist reinterpretations of control (see Hornstein 1999, 2001, Hornstein and Polinsky 2010, Boeckx, Hornstein and Nunes 2010 etc., for extensive discussion and argumentation). This thesis strongly supports a PRO-less theory, although the mechanics of the analysis is crucially distinct from, if not contradictory to, Hornstein’s. As opposed to infinitival constructions, secondary predicates are argued in this thesis to not enter into configurations which are characteristic to control. What is important though is that the conclusion that PRO is not a required formative converges from accounts of non-necessarily equivalent pieces of data, a big step forward towards ontological and methodological minimalism.

Anticipating a more detailed discussion of the taxonomy of secondary predicates, PRO has been made use of in order to explain the internal structure of one specific “subtype” - the so-called *adjunct secondary predicates*, as seen in (10). The classic discussion about the required presence of PRO in such contexts is Chomsky (1981, p. 104 and subseq.):

(10) John ate the fish raw.

The difficulty posed by (10) is in finding an analysis that is adequate enough as to capture multiple dependencies - the relation between *eat* and *raw*, the relation between *eat* and *fish*, as well as the relation between *fish* and *raw* (morphologically signaled by agreement on *raw*, as seen crosslinguistically). The only solution that could satisfy the strong lexicalist orientation in the Principles and Parameters era (Chomsky 1981, etc.) was to assume the structure in (11):

(11) \[
\begin{array}{c}
\text{V'} \\
\text{V} \quad \text{NP} \quad \text{PRO} \quad \text{A'} \\
\Delta \quad \text{eat} \quad \text{the fish} \quad \text{A} \\
\text{raw}
\end{array}
\]
What the diagram in (11) shows is that the NP *the fish* is base-generated as the complement of the verb *eat*, and linked to the adjectival secondary predicate through a control-like relation. A small clause structure like (12), in which the shared argument *the fish* is generated as the internal subject of the adjectival *raw* is predicted to be impossible because of s- and c-selection properties of the main predicate (*eat*):

(12) \[ \begin{array}{c}
V' \\
| SC \\
| V \\
| NP \\
| A' \\
\end{array} \]

\[ \begin{array}{c}
\Delta \\
eat \\
the fish \\
A \\
raw
\end{array} \]

A simple look at a variety of data from a cross-linguistic perspective contradicts the structure in (11), nonetheless. Binding, Condition A and C interactions, incorporation processes, scopal interpretations, etc., as discussed throughout this thesis show that the adjectival secondary predicate *cannot* be merged *higher* than the object, and moreover that the object itself is higher than the predicate. These tests give the same results in the case of the so-called *ECM type secondary predicates* (13), which have been traditionally analyzed as encompassing a small clause structure (on the lines of 12):

(13) I consider the students smart.
    I find the novel unappealing.

Of course, the observation that the DP is higher than the secondary predicate and the main predicate at some relevant point in the derivation does not necessarily mean that the DP could not have been merged to a lower position and then raised. The latter hypothesis is extensively examined in this thesis; systematic DP interpretations, as well lack of reconstruction effects (which might signal the presence of a copy in a lower position) are subjected to scrutiny. The result is that in order to explain them, one has to assume that the shared DP is merged above the complex predicate formed by the main and the secondary predicate. These observations have a crucial effect on PRO. Lack of reconstruction effects is seen with all types of (non-variable) secondary predicates. This implies that adjunct secondary predicates do not contain a PRO formative (they are instead complex predicative structures just like the traditional ECM-ones). But if there is no
PRO in the adjunct predicates, how is agreement established between the shared argument and the secondary predicate? In fact, what is the mechanics of agreement in secondary predicates?

In order to answer this question, the other minimalist idea assumed in this paper is the process Agree, as discussed in Chomsky (2000, 2001, 2005, 2008), as well as the rich literature dedicated to the topic in minimalism (Boeckx 2004, Béjar 2003, Béjar and Rezac 2009, Sigurðsson 2004, Gallego 2010, etc.). The crucial proposal is that the operations of the computational system happen in order to check features which do not have an interpretation at the interfaces (the so-called uninterpretable features). If these types of features survive unchecked at the interfaces, they won’t be read, and the derivations obtained will not only be illegible, but also illegitimate (forcing crash). Uninterpretable features can be valued if a relation is established with lexical items that bear interpretable features of the same type. This relation is the Agree relation, in which the head specified with uninterpretable features acts as probe which is searching for the matching interpretable feature on a goal. The following definitions are the working hypothesis. (14) identifies the goal, (15) summarizes the three basic conditions Agree is subject to, and (16) establishes the conditions under which Agree can be initiated. (17) contains a more formal definition of Match.

(14)  **Goal**: the closest c-commanded element with a matching feature.

(15)  **Agree**
   a. Probe and Goal must be active for the operation to apply.
   b. Agree divides into Match and valuation.
   c. Probe must contain a full set of features (it must be complete) to delete the uninterpretable FF of matched Goal.  

[Chomsky 2000, 2001]

(16)  **Activity Condition**
Uninterpretable (unvalued) morphology renders syntactic objects active.  

[Gallego 2010, p. 35]

(17)  **Match**
F and F match if they belong to the same attribute class (e.g., [number], [Case], etc.), independently of value (e.g., singular vs. plural, nominative vs. accusative, etc.)

[Gallego 2010, p.36]

The operation Agree, as conceived in the early minimalist literature, is restricted in some fundamental ways. The probe can establish the relevant necessary relation with the first matching (active) goal in its search domain (as elsewhere in the thesis, > marks c-command). If several matching goals are present in the configuration, the probe “sees” only the closest one, in c-
command terms (Goal 1 in (18)). The Agree relation cannot go beyond the first active goal, and establish covariation with all available goals:

(18) \[ \text{Probes} > \text{Goal}_1 > \text{Goal}_2 > \text{Goal}_3 \ldots \]

The only structural context in which the first goal can be skipped is when it has an incomplete set of phi-features. In this instance only the next active goal is selected, and the agreement operation stops.

(19) \[ \text{Probes} > \text{Goal}_1 \overset{\text{incomplete} \phi}{\rightarrow} \text{Goal}_2 > \text{Goal}_3 \ldots \]

Although this thesis assumes the basic conditions for the establishment of the Agree operation, it also demonstrates that subsequent Agree operations, in which the first goal does not deactivate the probe, which can enter into further agreement relations with other probes, are not only possible, but also required in specified structural contexts in human language. This idea has been recently argued for in Hiraiwa (2001, 2004) in the nominal domain. Contexts in which two distinct DPs end up bearing the same Case, irrespective of their thematic role (ex. multiple nominatives, multiple genitives, etc.), are explained as having entered into an agreement relation with same probe, which can encompass all the goals in its search domain. One example can be seen in sentence (20) from Japanese:

(20) **Japanese** (Hiraiwa 2004, ex. 2.4)

\[
\begin{align*}
\text{Taro-\text{ga/ni}} & \quad \text{Hanako-\text{ga me-\text{ga waru-ku kanji-rare-ta}}} (\text{koto}). \\
\text{Taro-\text{NOM/DAT Hanako- \text{NOM eye- \text{NOM bad-INF think-PASS-PST}}} (\text{that}) \\
\text{'(that) Taro thought that Hanako had a bad eyesight.'}
\end{align*}
\]

What the sentence in (20) illustrates is the ‘propagation’ of the nominative Case across a non-finite complementation domain. If the subject of the matrix clause is expected to bear nominative Case, the morphological markings of the subject and the object of the embedded non-finite clause are more surprising. In Japanese, just like in English, the verb *think* can function as an
ECM-inducing predicate, checking accusative Case. Hence, the case on the embedded subject, the DP *mega* ‘eye’, is nominative. And even more surprising is the presence of the nominative on the embedded clause possessor, Hanako. In this context, the genitive Case would be normally expected in Japanese. In order to account for this puzzling state of affairs, Hiraiwa (2004) assumes that a single probe (matrix T) can check the uninterpretable Case features of *several* goals which happen to be in the required space at some moment in the derivation. Implementing Ura’s (1996) observations about multiple feature checking, Hiraiwa (2004) formalizes the mechanism of Multiple Agree as in (22):

(21)  *Multiple Agree*

\[
\text{MULTIPLE AGREE (MULTIPLE FEATURE CHECKING) with a single probe is a single simultaneous syntactic operation. AGREE applies to all the matched goals at the same derivational point derivationally simultaneously. (Hiraiwa 2001, 69)}
\]

This thesis contains an investigation of the Multiple Agree mechanism in the predicative domain; the claim is that agreement on the secondary predicate is the result of a Multiple Agree operation initiated by a higher Probe which requires predicative goals. In very intuitive terms, the Probe is identified as a functional projection which constructs complex predicates; in many languages (as Romance, Japanese, etc.) it can be equated with a restructuring functional head.

(22)  \[
\text{Probe > Goal}_1 \quad \text{Goal}_2 \text{Pred} \quad \text{Goal}_3 \text{Pred} \ldots \ldots \ldots
\]

This implementation of restructuring goes beyond current formulations of this process, which as seldom noticed, lacks principled explanation (see Cinque 1999, Wurmbrand 2001, a.o.). That is, although the various existing accounts attribute the process of restructuring to various structural conditions, they do not explain why human language would exhibit such a process to begin with. This issue will be discussed at length in Chapters 2 and 3 of the dissertation.

Going back to specific examples of secondary predicates, the claim of this thesis is that *all* secondary predicates (the “adjunct” ones, as well as the ECM ones) are constructed as complex predicate configurations, with which a restructuring head induces a Multiple Agree opera-
tion. Exemplifying with secondary predicates hosted by “internal objects”, the derivation proposed is as in (23 c):

(23)  
a. John ate the fish raw.  
b. The professor considers all the students intelligent.  
c. 

The conceptual basis behind this implementation is as follows; starting from the overt marking seen with secondary predicates cross-linguistically, it can be safely postulated that depictive, as well as resultative (together with other types of secondary predicate) morphology corresponds to dedicated functional projections. The specification of these projections is to combine or put together predicative categories, and at the same type to specify various types of relations holding between the eventualities expressed. The strongest claim is that such categories are necessary in order to integrate predicative categories which are, in a sense, defective. By defectiveness is meant here that they can’t establish a predication relation directly, but rather have to saturate their predicative status via another predicate (which must be complete or non-defective). Adjectives of the type seen in secondary predicates are not only defective, they are also featurally reduced – they lack a slot for person features, and further, can’t exhibit agreement in definiteness (among other properties distinguishing them from more featurally robust adjectives). The intuition is that because of this structural/compositional deficiency two consequences obtain: a) adjectival secondary predicates cannot establish a predication relation directly, as already said above (see also Rothstein 1983/1985, 2001, 2003, 2006, Kratzer 2005); b) similarly, they cannot merge with main predicates directly. Instead, a functional projection mediates (hence, its label mediator) the relation between the main and the embedded secondary predicate, specifying the ways in which this relation holds (as an overlap, one eventuality is the result of the other, etc.). The mediator at its turn requires delimitation. This is based on the observation that cross-
linguistically depictives, resultatives, as well as other types of secondary predicates are not possible with predicates which are aspectually non-durative (pure statives, or semelfactives, among other classes; see Smith 1991, Richardson 2007, etc.):

(24) **PURE STATIVES WITH DEPICTIVE**

*The man owned a house young.*

**READING DISPREFFERED/IMPOSSIBLE:**

The eventualities of owning a house and being young overlap

**POSSIBLE READING:**

The man started to own a house when he was young.

Sentence becomes acceptable if the pure stative is coerced to an inchoative reading

In order to formalize the restriction in (24), which will be discussed in more detail in chapter 4, the assumption is that the mediator requires binding by a head specified with introducing the situational bounded/delimited context over which multiple predication relations hold.

The remaining piece of the puzzle is the presence of the higher v, labelled \( v_{\text{RESTRUCT}} \) in the diagram in (23). In order to understand its function, let’s recapitulate what was established in the previous paragraph: i) a mediator is necessary in order to combine a defective secondary predicate with a matrix predicate; ii) the mediator needs to be bound by a delimiter, labelled here \( \text{Sit} \).

These two assumptions do not explain how the predicational nature of the embedded elements is saturated. The proposal is that secondary predicate-main predicate combinations constitute ways of constructing complex events at the verb level (similarly to what was proposed by Bresnan 1982, and Simpson 2005). The mediator allows the secondary predicate to combine/merge with the main predicator, but cannot saturate its features. Something else is necessary, therefore. In a nutshell, the proposal entertained in this thesis is that Universal Grammar makes available a functional projection whose nature is to saturate the relevant features of more than one predicate simultaneously. This is the root and source of restructuring. More formally said, \( v_{\text{RESTRUCT}} \) is specified with (a set of) v-complex features. That will allow it to check the predicative features of (or saturate) more than one predicate. Crucially, in order for those features to become active, \( v_{\text{RESTRUCT}} \) has to establish a relation with an argument (DP). As the reader can guess by now, the fundamental predication relation is rather equated here with \( \phi \)-feature checking (and not necessarily with theta-relations). The (defective) adjective contains uninterpretable \( \phi \)-feature features (either in itself, or as a result of merging with the mediator). Similarly, the fully specified main predicate needs at least one argument (if it’s intransitive) in order to be saturated. What \( v_{\text{RESTRUCT}} \) does is identify the argument that is/can be shared by more than one predicate, activate its com-
plex-predicate feature by entering a Match relation with it, and then checking the (phi-) features of more than one predicate simultaneously. Intuitively, \( v_{\text{RESTRUCT}} \) can saturate more than one predicate, but it needs to know what the argumental features are. The complex predicate formation is the result of the Multiple Agree process. In many languages, the consequence of this process is spelled out by overt morphological agreement. Secondary predicates, therefore, resemble participials in the mechanics of the agreement process (see Chomsky 2001). The detailed discussion of the agreement process is presented in Chapter 3 of the thesis.

Another important minimalist concept touched on in the thesis is the notion of phase. According to Chomsky (2000, 2001, 2004, 2005, 2007), phases are self contained sections of the derivation, placed in active memory. Their motivation is the facilitation of processing in terms of computational load. In minimalism they represent a new formalization of the intuition that some points in the syntactic derivation are in a sense defining domains of operation (cycles, barriers, bounding nodes). Phases manifest “easily detectable” (Gallego 2010) phonetic and semantic characteristics. The result is that they are taken to be independent, in some clear sense:

\[
\text{(25) } \quad \text{[P]hases should have a natural characterization in terms of IC: they should be semantically and phonologically coherent and independent. At SEM, } v[^*]P \text{ and CP (but not TP) are propositional constructions: } v[^*]P \text{ has a full argument structure and CP is the minimal construction that includes tense and event structure and (at the matrix, at least) force. At PHON, these categories are relatively isolable (in clefts, VP-movement, etc.).}
\]

[Chomsky 2004: 124]

This assumption makes some strong claims about the role of agreement in defining phasal domains. Chomsky’s most recent work (Chomsky 2004; 2005; 2007; 2008) shows that the most important criterion in defining phases is not necessarily their interface properties, but the Case/Agreement systems. The deletion of uninterpretable features forces the emergence of phase boundaries.

\[
\text{(26) } \quad \text{Phase Condition (Gallego 2010)}
\]

\[\text{Uninterpretable features signal phase boundaries}\]

An investigation of complex predicates from a cross-linguistic perspective inevitably leads to refinements of the notion of phase. If (26) is correct, it results that restructuring heads should define a phasal domain. This in turn implies that the secondary predicate head cannot constitute a phase in itself. Evidence that this is so is provided throughout the thesis.
1.3 Outline of the dissertation

This dissertation contains a comprehensive examination of the syntax of adjectival secondary predicates. It encompasses three important thematic chapters. Chapter 2 addresses the problem of anti-reconstruction patterns with secondary predicates; the predictions of both the small-clause and the complex predication account are carefully scrutinized against the assumptions made by the various approaches to reconstruction available in the literature. It is shown that a small-clause configuration cannot explain why the shared arguments of secondary predicates do not reconstruct; the analysis which gives the correct result is one in which the shared argument is introduced above the main predicate. The anti-reconstruction patterns are connected to another interpretive characteristic of shared arguments with secondary predicates, namely the observation that they might give rise to evidentiality effects. As noticed by Matushansky (2002), contexts like (26) below are infelicitous if uttered in a situation in which the squire is absent, i.e not subject to direct evidence:

(26) **PUZZLE OF THE ABSENT SQUIRE** [Matushansky (2002)]

\[ I \text{ walked into the squire’s room when he wasn’t there. I saw medicine bottles, Kleenexes, and smelled a foul, sickly stench.} \]
a. The squire seemed to be sick.
b. # The squire seemed sick.

An examination of various other contexts of use with secondary predicates indicate that the evidence does not necessarily have to be direct; what is required instead is that the shared argument, as well as the two predicates be bound to a specific situation, defined as a spatio-temporal context strictly identified. The further proposal is that the shared argument is introduced by a Situation functional projection which restricts the span over which the two predicates hold, as well as the evidential component, as already mentioned. This specification of the situation is hypothesized to be necessary in order to allow crucial relations involved in secondary predication (for example, the overlap relation) to hold. In the case of a shared argument which is internal, the structure is as follows:
Chapter 3 addresses problems related to $\phi$-feature and Case agreement; based on data from Russian, as well as other languages, it is shown that uninterpretable Case is valued separately from substantive $\phi$-features. The case on secondary predicates is checked under a head-complement relation by the functional projection introducing the secondary predicate, in tandem with the Situation argument. More specifically the Situation head has to bind the depictive/resultative head in order to specify the strict context under which the secondary predication relation holds. Uninterpretable $\phi$-features on the other hand, are checked via a simultaneous Multiple Agree process initiated by the $v_{\text{CMPLX}}$ head. Empirical evidence is provided through a detailed analysis of Long-Distance-Agreement processes in Hindi, illustrating that both the matrix and the secondary predicate exhibit overt agreement with the shared argument. This provides further support to the Multiple Agree analysis as implemented in this thesis.

Lastly, Chapter 4 further discusses problems related to depictive realization, as well as cross-linguistic variation in the realization of depictives. It is shown that depictives are subject to the licensing conditions in (28):

(28) **Licensing Condition for Dep**

A depictive secondary predicate is licensed only if (i) and (ii) are met:

i. the Rule of Subject-Predicate-Linking  
   ii. the Rule of Predicate-Predicate-Linking  

**Rule of Subject-Predicate-Linking**  
Every depictive secondary predicate must be linked to an argument at LF; linking must be identified at PF

**Rule of Predicate-Predicate-Linking**  
i. Only predicates of the same type can be linked.  
   ii. Linking occurs between the event/aspect/sortal roles of the primary and the secondary predicate under a Parallel Merge condition
Unspecified event/aspect roles of the main predicate have to be bound/set either internally to the complex predicate, or at the sentential level.

Complexes containing depictives are not licensed if there are unspecified event/aspect roles.

The second part of Chapter 4 examines a construction with resultative semantics in Romanian, a language which blocks resultatives of the type in (2). This construction is called the bare noun pseudo-result, because it can only make use of bare nouns as secondary predicates. It is shown that the absence of the canonical resultative in Romanian is due to a selection issue: Romanian selects a functional category specified with the semantics of “TURN INTO”, instead of the canonical BECOME found in Germanic resultatives.
2 Scope Matters

One important characteristic of secondary predicates is that, as opposed to other embedded domains, their shared DP is restricted with respect to its interpretation. This observation is originally due to Williams (1983), who examined sentences like (1) contrasting a secondary predicate (1a), and an infinitival (1b):

(1)  a. A student seems sick. (Williams 1983, 293, ex.40a)
    b. A student seems to be sick.

In order to make the distinction more transparent, assume a context like the following for the two sentences above:

(2) I walk into the classroom and I see some pill cases on one of the desks.

Only sentence (1b) is possible as a continuation to this small fragment; it reports that the evidence indicates that a student is sick, but not necessarily a particular one. This is the non-specific indefinite reading, as the indefinite DP can refer to a non-specific entity. Sentence (1a) on the other hand would be infelicitous for describing the context in (2), as the shared DP with a secondary predicate does not permit the non-specific indefinite reading. In order for (1a) to be acceptable it must be the case that there is a specific, previously introduced, discourse or contextually salient student who is sick.

The canonical generative grammar approach to interpretative contrasts along the ‘specificity’ line follows the pioneering analysis of scopal relations formulated in May (1977, 1985), who scrutinized sentences like (3):

(3) Some politician is likely to address John’s constituency.

May’s (1977) crucial observation is that the sentence above is ambiguous. Its two readings can be further paraphrased as follows:

(4) [3] may be taken as asserting either that (i) there is a politician, e.g. Rockefeller, who is likely to address John’s constituency, or (ii) that it is likely that there is some politician (or other) who will address John’s constituency.

Crucially, May (1977) further connected the two readings to structural differences. The interpretation in (i), which introduces a specific referent, was assumed to correspond to a structure in which the DP is (interpreted) above the matrix predicate (is) likely, as shown simplistically in (5b). Specificity is thus associated with the wide scope of the shared DP. The non-specific read-
ing, May (1977) argued, must be read off a configuration in which the DP is below the predicate *(is)* likely, most probably inside the infinitival clause, as in (5a). A process of covert quantifier lowering inside/adjoined to the non-finite clause allowed the reconstruction of the (existential) quantifier in the embedded domain.

(5 a) \[\ldots\]

\[\text{is likely} \quad \text{IP}^\text{INFINITIVAL}\]

\[\quad \text{a politician} \quad \text{to address...}\]

\text{narrow scope reading}

A politician is likely to address.....

[Some politician or other is likely to address...]

is likely >> a politician

(5 b) \[\ldots\]

\[\quad \text{a politician} \quad \text{is likely}\]

\[\quad \text{to address...}\]

\text{wide scope reading}

A politician is likely to address.....

[A (specific) politician is likely to address...]

a politician >> is likely

(6 a) \[\ldots\]

\[\text{seem} \quad \text{IP}^\text{INFINITIVAL}\]

\[\quad \text{a student} \quad \text{to be sick}\]

\text{narrow scope reading}

A student seems to be sick.

[Some student or other seems to be sick]

Seems >> a student

(6 b) \[\ldots\]

\[\quad \text{a student} \quad \text{seem} \quad \text{sick}\]

\text{wide scope reading}

A student seems sick.

[A (specific) student seems sick]

a student >> seems

Following May’s (1977) line of argumentation, Williams (1983) took the impossibility of the narrow scope reading with secondary predicates to indicate that the existential quantifier in not found in the embedded subject position at any stage in the derivation. If the subject were indeed base-generated lower than the matrix predicate (as the subject of a small clause à la Stowell 1981, or Chomsky 1981) then the possibility of the existential (narrow scope) interpretation would be expected to arise (by quantifier lowering), on a par with the wide scope one (obtained after the subject has raised). Simplifying the structure of small clauses, the configuration in (7) would be expected if the quantifier were allowed to lower inside secondary predicate domains.
The question is what the absence of narrow scope readings tells us about the structure of secondary predicates. A radical conclusion, argued for by Williams (1983), regarding the absence of configurations like (7) is that since the small clause subject position is not available for reconstruction, it is probably not present in the syntax. More straightforwardly, it must be the case small clauses don’t exist, Williams further argued, and therefore the grammar should not contain a specific theory-internal subcomponent dedicated to them. More importantly, by eliminating small clauses, the conceptual force of the theory is not in any way weakened; there are other ways in which the puzzle of secondary predicates can be adequately explained.

Williams’ (1983) account is not the only possible answer to the interpretational puzzle of shared arguments with secondary predicates. Other researchers, among which Lasnik (1999), Chomsky (1993, 1995), Sportiche (2005), Matushansky (2002), and Basilico (2003), argue in favour of a small clause account for secondary predicates, attributing the lack of narrow scope readings to other, independent reasons (among which the impossibility of A-movement to feed reconstruction).

It is the purpose of this chapter to disambiguates between the two lines of argumentation. In order to evaluate the merits of each, two conclusions have to be clearly established. First of all, one has to make sure that the restricted readings do indeed hold across the domain of secondary predicates, and are not a simple quirk of some indefinites, or some variants of the verb seem. Secondly, as the status of reconstruction and its interaction with A-movement is subject to high debate, it is crucial to clarify some theory internal notions, and their relevance to the structure of secondary predicates. This chapter contains, therefore, three major parts. Section 2.1 comprises a detailed examination of the specificity readings of shared DPs with secondary predi-
cates; it is shown that Williams’ (1983) original observations extend to the entire domain, but there are also some exceptions in which narrow (also called existential in some treatments) readings obtain. Section 2.2 to 2.5, the second major part, evaluates structural accounts that could potentially derive the specificity interpretations. It is shown that the only configuration which accounts for all the interpretative facts is a complex predicate structure, in which the shared argument is not generated below the main predicate, as the subject of a small clause. And the last section provides further details about the nature of the shared argument, which is taken to be introduced by the functional projection with situation specification. The function of this head is to specify the concrete/specific/particular situation in which two (or more) secondary predicates hold. Sections 2.6 and 2.7 evaluate other accounts of reconstruction, as well as tests canonically assumed to support a small clause analysis. It is shown that they are problematic in various respects; hence the small clause configuration is rejected. Finally, section 2.8 presents the complex predicate structure in more detail.

2.1 One has to be specific with secondary predicates

Before attempting any structural conclusion about secondary predicates, one has to make sure that Williams’ (1983) interpretational effects systematically hold across the entire class. Also, one has to make sure that the specific scopal readings are not due to some inherent characteristic of indefinites, or to some properties of the verb seem, or to some interpretive quirks adjectival secondary predicates impose. That the restriction cannot simply be attributed to the indefinite determiner per se can be easily shown by plugging in various types of quantifiers. The absence of the low quantificational readings (named in the paper anti-reconstruction) is further confirmed by various other examples provided by Heycock (1995). This time the quantifier several is illustrated.

(8)  a. Several new books seem available.
    several >> seem
    b. Several new books seem to be available.  (Heycock 1994, 223, ex. 36a, b)
    several >> seem
    seem >> several

As expected under an anti-reconstruction (taken here to encompass quantifier lowering) account, a narrow scope reading in which the quantifier several new books is interpreted existentially is impossible in the case of the secondary predicate in (8 a). Moreover, the same state of affairs appears to hold with the arguments of the ECM-type secondary predicates as further discussed in
Heycock (1995) and Stowell (1991). These contexts demonstrate, therefore, that anti-reconstruction is not only triggered by the predicate-embedding *seem*. As expected under *anti-reconstruction*, the ECM-ed internal argument in (9) can carry only an interpretation under which *many drugs* refers to a specific, particular quantity of drugs (9 a). On the contrary the structure with the infinitive in (9 b) conveys that the number of drugs was considered to be large, without even committing to the existence of drugs:

(9) ECM CONTEXTS AND ANTI-RECONSTRUCTION

a. She considered many drugs available. (Heycock 1994, 233: 234, ex. 40b)
b. She considered many drugs to be available.

The anti-reconstruction facts imply that the traditionally called “ECM” secondary predicates might not have a low base generated subject either; therefore a structure like in (10a) might turn out to be incorrect, if the restriction cannot be satisfactorily explained in other ways. The wide scope reading on the shared argument can be obtained only if the DP asymmetrically c-commands the main predicate (and the embedded secondary predicate), as in (10b):

(10) (a) narrow scope reading  
    \[\text{consider} \quad \text{Sc} \quad \text{many drugs available}\]

(10) (b) wide scope reading  
    \[\text{many drugs} \quad \text{V} \quad \text{consider available}\]

As already shown, raising and ECM types are not the only categories in the taxonomy attributed to secondary predicates. The adjunct types are yet the other subclass; these are called *adjunct* because of their non-obligatory character, and because of not being c/s-selected by the main predicate. Structurally, in traditional G(overnment) and B(inding) thinking, they were assumed to encompass an adjunct small clause with a subject position occupied by a PRO coindexed with an argument of the main verb (Chomsky 1981, Stowell 1981, Cardinaletti and Guasti 1995, etc.). The canonical simplified representation for an adjunct secondary predicate (Chomsky 1981, etc.) is along the lines of (12). Note than any \(v\) projections and other details irrelevant to the discussion are omitted, as well as reference to intermediate bar projections:
A man wrote a letter tired.

The configuration in (12) does not necessarily predict that the subject should obtain only a wide scope reading. Nevertheless, this is indeed the only possibility allowed for subject oriented secondary predicates.

The situation is even more straightforward for adjunct secondary predicates modifying internal arguments. Examine the examples in (13) below, in which the reading obtained by the shared objects (italicized) is only a wide-scope (strong indefinite) one. Under the relevant interpretation in which raw is a secondary predicate (and not part of a reduced relative), the only interpretations native speakers accept for these examples are either generic or presuppositional (strong). In fact, as shown throughout this chapter, it appears to be a fact that cross-linguistically internal objects in secondary predicate constructions can normally obtain only a strong (presuppositional) reading, no matter whether those secondary predicates are traditionally classified as adjuncts, or complements to raising/ECM predicates. Assuming an account along May’s (1977) lines, the schema in (14) therefore predicts that interpreting the internal argument lower than the verb (as in 15) does not output the right semantics.

(13) **Shared arguments in adjunct secondary predicates - Wide scope only**

a. The man ate shrimps raw.
b. My friend ate a potato raw.
c. The man saw a woman naked on the beach.
d. The student returned VCRs broken.

(14) *Quantificational schema for internal arguments (IA) in adjunct secondary predicates:*

IA >> V (V SP)
Note that the wide scope reading cannot be due to the inherent nature of the internal argument. If not found in a secondary predicate configuration, the so-called internal argument can be interpreted non-specifically. In sentences in (16) a reading reporting about non-specific argument undergoing the corresponding event is perfectly fine:

(16)  **INTERNAL ARGUMENTS INTERPRETED EXISTENTIALLY**
   a. The man ate shrimps.  [The man ate some shrimps or other]
   b. The man ate a potato.  [The man ate a potato or other]
   c. The man saw a woman. [The man saw a woman or other]
   d. The student returned VCRs. [The students returned some VCRs or other]

So, it appears that when a secondary predicate is added, the shared arguments prefer/have to switch to a wide scope/specific interpretation. This also holds with arguments in resultative secondary predicate constructions. The contribution of the resultatives is fundamental to the discussion at this point, because the general tendency is to consider that they merge with the main verb at a position lower than the depictives (the general divide *resultative complements – depictive adjuncts*). Among the various types of resultatives, the ones requiring (semantically) unselected internal arguments are the most interesting. Consider examples like the ones in 17 (a) and (b):

(17)  **RESULTATIVE SECONDARY PREDICATES AND**
   a. The athlete ran many shoes threadbare.
      many shoes >> ran threadbare
   b. Strawberry the cat ate a small plate of Fancy Feast empty.
      a plate of Fancy Feast >> eat empty

Assuming a binary branching structure, the most common (simplified) syntactic representation will be like in (18), predicting an apparent impossibility of the wide scope reading, which is the opposite of what the semantics of the examples show:
As the various examples presented above show, Williams’ (1983) observation that secondary predicates require a *specificity* reading of their shared DPs holds. What is very puzzling, in a sense, is that this constraint applies to indefinites, too. The latter can only obtain a reading that is more similar to definites, the so-called *specific/strong indefinite* interpretation, when used with secondary predicates. May (1977) connects the specific reading with a certain structural position – namely above the main predicate. Interestingly, the same conclusion is supported by empirical facts cross-linguistically, as well as from other works concerned with the structure and interpretation of DPs. This is shown below.

2.1.1 Must be strong

It appears to be an undisputable generalization that specificity readings are wide scope readings, and moreover obtain in a configuration in which they have to occur higher than the verbal head (Diesing 1992, De Houp 1996, the papers in Reuland and ter Meulen 1987, Torrego 2004, etc.). Hence, in order for the nouns to obtain readings associated with specificity, definiteness, and strength, they need to raise/be merged in a position higher than the verb. Moreover, there appears to be empirical evidence motivating this particular configuration. In many languages, definites occupy a preverbal position, as opposed to indefinites which can be found in a post verbal site. Turkish is just one of the many illustrative examples, as discussed by Enç (1991). In Turkish, internal objects can be marked with the so-called *accusative Case*, or can appear bare. If they are marked accusative, then only a specific reading is possible. Unambiguously strong determiners/quantifiers can accompany only an accusative marked argument (19 c). In Turkish the pos-
verbal position is reserved to indefinite internal arguments in a post-verbal position (19 e). Such a placement is inaccessible to a definite DP (19 f)\(^1\).

(19) TURKISH INTERNAL ARGUMENTS (Diesing 1992, p.85, ex. 47a)
   a. Ali bir kitab-i aldi
      Ali one book-ACC bought.
      ‘A book is such that Ali bought.’
   b. Ali bir kitap aldi. (Diesing 1992, p.85, ex. 47b)
      Ali one book bought.
      ‘Ali bought some book or other.’
   c. Ali her kitab-i okudu. (Diesing 1992, p.87, ex. 49a)
      Ali every nook-ACC read.
      ‘Ali read every book.’
   d. *Ali her kitap okudu (Diesing 1992, p.87, ex. 49b)
   e. Ali okudu kitap.

In order to make sure that the DPs under discussion indeed illustrate wide-scope readings, it is necessary to examine the possible interpretations of the shared arguments, especially when they are morphologically marked as indefinites (which normally take narrow-scope interpretations). Limiting the discussion now to internal objects (as with external objects wide-scope readings might be required for irrelevant, independent reasons), one finds the picture presented in the next section.

2.1.2 Strong readings of morphologically indefinite shared arguments

Traditionally considered the field of logicians and philosophers of language, the various readings nominal phrases can obtain in human language have also been an intense topic of research since the early days of generative grammar. The interest is derived from the robust empirical data demonstrating that in human language noun phrase semantics is constrained in specific interactive ways. In a classic work on the topic, Milsark (1974) addresses the problem of existential sentences in English, which in unmarked conditions exhibit certain restrictions on the type of DP permitted:

(20) ENGLISH EXISTENTIAL SENTENCES
   a. There is a unicorn in the garden.
   b. There are some/three/no unicorns in the garden.

---

\(^1\) For more discussion about possible interpretations of Turkish DPs, as well as the contrast specific/non-specific, see also Kornfilt (1997), (1984), Taylan (ed., 2001), etc.
c. *There is the unicorn in the garden.
d. *There are all/most/both in the garden.

As can be seen in (20 a) versus (20 c), an indefinite determiner is allowed, while the definite one is blocked in a *there*-existential clause. Universal, as well as proportional quantifiers are also rejected. Milsark (1974) called those determiners that are allowed in existential sentences weak; determiners which cannot be found in the existential context are strong. Therefore, *a, some, three, no* are weak determiners, while *the, all, most, both* qualify as strong. Although the intuitive *strong/weak* distinction proves hard to formalize (see the discussion in Barwise and Cooper 1981, as well as Keenan 1987), it is assumed that that the existential reading is obtained when the variable of the NP is bound by an existential operator. This operation can be done covertly, via the process dubbed by Heim (1982) existential closure. The sentences in (21) contain examples of noun phrase interpreted existentially, although no overt existential marker is present (see also Carlson 1977, de Hoop 1996, Diesing 1992):

(21) **ENGLISH DPs WITH EXISTENTIAL INTERPRETATION**
   a. Unicorns were eating grass. (de Hoop 1995, ex. 131-132, p.49)
   b. A unicorn was eating grass.

But the existential binding is surprisingly not the only structural possibility in the two examples above. The two DPs in this context are not restricted to an existential interpretation only, which merely asserts that the set of grass eating entities is not empty. The two sentences in (21) can also make *generic* claims about the *class* of unicorn – unicorns were such that in general they were eating grass. Also, as it can be seen in (21 b), an indefinite can also make reference to a *specific* member of the class of unicorns; that is, in one reading, the sentence (21 b) conveys the meaning that one particular, clearly identified member of the class of unicorns was eating grass. This latter interpretation is rather similar to the reading conveyed by a definite noun phrase, which are traditionally considered to be semantically (and structurally) distinct from indefinites. A generalized existential binding analysis to examples like the ones in (21) is therefore, untenable in order to account for *all* readings they can accept.

Developing a specific structure for quantified phrases, Heim (1982) assumes that the distinction between *generics* and *existentials* can be captured by proposing distinct structural (logical) representations for quantified structures. The two important concepts she uses are *nuclear*
**scope** and **restrictive clause.** To see what these two notions refer to, examine the two examples in (22) borrowed from Carlson (1977) and Diesing (1992):

(22)  INDEFINITES IN ENGLISH

a. Brussels sprouts are unsuitable for eating.

b. Carpenter ants destroyed my viola da gamba.

Sentence (22 a) not only makes a **generic claim** about Brussels sprouts. It also conveys that those things which are Brussels sprouts are unsuitable for eating. Sentence (22 b) says that there exist some carpenter ants that destroyed my viola da gamba. The existential reading is obtained by existential closure of the NP *carpenter ants* which appears in the nuclear scope (23):

(23)  $\exists x [x \text{ is a carpenter ant} \land x \text{ destroyed my viola da gamba}]

Assuming that the generic reading is obtained by variable binding by a generic operator (Gen), sentence (22 a) has to have a different structure than (22 b); as said above, the generic operator quantifies only over those things which are Brussels sprouts. This is obtained by postulating that the NP is generated in the **restrictive clause**:

(24)  Gen$_x [[x \text{ is a Brussels sprout}] [x \text{ is unsuitable for eating}]$]

To better see the distinction between existentials and other readings, examine also an example with a quantifier like *every*, normally not allowed in existential sentences:

(25)  Every llama ate a banana.  
(Diesing 1992, ex. 10, p. 7)

In order to obtain the right interpretation, it must be the case that *every* quantifies over a restricted set. The sentence in (25) does not refer to every *thing*, but to everything which is a llama. This is obtained by assuming that *llama* is part of the restrictive clause, which specifies the things quantified over by the quantifier. The structure obtained is as in (26):

(26)  $\text{Every}_x [x \text{ is a llama}]$ \quad (\exists y) $y \text{ is a banana} \land x \text{ ate y}$

Quantifier \quad \text{restrictive clause} \quad \text{nuclear scope}

What the examples above show is that (bare) indefinites can obtain a variety of readings; and what is relevant to the current discussion is that these readings can be both **strong** and **weak**. Or, to put this more straightforwardly, there are contexts in which canonically **weak** noun phrases
accept *strong* interpretations/uses. Another typical example of this alternation is the sentence in (27), originally provided by Fodor and Sag (1982):

(27) A cousin of mine is pregnant.

As the two authors notice, the indefinite *a cousin* of mine can obtain two readings. One of them is a referential reading which points to a specific member of the class of my cousins (Helen, or Mary). In this case the sentence says that a *specific cousin of mine* is pregnant. The label referential is used in this context, because the noun phrase behaves semantically like a demonstrative, or a proper name (according to Fodor and Sag 1982). The referential reading is a type of *strong* interpretation (proper names are by definition strong, if not the strongest among all possible DPs). The other reading is the existential (or quantificational, in Fodor and Sag’s terms). The existential reading simple states that there is a cousin of mine who is pregnant, that is, the set of pregnant cousins of mine is not empty. The existential reading is the *weak* reading.

The presence/absence in sentences with overt existential markers, as well as the behaviour with respect to other tests, establish a clear distinction between readings which are classified as *weak* as opposed to readings which are *strong*. Table 1 below provides a systematic dichotomist list containing an exemplification of each subtype of reading. The square brackets contain the interpretation intended:
**Weak readings** | **Strong readings**
---|---
- **Existential**:  
  (a) Unicorns were eating grass  
  [There were unicorns eating grass]
  
  **Existential** readings of quantifiers like **Many, Few, Some**  
  (a) There were many people in the room.  
  (b) There were few people writing poems.  
  (c) Some people drink a lot.  
  [There are people who drink a lot]
  
- **Cardinal** readings (of numerals)  
  (a) There were three kids in the lounge.
  
- **Mass** nouns  
  (a) There was sugar all over the counter.
  
- **Specific/referential**  
  (a) The unicorns were eating grass.  
  (b) Those unicorns were eating grass.  
  (c) A friend of mine is a biologist.
  
- **Partitive**  
  (a) Many students enjoy linguistics.  
  [Many of the students…]  
  (b) Few students like snakes.  
  [Few of the students]  
  (c) Three kids liked snakes  
  [Three of the kids…]
  
- **Generic**  
  (a) Unicorns eat grass.  
  (b) A unicorn is a mammal.
  
- **Generic collective**  
  (a) Five books are always better than two.

**Table 1: Strong vs. Weak readings of DPs**

As the examination of the typology in Table 1 shows, indefinites, whose basic interpretations are traditionally classified as weak, can obtain strong readings. Following Milsark (1974, 1977), and Hoop (1995) in this thesis strong readings are taken to include (at least) the referential, partitive, generic, and generic collective subclasses. The immense literature on the topic underlines the challenges a theory which purports to explain these alternations faces.

Going back to secondary predicates, one notices that the issue is even more complex. As said in the introductory section, indefinites (if allowed at all) in these types of constructs can accept strong readings only. Their more characteristic, weak readings are generally absent. The English examples in (28) are illustrative:
ENGLISH INDEFINITES WITH SECONDARY PREDICATES – STRONG

a) I consider students intelligent.

Generic reading: (I consider intelligent the class of students in a general manner).

Referential/specific reading: (Speaker has in mind specific individuals from the class of students)

Generic collective reading (OK for some speakers)

(The collective class of students is such that it is considered intelligent by me)

a’) *I consider students intelligent.

Existential reading: There are students such that I consider them intelligent. *Weak

b) John eats fish raw.

Generic dispositional reading (It is a dispositional property of John that he eats raw the generic class of fish)

Referential/specific reading (Speaker has in mind specific members of the class of fish)

b’) *John eats fish raw.

Existential reading: There is fish such that John eats it raw. *Weak

If May (1977) is correct, the alternation weak/strong in embedded non-finite contexts is accounted for in terms of structure. More specifically, the shared argument has (at least) two positions in the tree – the merge position (inside the non-finite clause, below the main predicate, assuming a small clause representation), and the move position (above the main predicate, for scope reasons). A process of quantifier lowering inside the embedded clause allows the activation of the merge position, with its corresponding lower scope reading at LF. In more minimalist terms, the process which accounts for the existence of low scope readings is reconstruction (which can be implemented in various ways, as shown in section 1.2). Recall that May (1977, 1985) attributes the interpretive distinction existential/specific to configurational settings. Existential readings are those readings which are obtained by reconstruction, while specificity semantics is read off a position above the main predicate. Indefinites which allow for total reconstruction are those which are permitted in existential environments. The various examples in (29) and (30) illustrate this:

(29)  a. There is someone from Canada waiting in front of the Embassy.
b. There are many people protesting against the new piece of legislation.
c. There are few students attending the semantics lectures.
d. There are some people outside.
e. There are three thieves being put to jail.
f. There is sugar all over the floor.
g. There are unicorns in Romania.
(30) a. *There are many (of the) students outside.
    b. *There are few (of the) robbers put in jail.
    c. *There are three (of the) presidents accused of felony.
    d. *There are unicorns in the garden. (generic reading)
    e. *There is every senator in the garden.
   f. *There is everybody in the garden.

Now the question is – what blocks reconstruction of shared arguments of secondary predicates? Why it is the case that those indefinites that are allowed in secondary predicates are not interpreted existentially (unless special conditions apply, as will be shown below)? In order to answer the question, one has to carefully examine: i) the nature of reconstruction processes, and their parametrization; ii) whether existential (low scope) readings are totally excluded or not; iii) whether independent properties of secondary predicates are such that they allow permit only specific readings. Section 2.1.3 below makes some remarks about the interaction between strong readings and individual level predicates, in order to eliminate a potential source of lack of existential interpretations.

2.1.3 Individual level predicates and argumental readings

Examples (28 a & b) are an indication of the fact that weak readings are not blocked because of the presence of individual level predicates\(^2\). It is known that individual level predicates trigger only strong readings on their subjects (Milsark 1977, Carlson 1977, Kratzer 1995, Diesing 1992), while stage level ones favour the weak reading, but can accept both. Consider the behaviour of the stage-level predicate available (31), as opposed to the individual-level predicate sneaky (32):

(31) STAGE LEVEL PREDICATES: WEAK AND STRONG READINGS
Firemen are available. (Diesing, 1992, ex.4, p. 17)
EXISTENTIAL READING - WEAK: There are firemen available at some point in time.
GENERIC READING - STRONG: Firemen are such that they are generally/dispositionally available. (one possible generic reading)

(32) INDIVIDUAL LEVEL PREDICATES: STRONG READINGS ONLY (Milsark, 1977)
Many unicorns are sneaky.
PARTITIVE READING – STRONG: Many of the unicorns are sneaky.
EXISTENTIAL (WEAK) READING – IMPOSSIBLE: *There are many unicorns sneaky.

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\(^2\) Individual-level predicates denote non-transitory properties (intelligent, tall, crazy, etc.). In Carlson’s (1977) terminology, they quantify over individuals. Transitory/temporary properties (drunk, raw, wet, etc.) are called stage-level predicates, as they are taken to quantify over spatiotemporal parts of individuals. See also Kratzer (1995), and Jaeger (2001) for more detailed discussion about this very important distinction.
Intelligent in (28 a) is an individual-level predicate; but raw (28 b) is not. Therefore, the source of the weak NP restriction must lie somewhere else. More so, as it turns out that all types of secondary predicates are subject to this constraint. And these facts hold cross-linguistically. So, if one follows May and Williams very strictly, the conclusion would be that shared arguments are always merged above the main predicate.

But the definiteness/specificity issue leads to at least two broad logical conclusions regarding the position of the internal arguments found in secondary predicate configurations: i) it could be the case that internal arguments are initially externally merged as a complement of the verb, and then they internally merge to an edge position of a functional projection above the verb; ii) or it could be the case that the internal arguments are externally merged to a position higher than the verb. In order to answer this question, one has to examine reconstruction patterns, as this process allows access to an interpretation of lower copies left by movement. Unfortunately, this attempt is complicated by various theory-internal factors, among which the observation that reconstruction is not a characteristic of A-movement. That is, copies left by the shared argument under A-movement cannot reconstruct, hence readings corresponding to positions in which the DP is above the main predicate should only be allowed. This in turn would imply that no ‘existential’ or ‘narrow scope’ interpretations should ever be found in this environment. Interestingly, the latter type of readings seem to be possible in restricted contexts. A comprehensive account should therefore address and predict these two apparently contradictory results.

Before introducing the relevant examples, let’s briefly introduce first the main points of the analysis to be developed here.

2.1.4 Internal arguments and narrow scope

One claim made in this dissertation is that secondary predicates externally merge with a primary predicator, forming a special type of complex predicate configuration, which has a special weak phasal status, triggered by the uninterpretable features of a functional complex verbalizer head. All arguments are externally merged above the complex predicate. In the case of internal arguments, the simplified complex predicate configuration is as in (33):
Regarding scopal interpretations, the representation in (33) makes the prediction that narrow scope readings of the internal (shared) argument are possible only if the secondary predicate (or the main predicate) can take scope above it, i.e. if the intrinsic lexical nature of the predicate is such that it requires taking the widest scope. Given a restructuring analysis, after the main predicate and the secondary predicate form a complex, they will raise to $v_{CMPLX}$. In this position the adjective will end up taking wide scope. Hence, the narrow scope reading on the noun will be in fact wide scope embedded under the wide(est) scope of the predicate. It is well known that adjectives can be domains of quantification; moreover, the information they provide is very useful at this point of this dissertation, because there are adjectives which are lexically specified to take the widest scope.

Moulton (2010) noticed, independently, that internal arguments in secondary predicates can take narrow scope. Section 2.1.4.1 examines the arguments presented in his paper; it is shown that, as Moulton himself noticed, they not only support the complex predicate analysis, but moreover demonstrate that a small clause account is hard to argue for.

2.1.4.1 Internal arguments and quantificational adjectives

Moulton (2010) is interested in examples like (34), an (35):

(34) She considers a new fridge unnecessary.

$Unnecessary >> a \ new \ fridge; \ a \ new \ fridge >> unnecessary$

(35) A stove seems to me much more necessary.

$Necessary >> a \ stove; \ a \ stove >> necessary$
What the two sentences above have in common is the possibility of the shared argument to be interpreted as taking low scope with respect to the adjective with a modal interpretation (necessary, unnecessary). In one reading, one interpretation is possible for sentence (34) according to which what is considered unnecessary is a fridge, but not a specific fridge, or not the same fridge across all times and possible worlds. Similarly, sentence (35) does not make a claim about a specific stove. The lack of presuppositional/strong weight is better illustrated in sentences of the type in (36), which as Moulton (2010) noticed, do not even trigger an existential commitment (there does not have to do a senator with the characteristics aforementioned):

(36) A Green Party senator seems necessary if we are ever to make progress on climate change. (Moulton 2010: ex.5)

What do these facts say about the actual position of the shared internal argument? Two possibilities have to be clarified, and one of them is crucial. If the adjective takes higher scope, does the verb also take high scope with respect to the argument, or is it the case that the argument takes scope with respect to the main predicate? That is, which of the possible scopally-sensitive structural configurations is the correct one?

(37) Secondary predicate
    Main predicate
        Shared argument

(38) Secondary predicate
    Main predicate
        Shared argument

(39) Main predicate
    Secondary predicate
        Shared argument

(40) Main predicate
    Shared argument
        Secondary predicate

(41) Shared argument
    Main predicate
        Secondary predicate

(37) and (38) would correspond to interpretive effects resulting from the secondary predicate taking scope over the main predicate. Nevertheless, the readings sentences like (34) can obtain preliminarily indicate that this is not the case; it rather seems that the secondary predicate is in the scope of the main predicate. In sentence (34) the necessity of a new fridge is contingent upon the opinions of the subject introduced in the main sentence (hence necessary is scopally-embedded
under *consider*). Another configuration which can be rejected is one like (39), which Kratzer (2006) proposes for resultatives (see 42, but also the discussion on Hindi in Chapter 3 which could indicate that in this language the shared arguments might be found in a lower position, as narrow scope readings are possible across-the-board); the embedded position of the shared argument won’t explain the wide scope argumental restrictions we started with (the shared argument has to overtly raise in order to have its case feature checked, assuming that the secondary predicate is a defective category). We’ll see shortly that there are problems with the strict assumption that A-movement does not reconstruct (by quantifier lowering).

(42)

\[ \text{Shared argument} \]
\[ \text{Main predicate} \]
\[ \text{Secondary predicate} \]
\[ <\text{Shared argument}> \]

*Narrow scope systematically predicted (by reconstruction), but absent*

The representation in (40) is not an option either, given the observation that specificity readings are only obtained when the DP is *structurally* higher than the (matrix) predicate. The configuration in (41) is the only possibility left. The observation that the low scope of the shared argument can be obtained only with specific types of secondary predicates – namely those that take wide scope themselves demonstrates again that structure (42) cannot be the right one. As Moulton notes, the generalization regarding the interpretation of the shared argument is that its low scope can only be obtained if the secondary predicate is itself a wide scope bearing element:

(43) *Small clause generalization*

A narrow scope interpretation for the internal shared argument (with respect to the embedding predicate) is available only if the embedded predicate is itself a wide scope bearing element. (see Moulton 2010: 6)

Therefore, if the secondary predicate takes wide scope, the shared argument will be interpreted as weak, because it will be scopally asymmetrically c-commanded by the secondary predicate. Interestingly, various languages provide evidence confirming this assumption. For example, in Romanian (as across the Romance domain) there is a definiteness restriction on the subjects/external arguments (see also Miyagawa 2010, Chierchia 1998), which cannot be bare:
In order for the subjects to be well-formed, the presence of a determiner is obligatory. Generally, with verbal predication, both definite and indefinite markings are acceptable. Subjects of sentences with adjectival (primary) predication, on the other hand, are even more restricted. The subject in such contexts normally has to be definite, or interpreted strong:

(45) **ROMANIAN – SUBJECTS AND ADJECTIVAL PRIMARY PREDICATION**

a. **BARE NOUNS - DISALLOWED**

* Cărți sunt frumoase.
  Book.PL.F. be.INDC.PRES.3.PL. beautiful.PL.F.
  ‘Books are beautiful.’

b. **INDEFINITE NOUNS - DISALLOWED**

* Niște cărți sunt frumoase.
  Some book.PL.F. be.INDC.PRES.3.PL. beautiful.PL.F.
  ‘Some (non-specific) books are beautiful.’

c. **NOUNS WITH SPECIFICITY MARKERS – ALLOWED**

Unele cărți sunt frumoase.
One.PL.F.- the. PL.F. book.PL.F. be.INDC.PRES.3.PL. beautiful.PL.F.
‘Some (specific) books are beautiful.’

d. **DEFINITE NOUNS – ALLOWED**

Cărțile sunt frumoase.
Book.PL.F.- the. PL.F. be.INDC.PRES.3.PL. beautiful.PL.F.
‘The books are beautiful.’

Both the argument bare noun form (in 45a), and the indefinite determiner when used with adjectives are ill-formed. Definite nouns (45 d) are accepted, as well as specific plurals morphologically obtained from the plural of *one* and the definite article. The only contexts in which indefinite (but not bare) nouns are well-formed are those in which the main adjectival predicate is a modal one:
(46) ROMANIAN – SUBJECTS AND MODAL ADJECTIVAL PRIMARY PREDICATION

a. **INDEFINITE NOUNS - ALLOWED**
Niște cărți sunt necesare.
Some book.PL.F. be.INDC.PRES.3.PL. necessary.PL.F.
‘Some (non-specific) books are necessary.’

b. **NOUNS WITH SPECIFICITY MARKERS – ALLOWED**
Unele cărți sunt necesare.
One.PL.F.- the. PL.F. book.PL.F. be.INDC.PRES.3.PL. necessary.PL.F.
‘Some (specific) books are necessary.’

c. **DEFINITE NOUNS – ALLOWED**
Cărțile sunt necesare.
Book.PL.F.- the. PL.F. be.INDC.PRES.3.PL. necessary.PL.F.
‘The books are necessary.’

The puzzling example is the one in (46a), where an indefinite subject is possible. Under a canonical account of subject positions in Romance, when they are overtly expressed (the alternative being pro-drop) their position is higher than the regular Spec, TP. They are assumed to carry some topicalization specification, indicating that they are somewhere in the CP domain, or higher than Spec, TP (see Miyagawa 2010 for recent discussion, Alexiadou and Anagnostopoulou 1998, Dobrovie-Sorin 1994, etc.). What example (46a) indicates is that, due to its inherent lexical modal nature, an adjective like necessary is able to take scope over the subject, which will have to be interpreted existentially. Therefore, the low readings with shared arguments of secondary predicates are obtained because the adjective is able to scope over the DP (in a parallel manner with primary predication). If secondary predicates are constructed as complex predicates, and the shared argument is externally merged to the complex, reconstruction patterns are predicted to be lacking when the adjective cannot take wide scope (because the argument is never merged as a subject of a “small clause”, that is lower than the main predicate).

Moreover, if the argument is never in a low position under the main predicate, one would also expect the lack of Condition C bleeding (see footnote 6 below for a definition of Condition C). The examples below also provided by Moulton (2010) indicate that this is indeed the correct assumption:

(47) **NO CONDITION C VIOLATION**

a. Another nude picture of the model,’s toes seemed to her, rather unnecessary.

b. This nude picture of the model,’s toes seemed to her, rather unnecessary.

The tests examined above unambiguously show that the shared argument is not found in the embedded subject position at any stage during the derivation. The scopal interactions also demonstrate that the initial merge position is not in between the secondary and the primary
predicate. Again, the configuration which predicts the facts examined above is the one in which the shared argument is introduced above the main and the secondary predicate:

(48)

Shared argument

Main predicate

Secondary predicate

The question is then: what is the specific position of the shared argument in the configuration? Also, what is its nature? And what precisely accounts for its shared character? But before addressing this crucial issue, it is also necessary to examine in more detail two possibilities which would predict that a wide scope reading is always obtained with shared arguments, although they are found in a position lower than the main predicate. One of the options would be to say that postverbal DPs take wide scope because their nature is such (stipulative as an account along these lines would be, given the weak-strong alternations discussed above). The other option would be to assume that anti-reconstruction is triggered because of the intricacies of the process of reconstruction itself. It is obvious that none of these possibilities can be adequately evaluated unless one provides clear assumptions about the nature of the process of reconstruction. The next big section of this chapter precisely addresses this point.

2.2 Reconstruction and its quirks

One of the major advances of GB and its further incarnations resides in providing valuable clues into the nature of displacement in human language. Related to this is also the crucial observation that moved elements can also be interpreted as if movement has not taken place. These are the so-called reconstruction effects. In a reassessment of a theory of grammar first introduced in 1955, Chomsky’s minimalist program (1993, 1995) is able to elegantly account for reconstruction in terms of the copy theory of movement. When a syntactic object moves it leaves behind a full copy encompassing its content (as opposed to the 1973 model, in which the movement operation introduces a new syntactic object called trace). This issue is tightly related to another

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3 This dissertation assumes that the copy theory of movement is correct; hence, actual copies will be explicitly encoded in the relevant aspects of the representation of sentences. The copies which are not interpreted are signaled by horizontal crossing.
conclusion reached in early minimalist studies, more specifically the claim that A-movement
does not give rise to reconstruction effects. As the shared arguments in secondary predicates are
canonically analyzed as involving A-movement (for Case reasons, at least), and they lack recon-
struction effects, it is crucial to understand the nature of this restriction and its structural implic-
tions.

2.2.1 A-movement and anti-reconstruction

Chomsky (1993, and 1995), as well as Lasnik (1999 a), have put forward a conclusion
according to which reconstruction is a diagnostic of A-bar movement only. Strictly speaking, A-
movement is argued to not support reconstruction. The data taken to justify this divide comes
primarily from interactions between universal quantifiers and negation, as well as from ECM
contexts and other argument raising environments. In Chomsky (1995), the example in (49)
which contains a universally quantified DP in a GB raising environment (hence A-movement)
only allows a reading in which the universal takes scope over the negation. Hence the sentence
can only be interpreted as conveying that it is the case that everyone appears to not be present
yet; one other possible reading, along the lines ‘not everyone seems to be there yet’, is systemat-
ically rejected:

(49) Everyone seems not to be there yet. (∀>>⌐; *⌐>>∀)

Such examples are clearly contrasting with A-bar environments, in which reconstruction is
clearly available. The example in (50) below illustrates a configuration in which the effects of
reconstruction can be tested with respect to binding relations. The fact that Mary and she cannot

[4] A pretheoretical divide is assumed here for this important distinction, thus avoiding the complexities and intricacies raised by an appropriate characterization. A-bar is taken roughly to exemplify contexts similar to w/h- movement. These are contrasted with typical A-movement (passive movement, raising, etc.) contexts.

[5] The output the distinction between A-bar movement and A-movement has in terms of reconstruction is expected under minimalism. A-bar movement creates an operator-variable relation, and hence two positions are needed for interpretation reasons. In the case of A-movement, there aren’t strictly speaking two interpretation roles; the copying operation is rather a vestige of the Projection Principle in GB, and does not follow from ‘virtual conceptual necessity’.

[6] Following Sportiche (2005), interpretive effects connected to Binding and Scope are defined here as follows:

a. Binding Principles
   Condition A: anaphors must have a local antecedent (i.e., a c-commanding antecedent in the same clause no further than the first c-commanding subject)
be correferential indicates that LF has access to a structure in which *which picture of Mary* is available for interpretation in its low, base-generated position. This possibility is facilitated by the process of reconstruction.

(50)  Which picture of Mary will she look at?
     a. Which picture of Mary is such that she will look at?
     b. She will look at a picture of Mary, which one?
(reconstruction in (b) would lead to a Condition C violation)

To further support the A/A-bar divide in terms of reconstruction effects, Lasnik (1995 a and b, and 1999) provides various A-movement sentences containing object raising under pseudo-gapping, as in (51) below, and examples of subject-to-object raising in ECM (as illustrated in 52). These appear to also show readings in which the universal unambiguously takes wider scope than the negation:

(51)  Mary proved every Mersenne number not to be prime, and John will every Fibonacci number not to be prime]. (∀ >> ¬; *¬ >> ∀)
(52)  John proved every defendant [ not to be guilty] during his trial. (∀ >> ¬; *¬ >> ∀)

Secondary predicates appear to be very useful tools for probing the limits and inherent nature of reconstruction processes. The contrast we started with in (1), and repeated here in (53), shows that the conclusion that A-movement does not give rise to reconstruction cannot be correct as is, without further specification. The sentence in (53 b) containing an infinitival does permit a distinction in meaning which appears to be related to different scopal settings. Note that sentence (53 b) illustrates A-movement. Moreover, such sentences also show that existentials, as well as universals, are involved in these interpretational processes. And a third conclusion is that scopal interactions are established not only with negation but also with the existential import of the main predicate.

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**Condition B:** pronouns cannot have a local antecedent (i.e., a c-commanding antecedent in the same clause)

**Condition C:** pronouns cannot corefer with non-pronouns they c-command

**b. Scope Principles**

Principles of Scope:

i. If X superficially c-commands Y, Y can be interpreted in the scope of Y

ii. X and Y can outscope each other only if X and Y are clause mates

**Principles of Pronominal Binding** – a Principle combining both Binding and scope

A pronoun can behave as a variable bound by X only if it can be interpreted in the scope of X.
a. A student seems sick.  
   (Williams 1983, 293, ex.40a)

b. A student seems to be sick.

That infinitivals can feed reconstruction in spite of A-movement is not unexpected, given May’s (1977, 1985) findings. As already said, the sentence in (54), repeated from (3), is a classic context in which both specificity and low-scope existential (reconstructed readings) are permitted. Again, repeating (4), the interpretational possibilities exhibited here are as stated in (55), in May’s terms:

(54) Some politician is likely to address John’s constituency.  
    (some >>likely; likely>>some)

(55) [54] may be taken as asserting either that (i) there is a politician, e.g. Rockefeller, who is likely to address John’s constituency, or (ii) that it is likely that there is some politician (or other) who will address John’s constituency.

Chomsky (1993), as well as other early minimalism theorizing, do not deny the existence of examples like (54). What they claim instead is that these sentences differ from canonical A-bar reconstruction patterns. Following May (1977), Chomsky (1993) argues that a process of lowering should be invoked in order to address cases of apparent reconstruction under A-movement. In other words, A-bar movement has access to copies, while A-movement resorts to quantifier lowering:

(56) [The low reading of the A-moved syntactic object] could result from adjunction of the matrix quantifier to the lower IP (c-commanding the trace of raising and yielding a well-formed structure if the trace of quantifier lowering is deleted, along the lines of May’s original proposal). But reconstruction in the A-chain does not take place, so it appears. (Chomsky 1993)

As the distinction specific vs. existential is at stake with secondary predicates vs. infinitivals, let’s further decompose the structures of the two contrasting sentences. In sentence (53 a) the only reading allowed is that a specific student (salient in the discourse by previous mention, possibly) seems sick. As said, this is the so-called strong/specific indefinite reading. The structure which is interpreted is the one in which a student takes scope over the existential entailment of the main predicate. A reading corresponding to a structure in which a student is merged below the main predicate is impossible (i.e., the sentence in 53 a cannot mean that some student or other appears to be sick). According to Chomsky (1993, 1995), an existential reading of the shared DP could only be obtained if the quantificational existential part of the DP could lower into a position below the main predicate (adjoining to a small clause-like structure). In normal condi-
tions this would require the NP part of the DP to be initially generated inside a small-clause like constituent below the main predicate:

(57) \[ \text{SHARED ARGUMENTS AND SECONDARY PREDICATES} \]

a. A student seems sick.

\[ \exists \text{ >> seems} \]

\[ \text{OK} \quad \text{`A specific student seems sick.'} \]

b. A student seems sick.

\[ \exists \text{ student seems } [ \text{<student>} ] [ \text{student sick}] \]

\[ ^* \quad \text{`Some student or other ....'} \]

Quantifier lowering

The fact that low scope readings are not obtained with secondary predicates would obviously support the conclusion reached in Chomsky (1993, 1995), namely that A-movement does not feed reconstruction. The problem would then be the infinitival contexts, in which reconstruction by quantifier lowering is allowed. How should quantifier lowering be conceived of as to give the right contrast?

Lasnik (1999) provides further examples in which A-movement appears to give rise to reconstruction:

(58) I believe everyone not to have arrived yet.

\( (\forall \text{ >> } \neg/\neg \text{ >> } \forall) \)

(59) John proved every Mersenne number not to be a prime.

\( (\forall \text{ >> } \neg/\neg \text{ >> } \forall) \)

Lasnik (1999) accounted for examples like (58) and (59) by assuming that raising is not obligatory in all ECM cases. Scope is unambiguous only in those contexts in which the surface word order leaves no doubt as to whether raising has taken place. Crucially for Lasnik (1999), ECM and other limited cases of raising (to object) should be the only environments in which reconstruction is optional. No other A-movement configurations should feed a process by which movement is in a sense undone. Hence, Lasnik (1999) appears to deny the existence of a process of quantifier lowering, and provides examples to further support his claim. In sentence (60), although the lowered reading is biased, it cannot be obtained. That is, (60) cannot be interpreted as in (61):

(60) Every coin is 3% likely to land heads.

\( (\forall \text{ >> } \text{likely}; ^* \text{likely >> } \forall) \)

(61) It is 3% likely that every coin will land heads.

Lasnik (1999) further claims that the narrow scope readings in some infinitival sentences are only apparent; the contrast is not one of scope, but is rather due to the vagueness of indefinites. More specifically, indefinites can be interpreted as specific or non-specific, and A-movement
never leaves a copy (conclusion also adopted by Epstein and Seely 1999), or does not feed reconstruction by quantifier adjunction.

For Lasnik (1999), hence, scopal interactions are unambiguous when the surface word order leaves no doubt as to whether raising has applied. This crucial observation is supported by an examination of contexts containing particles, analyzed following Johnson (1991) as occupying a fixed order. The raising verb make... out, as well as other verb particle constructions requires overt raising of the pronoun.

(62) VERB-PARTICLE CONSTRUCTIONS AND OVERT RAISING OF PRONOUNS
   a. Mary made him out [him to be a fool].
   b. *Mary made out [him to be a fool].
   c. Mary picked him up <him>.
   d. *Mary picked up him.

Transferring such examples to nominal DPs, the general idea is that if a DP appears to the right of the particle, one can conclude that it has not raised. When the DP is to the left of the particle, it means that it has undergone overt raising. In terms of scopal interactions, following Lasnik’s (1999) conclusions, one would expect the overtly raised (existentially/universally quantified) DPs to exhibit scopal non-ambiguity (that is to be interpreted as taking wide scope). This is indeed the case, as shown in the examples below. The sentence in (63) can only be interpreted with the universal taking scope over the negation in the infinitival.

(63) The mathematician made every even number out not to be the sum of two primes.
     \( (\forall >> \neg /\neg >> \forall) \)

If the argument is to the right of the particle, on the other hand, there is indication that no overt raising has taken place, and the low scope reading should be available. This is born out, as seen in (64), where the two readings are available:

(64) The mathematician made out every even number not to be a prime.
     \( (\forall >> \neg /\neg >> \forall) \)

This test is suggestive when secondary predicates are analyzed. Although there aren’t extensive possibilities of verb-particle-secondary predicate combinations, some can be seen with resultatives. See the contrast in (65), modeled after sentences of the type in (62) in den Dikken (1995):

(65) VERB-PARTICLE-SECONDARY PREDICATE CONSTRUCTIONS
   a. They painted a barn up red.
   b. */? They painted up a barn red.
As this sentence shows, the shared argument with secondary predicates must overtly raise. Therefore, the only reading obtained is the one corresponding to the wide scope. The question is why this must be the case. Prima facie, this can indicate a very strong conclusion – namely that the shared argument is never merged inside a small clause projected by the adjective, and secondary predicates are parts of syntactic complex predicates with non-clausal structure. The second option, of course, would be that there is a small clause constituent, but the shared argument must obligatorily raise overtly. The question in this case would be why overt raising is required with secondary predicates, as opposed to infinitives, or non-shared argumental DPs. Again, secondary predicates turn out to be special in that they require overt raising. Assuming that Chomsky (1993) and Lasnik (1999) are right, reconstruction is not possible here because A-movement does not create full copies which can be accessed at LF. Infinitivals are a separate phenomenon either because some process of quantifier lowering applies there (Chomsky 1993, 1995), or because the distinction specific/existential is not a matter of scopal relations calculated via reconstruction/quantifier lowering (Lasnik 1999). The subsection below shows that an analysis along Lasnik’s lines cannot be correct. It does not seem empirically adequate to assume that A-movement completely blocks reconstruction. Moreover, it is not plausible to assume that the distinction specific/existential is a result of vagueness of indefinites, as patterns of reconstruction/quantifier lowering (QL) can also be seen with definites, although not as frequently. All these facts are discussed in the next section.

2.2.2 A-movement does feed reconstruction

The discussion in Lasnik (1999) arrives at two crucial conclusions: i) there is no reconstruction under A-movement (supporting Chomsky 1993, 1995); ii) cases of apparent reconstruction with weak indefinites are in fact due to the vagueness of such elements, which can be interpreted either as specific or non-specific. This section demonstrates that this outcome cannot be correct; there appear to be numerous contexts in which reconstruction is allowed with A-movement, and in which the interpretive differences cannot be attributed to the distinction specific/non-specific. What such sentences illustrate is that the conditions under which reconstruction is possible are still to be understood (see also Boeckx 2001). The subsections below present five counter-examples to Lasnik’s (1999) original cases.
2.2.2.1 Complex NPs with *no*

One of the main observations made in Lasnik (1999) is that the paraphrasability tests introduced in May (1977) in order to tell the wide/low scope readings apart do not apply to all contexts that contain indefinites. For example, the sentences in (66a) and (66b) cannot be paraphrased as (67a) and (67b). Recall that the paraphrases in (b) would correspond to structures in which the DP is interpreted *lower* (by reconstruction) than the main predicate.

(66) a. No large Mersenne number was proven to be prime.
    b. ≠ It was proven that no large Mersenne number is prime.

(67) a. No one is certain to solve the problem\(^7\).
    b. ≠ It is certain that no one will solve the problem.

Lasnik (1999) attributed the absence of lowered readings in the sentences above to the fact that A-movement does not feed reconstruction, in general. However, when examined in more detail these sentences do not provide as clear-cut evidence as initially assumed. There is at least one potential confounding issue here. First of all, sentence (67) contains the complex NP/DP *no one*. Although this negative phrase appears to be like other weak quantifiers (it can occur in *there*-contexts), it is different from the latter because of the presence of the negative operator. As shown in Boeckx (2001) and Kamiya (2009), this DP decomposes interpretationally and structurally into the negative part *no* and the weak NP *one*. Crucially, *no* always remains in its surface position, while *one* could in principle have reconstructed\(^8\).

2.2.2.2 A-movement is likely to reconstruct

Another important argument Lasnik (1999) provides in order to support his conclusion that A-movement does not reconstruct is seen in sentences in (68). As already said, these sentences are extremely interesting in that although a lowered reading is biased by the context it does not arise.

(68) a. Every coin is 3 % likely to land heads.
    b. ≠ It is 3 % likely that every coin will land heads.

However, this piece of evidence is also not as strong as claimed. Crucially, the predicate Lasnik (1999) uses is a gradable one (*3 % likely* vs. *likely*), and it is known that degree semantics interacts with reconstruction in crucial ways – namely it blocks it. It is independently known from

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\(^7\) Example originally provided by Partee (1971).

\(^8\) An explanation along similar lines can be offered for (66).
Kennedy (1997) that degree operators cannot outscope other operators or negation, with the exception of some intensional predicates (of a type which is irrelevant for the current discussion). This fact is known in the literature as Kennedy’s generalization:

(69) **KENNEDY’S GENERALIZATION**
Degree quantifiers have obligatory narrowest scope with respect to negation and other quantifiers (with the exception of quantifiers in the surface c-command domain of \(-er\)).

Examine the contrast below. In sentence (70) the indefinite subject c-commands the graded (comparative) adjective and can only be interpreted as taking wide scope (i.e., scoping over it). Hence a specific indefinite reading only is possible; the sentence cannot mean that some airport or other is closer to Boston.

(70) An airport is closer to Boston than to P-town.  **SPECIFIC INDEFINITE ONLY**

On the other hand, if the gradation (comparative) operator c-commands the indefinite, both the lowered and the specific indefinite readings are possible:

(71) Boston is closer to an airport than P-town.

In fact, Lasnik and Saito (1992) provide relevant examples in which a contrast between degree modified predicates and non-degree modified predicates is salient.

(72) a. John is likely to win.
    b. There is likely to be a riot.
    c. Advantage is likely to be taken of John.

(73) a. How likely to win is John?
    b. *How likely to be a riot is there?
    c. *How likely to be taken of John is advantage?

The examples in (a) contain a definite description, and are not as relevant to the discussion (definites appear to feed reconstruction in more restricted ways than indefinites). What the examples in (b) and (c) show is that when the adjective *likely* is modified by a degree quantifier, scope is fixed in a way which is not seen with non degree-quantified adjectives. See also the contrast between (74) and (75), and (76):

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9 See also Matushansky (2002) for further developments of an account along similar lines, as well as Boeckx (2001).

10 See also the discussion in Sportiche (2005), to be detailed below.
(74) \[\text{How likely to win the lottery} \text{ is someone from New York?} \]
(someone >> likely /*how likely >> someone)

(75) Someone from New York is \textit{very likely} to win the lottery.
(someone >> likely /*very likely >> someone)

(76) Someone from New York is \textit{likely} to win the lottery.
(someone >> likely / likely >> someone)

In (74) and (75) the adjective is degree scalar, and lowered readings of the indefinite are not possible. In sentence (76) on the other hand, the two interpretations are possible as expected under Kennedy’s generalization. Moreover, as Boeckx (2001) further shows, it is not entirely clear that the ambiguity in (76) can simply be attributed to the vague character of indefinites. What is important is that there appears to be a truth conditional difference between the low and the high reading. Boeckx (2001, ex. 25 and 26) unambiguously demonstrates that the distinction can be strengthened by taking the strongest modal reading in more straightforward contexts like (77) and (78):

(77) Someone from New York is guaranteed to win the New-York lottery.
(78) It is guaranteed that someone from New York will win the lottery.

Assuming, counterfactually, \textit{that the New York lottery is open only to New York residents and that the rules are that numbers are drawn until there is a winner, then it will be true that \textquoteleft \textit{it is guaranteed that someone from New York will win the lottery}, but false that \textquoteleft \textit{there is someone from New York who is guaranteed to win the lottery}.\textquoteright} \hfill \text{(Boeckx 2001, page 512)}

Boeckx’s (2001) examples are particularly suggestive, as they show that the difference in interpretation cannot simply be attributed to lexical ambiguity (on the indefinite). What makes a truth-conditional difference is instead the presence of an intervening operator. Hence, A-movement is likely to feed reconstruction. In conclusion, when Lasnik’s (1999) sentences are analyzed more carefully, it turns out that his radical assumption cannot be maintained at face value. The process of reconstruction \textit{is} sensitive to apparently innocent details like degree modification, or the quantifier intervention.

2.2.2.3 Reconstruction is tough to analyze: theta-criterion is not relevant

Another argument Lasnik (1999) puts forward in order to support his claim that A-movement does not reconstruct refers to the distinction between control and raising. According to the clas-
sic account of scope relations, as formulated in May (1977), raising gives rise to reconstruction, while control does not. The examples in (79) and (80) are significant in this respect. The sentence in (79) contains a canonical GB raising predicate, and a lowered reading is possible; the sentence in (80) has as main predicate a typical GB control predicate, and the lowered reading of the indefinite is barred.

(79) A unicorn is likely to be apprehended.
LOWERED READING OK – ‘It is likely that a unicorn will be apprehended’

(80) A unicorn is eager to arrive.
LOWERED READING IMPOSSIBLE: ≠ ‘It is eager that a unicorn will arrive’

Lasnik (1999) is aware of this distinction, and attributes it to the fact that in (80) a violation of the theta-criterion blocks the possibility of reconstruction. It is not clear how Lasnik’s (1999) explanation is different from May’s (1977, 1985). Moreover, examples from tough-sentences show that the absence of lowered interpretations is not connected to the theta criterion. The example in (81) provided by Boeckx (2001) illustrates this point. In the sentence in (81), although the theta-criterion is not violated, the lowered reading is still not possible. As generally assumed in the literature, tough-sentences appear to involve a predication relation that is taken to be similar to control (see Epstein 1991, or Browning 1991, a.o.), no matter how the syntax of these constructions is analyzed. Crucially, as Epstein (1991) has shown, tough-conSTRUCTIONS do not allow lowered readings.

(81) Many people are tough to please.
LOWERED READING IMPOSSIBLE: ≠ ‘It is tough to please many people’

2.2.2.4 Strong quantifiers and reconstruction

Lastly, Lasnik’s (1999) argument that the apparent reconstruction effects seen with indefinites under A-movement have to be attributed to the vagueness of these elements because A-movement does not generally feed reconstruction can be nullified by an examination of reconstruction patterns with strong quantifiers undergoing A-movement. In these contexts vagueness cannot be an explanation - strong DPs cannot oscillate between a specific vs. a non-specific interpretation. But in their case other interpretive effects arise which require the activation of an embedded copy, generated lower than the main predicate.

There are at least two classes of such interactions. In one group, one can place examples of the type discussed in Abusch (1993), as seen in (82):
Everybody who shows up is likely to be a psycholinguist.

This sentence is particularly interesting in that the present tense in the relative embedded under the raised subject obtains a future-oriented interpretation. At LF it is thus interpreted as being in the scope of the future-oriented raising predicate *is likely*, along the lines in (83):

(83) The one who will show up is likely to be a psycholinguist.

Abusch (1993) analyzed these contexts as containing a futurity operator which interacts with the tense specification of the matrix predicate. In order to obtain the correct reading, the subject has to have been generated and interpreted in the scope of *is likely*. Moreover, Higginbotham (1998) also provides strong pieces of evidence which argue for a syntactic account involving actual lowering of the subject. What is relevant to the present discussion is that the lowered DP is in example (82) a (strong) universal quantifier. Hence reconstruction cannot simply be linked to indefinites only. And narrow vs. wide scope readings cannot obviously be attributed to specific vs. non-specific vagueness.

As further shown in Boeckx (2001) other contexts can be seen in which strong quantifiers can bear narrow scope readings. Two examples are to be found below. Both sentences allow lowered readings on the lines in (84) and (85):

(84) a. Nobody is believed to be in the reactor room.
    b. It is believed that nobody is in the reactor room.
(85) a. Exactly one person is likely to get an offer.
    b. It is likely that exactly one person will get an offer.

The four classes of arguments presented above severely undermine Lasnik’s (1999) claim that A-movement does not feed reconstruction. Instead what the counterexamples adduced show is that reconstruction *is* possible under A-movement but restricted under specific conditions. The crucial issue obviously resides in understanding how these restrictions are to be explained in such as way as to derive their specific blocking of reconstruction. This task, in turn, has two sub-parts. First, how are the apparently reconstructed readings of A-movement to be explained? Three possible answers seem plausible:

I. Activation of a lower copy (reconstruction of the operator-variable type)? (Boeckx 2001)

II. Quantifier lowering by adjunction (Chomsky 1993, May 1977)
III. No quantifier lowering adjunction or reconstruction – the distinction specific/non specific with indefinites (Lasnik 1999)

Secondly, however the low scope readings under A-movement are explained, what motivates their absence in some contexts? And more specifically, how does this explain the general absence of reconstruction with secondary predicates? Regarding the latter question, various answers are obviously conceivable:

1. The types of secondary predicates discussed in this thesis do not generate a small clause, the argument being introduced in the domain of the main predicate (Williams 1983, Larson 1989). In more minimalist terms, such a theory would reduce to “there is no A-movement” in such contexts (Williams 1994, Manzini and Roussou 2000, Manzini and Savoia 2008, Neeleman and van de Koot 2002, etc.). If the argument is not generated low, inside the small clause, no reconstruction is to be expected.
2. The explanation is not necessarily derivational. Secondary predicates give rise to specific readings only (following Lasnik 1999, see also Basilico 2003), and these readings do not reconstruct. The question would be then why secondary predicates have this nature.
3. There is a small clause projected, but some important quantificational layers are missing in its composition (Sportiche 2005, Moulton 2011)
4. Although the argument is initially merged low, it can only be interpreted high, where its Case feature is checked (Bobaljik and Wurmbrand 2005, Boeckx 2001)
5. Some specific structural/semantic aspects of adjectives are as such that they require only wide scope readings on the argument (Matushanky 2002, Basilico 2003)
6. A-movement (optionally) leaves a simple trace, not a full copy (Fox 1999). A simple trace is presumably not enough for obtaining the low scope readings in secondary predicate contexts. The question, again, would be why not.

The next sections will examine each of the possible answers. It will be shown that the configuration that adequately accounts for the data with least stipulation is a complex predicate analysis. It is concluded that the shared argument must be introduced above the main predicate. The last section more closely addresses details pertaining to the specific nature of the functional projection introducing the shared argument. In order to set the crucial distinction small clause/complex predicate, it is necessary to make sure that lowered readings are not blocked because of intrinsic properties of adjectives, which might require wide scope on the arguments, as examples like (45) might suggest. Two particular analyses (Basilico 2003, Matushansky 2002) attributing the lack of existential readings to the intrinsic nature of adjectives are examined below, and shown to be problematic.
2.3 Adjectives and anti-reconstruction

As said above, the assumption that the wide scope restriction on the shared DP is triggered by the external merger of the argument to a position asymmetrically c-commanding the main predicate is a possible explanation. One has to make sure though that it is not only the best (most economical) explanation, but possibly the only viable explanation. Logically feasible accounts could be proposed according to which the shared DP is initially merged inside an embedded small clause and the wide scope is attributed to other factors. Basilico (2003) formulates an analysis along these lines, taking the shared arguments to function as topics in the small clause. Their topichood character is responsible for the non-permissibility of narrow scope readings. The detailed account is presented below.

2.3.1 Basilico (2003)

For Basilico (2003) adjectival predication involves categorical predication (see also Sasse 1987, Ladusaw 1994, Lambrecht 1994, Uriagereka and Raposo 1995); the author provides the following leading definition (p. 3) for categorical predication: “with categorical predication, the subject is singled out from the event itself, and the predicate ascribes a property to this subject. Here, the subject forms the topic of the clause.”

The main piece of evidence Basilico (2003) adduces in order to support the categorical predication analysis is precisely the strong interpretation the postverbal DP has to carry in examples (86) and (87) below. Following Ladusaw (1994), and Uriagereka and Raposo (1995), Basilico (2003) focuses on the contrast showed by the two examples below:

(86) The guard saw prisoners leave.
(87) The guard considers prisoners intelligent.

If the postverbal DP in example (87) can obtain an existential interpretation, prisoners in (86) must have only a generic reading. As mentioned above, generics, similarly to definites, and partitives count as strong readings whose interpretation requires wide scope.

Another observation Basilico (2003) uses is the (required) presence of individual-level predicates in adjectival small clause complements. Individual-level predicates are characteristic to categorical predication, and are not allowed in thetic predication (which attributes an event to an argument). The topic status of the shared argument in adjectival small clauses is given by the structural presence of a functional projection, identified as TopP, which merges with the adjecti-
val secondary predicate. Although the shared DP is initially merged as a specifier inside the AdjP it further moves into the Spec, TopP position:

\[ \text{(88)} \quad \text{Fp (TopP)} \]
\[ \text{DP}_i \quad \text{F}' (\text{TOP}') \]
\[ \text{F (TOP)} \quad \text{AP} \]
\[ t_i \quad \text{A} \]

Besides capturing the topichood property, Basilico (2003) claims that the structure in (85) can also account for the special extraction facts observed with subjects of small clauses. More specifically, it is well known adjectival small clauses do not permit extraction of material inside the shared DP (Kayne 1984):

\[ \text{(89)} \]
\[ ? \text{Which subject}_i \text{do you consider [a book about } t_i \text{] too boring for your class?} \]
\[ ? \text{Who}_i \text{did you find a [photograph of } t_i \text{] rather unattractive?} \]
\[ ? \text{Who}_i \text{did you judge [a rumor about } t_i \text{] false?} \]

Similarly to previous (GB) work (see Kayne 1984, Stowell 1991, etc.), the unacceptability of such examples is attributed to a violation of the Subject Condition (Chomsky 1981) which derives from the ECP. Subjects, as opposed to objects, are known to not permit extraction.

\[ \text{(90)} \]
\[ * \text{Who did [a picture of } t \text{] anger you?} \]
\[ \text{Who did you see [a picture of } t \text{]?} \]

Basilico (2003) uses a derivational account in order to explain the impossibility of extraction out of small-clause subjects, following Takahashi (1994). The crucial ingredient is the movement of the small clause DP into the [Spec, Top] position, a process which takes the argument out of the domain of the theta-assigning head. The two principles borrowed from Takahashi (1994) are given below; they crucially employ the consequences of the movement mentioned above. The first principle, \textit{Chain Uniformity}, prohibits adjunction to a member of a (nontrivial) chain. More specifically, it postulates the impossibility of adjoining an element to the head/foot of a chain \((a_i, \ldots, a_n)\) because the result will be non-uniform: the head/foot will contain an adjoined element which is not seen in the other links of the chain. The second principle, \textit{Shortest Move}, requires that the movement operation of an element has to land in the closest relativized asymmetrical c-commanding position for that element.

\[ \text{(91)} \]
\[ \text{\textit{Chain Uniformity}} \]
\[ \text{Chains must be uniform.} \]
(92) **Shortest Move**
Make the shortest move.

(93) \[[IP DP_1 \ldots [FP t_i [AP t_i A]]]\]

Applying the two principles to the secondary predicate structure depicted in (88) and repeated in (93), ungrammaticality is predicted. Wh-phrase movement must adjoin to the subject, as this is the closest A´- c-commanding position. But this type of adjunction violates Chain Uniformity because the subject has moved out of the AP. Various other mechanisms to amend the structure are similarly problematic.

Although the prohibition against “subject extraction” might be explained using Takahashi (1994), there are numerous problems with Basilico’s (2003) analysis. The most important of them deals with the notion of Topic Phrase itself. It is not clear what the nature of this functional category is. Obviously, this Topic element cannot be the same as the topic position found with canonical topicalized (left-dislocated) elements. One important piece of evidence that such unification is not possible comes from an examination of the interaction between secondary predicates and implicit arguments. It is known that the latter cannot constitute topics, as topiclization normally requires overt material. Examine, in contrast, the two middle sentences below from Romance, as well as the passive constructs from Venda, and Finnish:

(94) **ROMANIAN**
Cărțile nu se citesc obosiți.
LIT. ‘Books don’t read tired.’
‘Books should not be read (when) tired.’

(95) **ITALIAN**
I libri si legono felici.
LIT. ‘Books read happy.’ (middle construction)
‘People read books happy.’

(96) **VENDA**
Nama yo liwa vho neta.
Meat was eaten 3PL. tired.
‘The meat was eaten tired.’
Moreover, Basilico (2003) mainly addresses the raising and the ECM types of secondary predicates. But extending his analysis to the other types of secondary predication, namely the adjunct ones, the structure obtained would probably be along the lines of (99) for a sentence like (98)\textsuperscript{11}:

(98) The man arrived happy.

(99) $[[IP\,DP_i\,〔VP\,arrived\,〔FP\,PRO_i\,〔AP\,t\,A]]]]$

The main problem with such an account is that the TopP will contain a PRO element in its Specifier. This is in sharp contrast with canonical topic projections which cannot contain empty elements (PRO or pro). Nevertheless, although Basilico (2003) does not define what he means by topicalization in the context of secondary predicates, he does imply a very tight connection with the left-dislocated topics, which have been argued to take wide scope (see especially Erteschik-Shir 2007). This feature is what explains, for Basilico (2003), the absence of a low reading in the examples similar to those examined by Williams (1983).

This issue is not trivial by any means. In Basilico’s (2003) view topic projections are required with adjectival secondary predicates because of the intrinsic nature of adjectives. These categories are taken to express basic properties of individuals, and they are not predicates of events. In categorical predication, the subject is singled out from the predicate, and the topic represents “what the sentence is about.” But if topics induce the idea of aboutness, and categoric predication always involves topicalization (in Basilico’s view), it is not clear why secondary predicates should involve topicalization (of the special type, which is left undefined in Basilico 2003). Saying that adjectives do not involve event predication does not necessarily imply that they should be only involved in “categorical predication.” Unless the notion of topicalization is made clear, the whole discussion ends up in circularity: secondary predicates involve categorical predication because they merge with a Topic functional head, and the shared DPs are topics because they require categorical predication.

\textsuperscript{11} Assuming that \textit{arrive} is an unaccusative predicate, movement from the complement position to Spec, IP is not represented here.
Even if one assumes that the postverbal DPs are indeed topics (without worrying about the precise definition of *topichood*), and require wide scope, one important question still arises. It has been noticed cross-linguistically that cross-clausal agreement phenomena might affect elements in embedded (finite or non-finite) clauses which are typically involved in Case relation with some functional projection/the predicate of the matrix clause (see Massam 1985 for a very detailed overview, as well as more recent minimalist investigations in Polinsky and Potsdam 2003, Takano 2003, Mahajan 1989, Bruening 2001, Bhatt 2005, Boeckx 2001, 2003, etc.). There seem to be two options of cross-domain relations: a) either an argument from the embedded clause raises into the matrix clause (overtly or covertly); b) or the element stays in the embedded clause and a long-distance agreement relation is established (resulting in the valuation of unintepretable Case features). What has been noted in the case of topicalized elements is that they prefer to remain in-situ, in the embedded clause. Their presence in the low domain is diagnosed by various constituency tests. On the other hand, even though DPs in secondary predicates are claimed to be Topics, a multitude of tests unambiguously demonstrate that they are found in the domain of the matrix predicate (see Postal 1974, Stowell 1991, Lasnik and Saito 1992, etc). It is not clear why the same long-distance agreement process (which is permitted in recent minimalist work) won’t apply to them similarly to the other topics, especially as small clauses have never been assumed to induce opacity or domain barrierhood to such processes.

Moreover, it cannot simply be the case that adjectives can only construct categorical predication. An indication that this is not the correct state of affairs comes from existential sentences which permit adjectival (secondary) predicates:

(100) There are people sick in Ukraine.

Also, when minimal pairs such as (101 a) and (101 b) are examined, interpretive distinctions are salient (see also the discussion in Rothstein 2001, page 15, where the examples are taken from):

(101) a. Three women entered wearing coats and hats.
    b. There entered three women wearing coats and hats.

The intuition we get is that the sentence in (101 a) is ‘about’ three women, while the sentence in (101 b) simply presents a state of affairs. Notice, that in the relevant reading (as opposed to a reading in which *wearing coats and hats* acts as an appositive attributive) sentence (101 b) contains a secondary predicate. But the “topic” interpretation is obviously absent. Also, as the reader
can already guess, it’s not clear how Basilico (2003) would deal with sentences of the type in (36), in which unambiguous secondary predicates take DPs interpreted as if lowered.

Besides the topicalization issues, there are other problems. One of them deals with the structure Basilico proposes for secondary predicates. It simply cannot be the case that the ‘subject’ DP merges with the A head, without attention to structure. Secondary predicates can contain various modifiers (degree words, adverbials), as well as complements of their own, as in (102). What seems more plausible to say is that probably the ‘subject DP’ externally merges with an AP, as in (103), (unless a more structurally detailed analysis of the composition of adjectives is assumed), where the Focus head projection is omitted. Nevertheless, given the current minimalist implementations, it is simply not possible to allow external merger of two phrases (even if one assumes a label-fee, bare phrase structure). Such combinations lack “stability”, and don’t follow the canonical merge rules.

(102) SECONDARY PREDICATES AND MODIFIERS

I considered the students extremely happy about their work.

(103) $\begin{array}{c}
\text{Fp} \\
\text{DP}_1 \\
\text{t}_i \\
\text{AP}
\end{array}$ $\begin{array}{c}
\text{AP}
\end{array}$

Assuming that one does not embrace a strict minimalist stance, the structure is still problematic. How is passivization explained, to take just one process affecting the shared arguments? If the internal argument functions as a subject, why does passivization affect it, knowing that what is called a subject is not usually prone to such processes? And lastly, is the problem of extractability itself. It is known that not all postverbal arguments in secondary predicate contexts are sensitive to such processes in the same way. Resultatives, for example, are quite permissible in this respect. One cannot argue that the DPs in resultative contexts are not topics, because, as already mentioned, they obey the same strength requirement. In conclusion, the topichood analysis proposed by Basilico (2003) does not explain the scopal characteristics of the DPs in a non-stipulative way, and moreover gives the wrong results in many respects; an explanation must be found somewhere else. In the next section another proposal along the same line is examined, and it is shown that its shortcomings lead to its rejection.
2.3.2 Matushansky (2002)

Matushansky (2002) discusses contexts of secondary predication introduced by *seem*. The gist of her account is that there are at least two ‘flavors’ of *seem* – the verb that merges with a propositional complement (CP or IP), and the verb which takes a smaller sized complement. The latter is relevant for the current discussion. What distinguishes the two variants is not only the size of their complement, but crucially the claim that the latter “imposes a scalarity restriction” on the phrase it merges with. In more structural terms, the variant of *seem*, which is seen in secondary predicates, has to merge with a DegP complement. This is formalized as the licensing mechanism for the adjectival complements of *seem*. The DegP is therefore a necessary ingredient in the construction of a scalar predicate, and also as a landing site for QR of degree.

Matushansky (2002) assumes a licensing mechanism for complements of *seem* as given in (104):

(104) *Seem* licensing (*syntactic formalization*)

Perception verbs, including the perception *seem*, are lexically specified for an uninterpretable [degree] feature. This feature is checked by (covert) QR of a Deg P from its complement. (Matushansky 2002, v, page 256)

The other important assumption Matushansky (2002) makes is that a degree operator in the complement of *seem* cannot be interpreted in situ, due to the small size of this complement (more specifically, due to the fact that the complement is not a full proposition). Hence, there must be a process of Quantifier Raising, allowing the degree operator in the complement of *seem* to be interpreted above it. The examples which are provided in order to support this conclusion come from *degree clauses* (introduced by *than* or *as*, as well as *too* or *enough*). Such sentences have been extensively discussed by Bhatt and Pancheva (2001), who have noticed the absence of scopal embedding under the main predicate. (105) below cannot have a meaning where what is subject of uncertainty is the magician’s claim – hence the sentential part *as he claimed he was* is not interpreted below *seem*. Similarly, the *than* clause in (106) is not interpreted as the complement of *seem*, that is the sentence does not mean that she seems more eager to learn than you seem eager to learn.

(105) The magician seemed as powerful as he claimed to be.
(106) She seems more eager to learn than you are [\(v_p0\)].
As one would expect, such sentences obey what is called Williams’ (1977) generalization, accounting for the scope of DPs out of which XPs have been extraposed:

(107)  *Williams’ generalization*

The scope of the source DP is at least as high as the adjunction site of the extraposed XP.

As Matushansky (2002) herself notices, there is no straightforward motivation for postulating an [uninterpretable] degree feature on the predicate she is looking at, namely *seem*. Moreover, as will be seen in Chapter 4 secondary predicates must be scalar, no matter what main predicate they merge with. Therefore, this restriction has to be encoded somehow in the structure proposed for such constructions. Its generality indicates that it is not a simple stipulation about the make-up of secondary predicates. The crucial property of *seem* under its perception\textsuperscript{12} variant is that it imposes a scalarity restriction on its complement. Scalar predicates are defined as “having domains that are partially ordered according to some property that permits grading” (page 244). The author further follows Bierwisch (1989) in postulating that the structure of scalar adjectives contains an argument of the semantic type $d$ (degree), as the postulate in (108) shows:

(108)  *Scalarity*

A lexical item is scalar if it has an open variable slot of type $d$ (degree).

Obviously, this variable of type $d$ has to be bound. Matushansky assumes that this operation is taken care of by *degree operators* which come into at least two types: a) degree modifiers (*very, greatly, exceptionally*, etc.) and b) degree quantifiers (*quite, as, more, less*, etc.). What accounts for the lack of reconstruction effects is the syntax Matushansky proposes for degree modification. Crucially, scalar predicates have to be of type $<d, <e, t>>$, hence the degree-type argument

\textsuperscript{12} It is, by now, uncontroversial that *seem* collapses (at least) two lexical entries, with distinct syntactic and semantic restrictions. The variant of *seem* found in secondary predicates is systematically distinct from its more canonical raising relative, in that it receives a perception reading as opposed to the more epistemic/deductive reading of the latter. The small table below (from Matushansky 2002) illustrates further distinctions between the two variants. Nevertheless, a complete examination of the distinctions between the two variants will not be further attempted in this thesis.

<table>
<thead>
<tr>
<th></th>
<th>Perception verb</th>
<th>Epistemic verb</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interpretation</td>
<td>Perceptual</td>
<td>Deductive</td>
</tr>
<tr>
<td>Complements</td>
<td>Small clause</td>
<td>IP or CP</td>
</tr>
<tr>
<td>Θ-assignment to subject position</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td><em>Like</em>-complements</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Experiencer</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

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}\textsuperscript{12} It is, by now, uncontroversial that *seem* collapses (at least) two lexical entries, with distinct syntactic and semantic restrictions. The variant of *seem* found in secondary predicates is systematically distinct from its more canonical raising relative, in that it receives a perception reading as opposed to the more epistemic/deductive reading of the latter. The small table below (from Matushansky 2002) illustrates further distinctions between the two variants. Nevertheless, a complete examination of the distinctions between the two variants will not be further attempted in this thesis.
is introduced first, and the individual-type argument second. Corresponding to this semantics is a structure in which the DegP is merged as a specifier to A’:

\[ \text{(109)} \]

\[
\begin{array}{c}
\text{aP} \\
\text{subject} \\
\text{a’} \\
\text{a}^0 \\
\text{AP} \\
\text{DegP} \\
\text{A’} \\
\text{A}^0 \\
\text{tall}
\end{array}
\]

The further assumption is that degree quantifiers are of type \( <d, <<d,t>, t>> \), and cannot be interpreted in-situ. They have to move to a position at least above the adjectival’s subject. Positive adjectives contain a DegP, specified as an existential quantifier over degrees which is also merged in [Spec, AP]:

\[ \text{(110)} \]

\[
\begin{array}{c}
\text{AP} \\
\text{DegP} \\
\text{QDeg} \\
\text{A’} \\
\text{A}^0 \\
\text{tall}
\end{array}
\]

Let’s further illustrate the discussion with a specific example of (107). According to what was said above, the degree-variable slot inside the AP is saturated when AP is combined with the verb. But \textit{more} is defined semantically as taking a \( <d, t> \) property as its first argument. More simply put, this says that \textit{more} needs a full proposition containing an open slot of the type \( d \) (degree). As small clauses do not contain event variables, and have a reduced structure, the degree operator must move to a position above the small-clause internal subject position:

\[ \text{(111)} \]

\text{Thumbelina seems much taller.}
Matushansky (2002) also claims that anti-reconstruction effects unstipulatively result from the degree analysis. In order to see how, let’s return first to the relevant examples. These are shown here in (113) – where the quantifier *everyone* can acquire both wide and low scope when found inside an infinitival, but only wide scope when constructed with a secondary predicate.

(113)  

a. Everyone\(_i\) seems \([t_i \text{ to be } [t_i \text{ sick}]]\).  
     \(\forall \gg \text{seem}; \text{seem} \gg \forall\)  
b. Everyone\(_i\) seems \([t_i \text{ sick}]\).  

Adjectives are base-generated with a degree variable which has to be bound by an operator. Due to its type, the degree operator has to raise to a position above the \(vP\) hosting *seem*, as shown in more detail in (115):

(114)  

\(Q_{\text{Deg}} \text{ seems } [\text{everyone}, d\text{-sick}]\).
Matushansky (2002) attributes the wide scope reading of the shared DP of secondary predicates to the interaction with the degree operator. As already mentioned, it is known about degree operators that they cannot outscope any other operator or negation. This is Kennedy’s generalization, repeated here in (116):

(116) *Kennedy’s generalization*

> Degree quantifiers have obligatory narrowest scope with respect to negation and other quantifiers (with the exception of quantifiers in the surface c-command of –*er*).

The initial example Matushansky (2002) uses, given in (113), contains a positive adjective (*sick*). The degree operator in this case is assumed to have an existential force (as positive adjectives are not comparatives, or superlatives). In the structure in (115), it is also assumed that the degree slot cannot be interpreted unless the operator raises. Although after the operator raises (to a Spec position above V), it will structurally higher than the base position of the shared DP, it cannot take scope over it due to Kennedy’s generalization. So, the degree operator is always in the scope of the DP at LF, regardless of actual position of the latter at the surface.

Assuming that this is the correct state of affairs, and generalizing the fact that degree operators have to be found in the scope of other quantifiers at LF, one would expect the infinitivals to follow the same anti-reconstruction patterns. Unfortunately, the data do not confirm this hypothesis. The sentence in (117) below can have two readings: a) a reading in which *seems* takes
scope over the universal (‘It seems that everyone is sick’), and b) a reading in which the universal takes scope over *seem* (the same reading seen in secondary predicates):

(117) Everyone \( t \) seems \([t_i \text{ to be } [t_i \text{ sick}]]\).

Matushansky (2002) is aware of these examples herself, but does not provide a satisfactory answer as to why both readings are allowed in this case (she assumes that something in the structure of the infinitival must be interacting with the degree operator). But taking Kennedy’s generalization *ad litteram*, the narrow scope should not be allowed. The degree operator has to outscope all other quantifiers at LF, no matter whether the surface position of the shared argument is. Simply postulating that infinitives are not like secondary predicates leaves the anti-reconstruction patterns unexplained, and ends up in circularity. One must understand in what respect the two embedded constructions are different.

In order to solve the problem, it is rather necessary to go back and double-check whether it is indeed true that degree operators cannot outscope other operators. The sentence in (118) shows in fact that these interactions do not always go this way – the sentence contains a secondary predicate whose degree specification can be overtly specified as a comparative, and surprisingly it can accept a reading in which the existential takes low scope with respect to *seem*. The same holds for sentence (113).

(118) A book seems (more) necessary (than an atlas).
\[ \exists >> \text{seem} \ [\text{A specific book seems necessary}] \]
\[ \text{seem} >> \exists \ [\text{It seems that some book or other is necessary}] \]

(119) Everything seems necessary.
\[ \forall >> \text{seem} \ [\text{Everything is such that it seems necessary}] \]
\[ \text{seem} >> \forall \ [\text{It seems that everything is necessary}] \]

Therefore, there are contexts in which the narrow scope capacity of the degree can be in a sense, undone. As the *necessary* contexts, as well as the infinitivals provide such instances, let’s see what type of analysis would explain the differences between them and the simple secondary predicate instances (in which low scope is not possible).

In order to do that, one important fact has to be clearly established. Another case in which degree operators can outscope other operators is when the latter are in the surface c-command of the former. Such a context would be seen in sentence (120) below; *a financial result* or *something* can either have a specific or an existential reading. In order to obtain the latter it must be
the case that the existential operator of the DP embedded under *about* takes low scope with respect to the degree operator.

(120) A manager seemed happy about a financial result/something.

Hence, there are three cases in which existential readings are possible, as summarized in Table 3 below:

<table>
<thead>
<tr>
<th>Existential readings of DPs</th>
</tr>
</thead>
<tbody>
<tr>
<td>- With modal adjectives (<em>necessary</em>)</td>
</tr>
<tr>
<td>- With infinitives [<em>A man seems to be sick</em>]</td>
</tr>
<tr>
<td>- In the complement position of the adjective</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>[<em>A professor seems happy about a student</em>]</td>
</tr>
</tbody>
</table>

**TABLE 2: EXISTENTIAL READINGS OF DPs**

The second issue that needs to be clarified is the exact nature of the scopal restriction seen with degrees. Why is it the case that degree operators cannot outscope other operators (unless the latter are in their c-command domain on the surface)? Matushansky (2002) does not address the nature of this restriction. Unfortunately, not much clarification can be found in the larger literature either.

Some steps towards an explanation can be made by starting from examining adjectives in more detail. Following Bhat (1994), adjectives are categories which require gradation, due to the inherent nature of their roots. In normal conditions, the first argument they merge with is the degree argument; the degree component can be bound by degree operators, but its interpretation has to be made in-situ, as the degree slot is part of the semantic make-up of the adjective. This crucial aspect is what distinguishes adjectives from other lexical categories like nouns or verbs (nouns do not need to contain existential or universal quantifiers, for example, and even if present, such categories can be interpreted in a displaced position). The requirement that the degree operator has to raise to a position where it has access to an event argument is not the only possible explanation regarding the interpretation of the degree slot. In other words, it is not always necessary that the degree operator has to raise.

To see this in more detail, let’s go back to the licensing conditions of secondary predicates. Matushansky’s core postulate (2002) is that the predicate *seem* has an uninterpretable *degree* feature which can be valued by merging a DegP. As we will see in Chapter 4, it is a general
property of all secondary predicate – V complexes that they require their members to be quantized (pure statives cannot construct secondary predicates). Given the discussion in that chapter, it cannot be the case that such features are uninterpretable on V. Hence, in order to capture the requirement that the two predicates have to be quantized, it is assumed here that the situation argument (the functional projection introducing the shared argument) has a quantization requirement which can be fulfilled when quantized predicates are merged. The operation of Multiple Agree is responsible for binding the degree variable of the secondary predicate adjective (in those cases in which there are no overt degree phrases, etc.). As the degree quantifier itself does not raise, one would expect it to always take narrow scope.

Those contexts, in which an existential reading on the shared DP appears to be possible can be explained independently. The necessary cases can be accommodated by examining of structure of such adjectives in more detail. According to Moulton (2011), adjectives like necessary are a source of existential quantification. When the existential raises it will take scope over the shared DP:

\[(121) \ldots \]

Regarding the infinitive, it is well known that it contains more morphology than secondary predicates. The infinitive is also semantically richer in that it also has a source of existential quantification:
The contexts in which the quantifier is in the scope of the degree on the surface are trivial. The last issue that needs to be addressed regards the pieces of evidence Matushansky (2002) adduces in order to support a small clause analysis in which the shared argument is base generated below the main predicate. Such evidence revolves around θ-assignment, and the non-obvious assumption that if the argument is not merged inside the small clause it will have to receive a theta-role from the main predicate. Matushansky (2002) correctly claims that if the main predicate must assign a theta role to that argument, sentences containing expletives are unaccounted for:

(123)  
\begin{enumerate}
\item It seems cloudy today.
\item It seems obvious that the answer lies elsewhere.
\end{enumerate}

A projectionist view to theta relations obviously leaves the small clause analysis as the only possibility in such cases. Nevertheless, once the strict theta relations implementation of the GB type is dropped (due to independent reasons), various other argument interpretational possibilities are open. Processes of compositional theta-role assignment are also possible (see Chomsky 1986), for example. Moreover, it could also be the case that the shared argument is not an argument introduced by the main predicate, which does not have to be involved in any theta-role assignment. This last option is actually argued for in this work – the shared argument is introduced by the Situation functional head which is necessary due to the semantics of the secondary predicate introducers.

Matushansky (2002) linked the lack of anti-reconstruction patterns to the special quantificational and scopal properties of degree operators which cannot outscope other operators. Nevertheless it is not explained why such a scopal characteristic holds of degrees; the section above has moreover shown that Keneddy’s generalization is not exceptionless. An account in which degree variable can be done in-situ under a complex predicate analysis, on the other hand, can derive the data, and account for the exceptions.
Another class of anti-reconstruction explanations involves the notions of Case and theta relations. Two such accounts will be examined below in detail, due to their relevance to other aspects of secondary predication: Bobaljik and Wurmbrand (2005), and Boeckx (2001). Both will be shown to make problematic/incorrect claims, and leave some examples unaccounted for. These instead are better explained under a complex predicate analysis.

2.4 Anti-reconstruction and Case checking

A second class of explanations of anti-reconstruction patterns rests on the connection between accessing lowered copies and specific configurations in which Case is checked. The precise relation between non-finite verbal structure and anti-reconstruction is systematically investigated in one recent paper by Bobaljik and Wurmbrand (2005). Since the data the two authors analyze also employs verbal restructuring paradigms (which will be investigated in more detail in Chapter 2), and as the explanation provided differs substantially from the account given in this thesis, it is crucial to examine in more detail the arguments proposed there.

2.4.1 Bobaljik and Wurmbrand (2005)

The main concern of Bobaljik and Wurmbrand (2005) is with subordinate infinitival complementation introduced by scope-bearing predicates like forget. The interesting observation is that, while the non-restructuring infinitivals (124 a) allow both the direct and the inverse (lowered) scope, the restructuring contexts systematically lack the inverse scope. Examine the English sentence (124) below, which is ambiguous. One reading (124 a) can convey the fact that John did not actually close any windows – this is the reading in which the universal quantifier takes scope over the quantified verb forget (which is interpreted as negation). The other reading says that in fact John closed some window(s), but not all. The latter interpretation can be obtained by assuming that the universal quantifier is embedded under forget (124 b).

(124) John forgot to close all windows. [Bobaljik and Wurmbrand (2005)]

a. \( \forall \gg \text{forget} \)
The weather forecast in the morning predicted rain, and John intended to close all the windows before leaving his apartment. Nevertheless, as he was late for work, he left in a hurry and forgot to close any of the windows in his apartment. Therefore, all the windows remained open.

b. \( \text{forget} \gg \forall \)
It was about to rain, and John decided to close all the windows in the apartment. He closed the windows in the kitchen, and in the living room, but forgot the window in the bedroom, which thus remained open.
Bobaljik and Wurmbrand (2005) observe a rather puzzling fact about the two readings. In German sentences which do not exhibit restructuring diagnostics, the two interpretations are possible:

(125) weil er alle Fenster zu schließen vergessen hat.
    since he all windows.ACC. to close forgotten has.
    ‘since he has forgotten to close all the windows.’
    (Bobaljik and Wurmbrand 2005: 1b)
    a. ∀ >> forget
    b. forget >> ∀

On the other hand, non-finite embedded contexts showing remnant extraposition, which in German indicates the presence of restructuring (clause union), lack a reading in which forget takes scope over the universal quantifier.

(126) weil er alle Fenster vergessen hat [t_{OBJ} zu schließen]
    since he all windows forgotten has t_{OBJ} to close.
    ‘Since he forgot to close all the windows.’
    a. ∀ >> forget
    b. *forget >> ∀

What the examples above illustrate is therefore the absence of a reading in which the universal quantifier is interpreted to the right of vergessen, in the position signalled by the two authors as t_{OBJ}. These narrow scope blocking paradigms are seen in other languages, like Japanese or Itelmen (Chukotko-Kamchatkan):

(127) JAPANESE
    John-wa subeto-no ringo-o tabe-wasure-ta.
    John-TOP all-GEN apple.ACC. eat-forget-PST.
    John forgot to eat all the apples.
    a. ∀ >> forget
    b. *forget >> ∀
    (Bobaljik and Wurmbrand 2005: 2b)

(128) ITELMEN
    tʼståxa-čeʔn mił okno-ʔn sop-es.
    1SG.-forget-3.PL.OBJ. all window-PL. close-INF.
    ‘I forgot to close all the windows.’
    a. ∀ >> forget
    b. *forget >> ∀
    (Bobaljik and Wurmbrand 2005: 2c)

This effect is exactly the anti-reconstruction pattern seen with secondary predicates; the quantifier cannot be interpreted in its initial position: both classes reject a low scope reading of quanti-
fiers inside the shared DP, triggering only the wide scope. The classic example containing a secondary predicate is repeated below:

(129) A student seemed sick.
   a. a student >> seemed
   Wide scope
   (indefinite must be interpreted as specific/presuppositional/strong)
   b. *seemed >> a student
   Narrow scope impossible
   (indefinite cannot be interpreted as non-specific/existential/weak)

To recapitulate, the verbal restructuring sentences (in German, Japanese, and Itelmen) as well as the secondary predicate ones are problematic in that they do not seem to involve canonical narrow-syntax derivations, in which strict thematic domains are respected. In order to illustrate the problems posed by the restructuring contexts in German, a passive example is more illuminating. Consider the sentence in (130), also provided by Bobaljik and Wurmbrand (2005):

(130) **German**

    weil die Traktoren zu reparieren versucht wurde.

    since the tractors to repair tried were.

    LIT: ‘Since the tractors were tried to repair.’
    ‘Since they tried to repair the tractors.’

The example above illustrates the so-called long-passive construction, in which only the matrix predicate is passivized. The embedded predicate does not exhibit passive morphology; at the same time the Case on the DP the tractors is nominative. This is surprising if one assumes that the DP merges with a thematic complement of the embedded predicate reparieren (repair), which in normal conditions assigns accusative Case (as shown in the sentences below). The paper under discussion as well as Wurmbrand (2001) explain such patterns by taking restructuring infinitives to be domains which lack ‘their own Case-assigning functional projections’. The lack of the relevant functional projections in the embedded domain triggers movement of the DP to a higher functional projection, where its Case will be checked. With restructuring predicates under passives, the Case of the DP is checked in Spec, TP. Similarly, if the matrix restructuring predicate is unaccusative, the accusative Case on the object of the embedded predicate is not possible,

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13 Bobaljik and Wurmbrand (2005) note that in German non-pronominal DPs accusative case has a distinct morphological shape from nominative only in the masculine singular. On the other hand, singular agreement is the default in impersonal constructions; therefore, in order to disambiguate agreement from lack of it, plurals are required. Bobaljik and Wurmbrand do not provide examples containing pronominal DPs which would unambiguously signal the presence of the nominative Case.
and has to be replaced instead with nominative. The sentence below illustrates this observation with the unaccusative matrix restructuring predicate *gelingen* (which requires a dative subject):

(131) **GERMAN RESTRUCTURING - UNACCUSATIVE**

?weil mir der Brief auf Anhieb zu
Since me.DAT the.NOM. letter straightforwardly to
entfizzern gelungen ist.
decipher managed is.
‘Since I managed to decipher the letter straightaway.’

In Active Restructuring Infinitives (132) the Case of the embedded DP is checked in the Spec of the main v. The structures Bobaljik and Wurmbrand (2005) propose are as in (133) below (InflP is a diacritic simplifying the structure of the infinitival):

(132) **GERMAN**

weil er den Traktor versucht hat
since he the.Acc. tractor tried has
[t$_{OBJ}$ zu reparieren]
$t_{OBJ}$ to repair.
‘since he tried to repair the tractor.’ (Bobaljik and Wurmbrand 2005: 5 a)

(133) a. **ACTIVE RI** (w/o extraposition) b. **PASSIVE RI**
But if the DP is base-generated as a complement to the embedded infinitival (and has to undergo movement in order to have its Case features checked), it is not clear why a reading in which the quantified DP is interpreted in its initial position is impossible. We have seen above that an explanation according to which A-movement does not feed reconstruction is not necessarily tenable, without further qualification. There are accounts which can predict exactly the opposite: A-movement systematically feeds reconstruction, i.e. makes available the low copy for binding, etc. purposes (see the detailed discussion in Fox 1999). Because restructuring predicates, just like secondary predicates normally avoid reconstruction (i.e. low copies act as if they are not present in the derivation/quantifier adjunction does not take place), such constructions are claimed to exhibit *anti-reconstruction* effects. Understanding the source and the nature of *anti-reconstruction* is a highly debated topic, as one could have guessed by now, especially given that infinitives do normally permit reconstruction (as the classic distinction in 1 shows). In the group of restructuring infinitivals, which are better studied than secondary predicates, two competing analyses are put forward: i) restructuring infinitivals illustrate truly complex predicates, in which the embedded verbal element is defective/reduced, and, if transitive, does not merge with a full lexical internal object (see Takano 2003 for an account using the concept of prolepsis, and Saito and Hoshi 1998, 2000, Neeleman 1994, Marantz 1984, etc.) – the internal argument is introduced later in the derivation, presumably after the merger of the two predicates; ii) restructuring contexts do not illustrate a complex predicate configuration – the lower V merges with its internal argument, projecting a VP which nonetheless lacks any functional structure. Bobaljik and Wurmbrand (2005) argue for the second analysis.

The two accounts make completely different claims when it comes to reconstruction. The complex predicate configuration predicts lack of reconstruction of the DP below the main predicate, as the shared DP is never found in such position. An argument on the lines followed by Bobaljik and Wurmbrand (2005), on the other hand, predicts the accessibility of reconstruction, unless some other independent factor blocks it. As restructuring classes are generally *anti-reconstruction* domains, it is crucial to understand the nature of the constraints underlying it, in spite of the presence of a (potentially) available copy.

Bobaljik and Wurmbrand (2005) argue that the impossibility of reconstruction is due to the fact that a verbal complement to a lexical verb signals an agreement domain/boundary. Such domains are delineated along a thematic dimension, in a fashion reminiscent of Chomsky (1986
The generalization is that an agreement relation cannot be established across a domain boundary. Therefore A-movement is forced, and cannot reconstruct when ‘a DP originates in a lower agreement domain than its licensor’. There are two contextual conditions that have to hold: a) the embedded VP has to be a complement of a lexical (restructuring) predicate; b) because the embedding verb introduces a new thematic domain, the lower VP is taken to represent its own agreement domain. This implementation makes crucial use of the bipartite classification of restructuring argued for in Wurmbrand (2004): lexical vs. functional. Restructuring triggered by lexical heads is claimed to involve slightly distinct characteristics, in that it always induces lower domain opacity.

Moreover, Agree and A-movement are assumed to respect different overlapping locality conditions. The Agree relation (which spans over Case or agreement licensing under a government-type relation) is subject to a domain-based locality condition, termed the Domain Impenetrability Condition. The main gist of this requirement is that Case/agreement checking may “occur without DP-movement but only within a single agreement domain”. (p.812). As agreement domains are defined thematically (or at least in part, thematically), VP complements to lexical verbs will be taken to constitute an independent domain. Adding to the picture the observation that the lower VPs in lexical restructuring contexts are defective domains (they do not contain any functional checking projections), a DP which is merged lower than the main predicate will have to raise into the functional domain of the restructuring predicate in order to have its Case checked. As agreement and Case constraints have to be visible at LF, reconstruction is taken to be impossible across an agreement domain boundary. The explanation of the facts revolves around the following agreement-scope correlation:

(134) A DP may not be interpreted (for scope and binding) in a position lower than in the checking domain in which it undergoes Case/agreement checking.
(Bobaljik and Wurmbrand 2005: 4)

The prediction that anti-reconstruction is possible only with verbs/predicates embedded under lexical restricting predicates (those predicates that form their independent thematic domain) deserves further attention. The issue crucially touches on the correct analysis of secondary predicates. But on closer inspection the arguments Bobaljik and Wurmbrand provide to support their particular account of anti-reconstruction prove to be problematic. Moreover, the data looked at in their paper can receive alternative accounts, which might support a complex predicate account.
One such aspect is precisely the definition of an *agreement domain*. Three significant characteristics are at stake: i) such domains are sensitive only to agreement processes, but not to movement; ii) such domains are defined contextually; iii) agreement relations are evaluated at LF. What these three parametrization facts are intended to account for is the motivation for movement – A-movement is forced when the goal target-relation has to be established across more than one agreement domain, as well as the source of anti-reconstruction – the agreement relation has to be evaluated at LF, and this is what “puts a lower bound on reconstruction.”

Bobaljik and Wurmbrand (2005) do provide evidence that the internal DP in a restructuring configuration has to raise for Case checking purposes, as opposed to DPs in simple predicates (where nominative Case can be checked in-situ by the mediation of an Agree relation with T). Simple predicates with verb fronting processes illustrate *scope freezing*; in sentence (135) below, although after VP fronting the universal quantifier takes linear precedence, the Nominative DP cannot take wide scope with respect to the Dative subject. This is similar to what is seen in VP-fronting in English (137 vs. 138):

(135) **German: Simple predicates and no fronting– scope ambiguity**

Weil mindestens einem Kritiker jeder Film
Since at least one.DAT critic every. NOM film
gefallen sollte.
Please should.
‘Since at least one critic should like every movie.’

∃>>∀ (ex. for every movie, there is at one critic who likes it)
∀>>∃ (every movie is liked by one critic) →
there could be the case that no single critic likes all the movies

(136) **Simple predicates and verb fronting– scope freezing (only low scope allowed)**

?[Jeder Film gefallen]VP sollte mindestens einem Every.NOM film please should at least one.DAT
Kritiker.
Critic.
‘At least one critic should like every movie.’

∃>>∀
*∀>>∃

(137) **English: Simple predicates and no fronting– scope ambiguity**

…. and a policeman stood in front of every bank that day.  

∃>>∀/∀>>∃

(138) **Simple predicates and verb fronting– scope freezing (only low scope allowed)**

…. and [stand in front of every bank] a policeman did that day.  

*∀>>∃
In light of these types of examples, the patterns exhibited by secondary predicates and restructuring contexts appear to be even more surprising, when compared to fronting. Recall that restructuring/secondary predicates show the opposite behavior in terms of scopal interpretation—they allow the scopal reading which is associated with movement, while they block the scopal reading corresponding to a presumed externally merged position.

As already said, in the German examples discussed by Bobaljik and Wurmbrand (2005) the object DP is higher than the two predicates:

\[(139)\] weil alle Fenster zu schließen vergessen wurden.
Since all windows.NOM to close forgotten were.

‘Since they forgot to close all the windows.’ \(∀\gg\)forget; \(*\)forget \(\gg ∀\) (ex. 15 a)

\[(140)\] weil er alle Fenster vergessen hat zu schließen
close.

‘Since he forgot to close all the windows.’

a. \(∀\gg\) forget
b. \(*\)forget \(\gg ∀\) (ex. 15b)

Constituency tests also indicate that the DP cannot remain inside the embedded VP:

\[(141)\] *[Ein blauer Wagen zu reparieren]_{TP} wurde erst gestern vergessen.\]
\[a.NOM.\] blue car to repair was just yesterday forgotten.

‘It just happened yesterday that they forgot to repair a blue car.’

This contrasts with the examples given above where a VP could be fronted. This diagnoses the same type of restriction as seen with non-variable secondary predicates. No matter

---

\[14\] Such sentences can be contrasted with examples containing non-restructuring infinitivals, as in the impersonal passives, in which the matrix verb is passivized, without agreement. The DP does not bear nominative Case in such instances, wider scope of forget is possible (i), and the embedded verb-DP sequence can be easily fronted (ii):

(i) weil [alle Fenster zu schließen]_{NONRESTRUCTURING} vergessen wurde.
Since all windows.ACC. to close was forgotten.

LIT: ‘since it was forgotten to close all windows.’

(ii) [Einen blauen Wagen zu reparieren]_{VP} wurde erst gestern vergessen.
a.ACC. blue car to repair was just yesterday forgotten.

‘It just happened yesterday that they forgot to repair a blue car.’
whether they are more ECM-like, or adjunct-like, the latter do not permit fronting of the shared argument – secondary predicate cluster:

(142) A student seems sick.
*A student sick (,) seems.

(143) He eats the fish raw.
*The fish raw (,) he eats.

(144) He considers the students intelligent.
*The students intelligent (,) he considers.

Moreover, as the authors further observe, if the infinitive alone is fronted, the examples are grammatical.

(145) [Zureparieren]_{vp} wurde erst gestern ein blauer Wagen
tergessen\textsuperscript{15}.

‘It just happened yesterday that they forgot to repair the blue car.’ (ex. 16c)

The same hold with secondary predicates, which can be fronted (under topicalization or focus movement) when the shared argument is left behind.

(146) SICK, he seemed.

If the DP moves to a high position in the main predicate, anti-reconstruction effects can be connected to a licensing which is established via ‘long distance.’ Cross-linguistic evidence seems to support this claim, as illustrated by the Japanese data. In sentence (142), a restructuring context triggered by the potential re, which assigns nominative Case to the embedded DP, the only reading is one in which only takes scope over can.

(147) \textsc{Japanese restructuring}

John-ga migime-dake-ga tumu-re-ru. \textit{(B&W 2005: ex.18a)}
John-NOM right.eye-only-NOM close-can-PRES.

‘John can only close his right eye.’ \textit{Only\textgreater\textgreater can; *can\textgreater\textgreater only}

\[\text{[it is only his right eye that John can close]}\]

\textsuperscript{15} Bobaljik and Wurmbrand (2005) provide extensive evidence that the fronting the TP is not an option; therefore, such examples can only be explained if the position of the embedded argument is in [Spec, TP], and not inside the embedded VP.
One major claim therefore is that within the domain of a single predicate, agreement on phi-features and the corresponding Case on the DP is possible without movement, and the relation will be licensed at LF in-situ. In restructuring contexts, when triggered by lexical verbs (forget, try, want), agreement between the embedded DP and the relevant function head in the extended projection of the main predicate cannot be realized in-situ and requires movement. Raising is due to the generalization in (149) according to which the embedded restructuring infinitive (predicate) forms its own domain sensitive to locality constraints for agreement (but not to movement). That is, in lexical restructuring contexts there are two agreement domains: the domain of the (lexical) matrix predicate, and the domain of the embedded predicate (as diagrammed in (150) and (151). According to the authors, the Agree relation (which, again, is one of the reflexes of the process responsible for Case checking) is evaluated at LF, and respects a strict locality condition. More precisely, in a non-finite embedded predicate domain, an object DP cannot check Case (because) those predicates lack any relevant functional material). The uninterpretable features can be checked by a functional projection in the domain of the main predicate, but the DP has to raise into the main clause, because the Agree relation cannot be established across an agreement domain. Once the DP has its features checked in the domain of the main predicate, the agreement relation will be evaluated at LF in the matrix clause, to respect locality; the DP will not be able to “lower” into its initial Merge position (the agreement relation won’t be local anymore in that case), hence the lack of reconstruction effects.

(149)  INDUCED DOMAIN GENERALIZATION
The (verbal) complement to a lexical verb delineates an agreement domain.
(BW 2005: 21)
One important problem which deserves further analysis, as it touches directly on the issue of secondary predicates, is the stipulation that only those infinitivals which are embedded by lexical restructuring predicates count as a discrete agreement domain. The distinction between lexical
and functional restructuring predicates (see Table 3) was introduced in Wurmbrand (2004) to separate the anti-reconstruction effects triggered by embedding under forget, want, vs. reconstruction patterns introduced by embedding under modal or raising predicates (seem, must), the latter illustrated in (152):

(152) FUNCTIONAL RESTRUCTURING PREDICATES – RECONSTRUCTION ALLOWED (EX.23 a)
Weil ein Außenseiter gewonnen zu haben scheint.
Since an.NOM. outsider won to have seems.
i. It seems that an outsider won. (seem>> an outsider)
ii. There is a (specific) outsider and he seems to have won. (an outsider >> seem)

<table>
<thead>
<tr>
<th>Lexical Restructuring</th>
<th>Functional restructuring predicates</th>
</tr>
</thead>
<tbody>
<tr>
<td>versuchen ‘try’</td>
<td>Modal</td>
</tr>
<tr>
<td>vergessen ‘forget’</td>
<td>Raising</td>
</tr>
<tr>
<td>gelingen ‘manage’</td>
<td></td>
</tr>
</tbody>
</table>

**TABLE 3: LEXICAL VS. FUNCTIONAL RESTRUCTURING PREDICATES**

As functional restructuring predicates do not constitute a separate agreement domain (there is in fact functional material merging with a predicate in the same way as aspectual heads, or auxiliaries do), both readings are in principle possible (if an adequate theory of scopal quantification is applied).

The authors (2005) are able therefore to explain the non-occurrence of reconstruction with a class of restructuring domains. Let’s examine the specific predictions their agreement-sensitive domain implementation makes with secondary predicates. Since the latter do exhibit reconstruction diagnostics (see clitic climbing, 153), and since they surface anti-reconstruction patterns (154, 155), they would predict that the secondary predicate is an agreement domain, while the matrix predicate is a *lexical* domain.

(153) SECONDARY PREDICATES – CLITIC CLIMBING

**ROMANIAN**

a) *Mi-o*  
DAT.CL.1.SG.-ACC.CL.3.SG.F. consideram fidelă.  
‘I considered her loyal to me.’

---

16 The two sentences in Romanian also permit an (less-preferred) interpretation in which the Dative clitic functions as an applicative (a type of benefactive, or ethical dative) to the main predicate – ‘I considered to me that she was loyal (to someone else)’/ ‘I believed to me that she was dear (to someone else)’. We are interested here in the context in which the dative clitic functions as an argument of the embedded adjective.
(154) **SECONDARY PREDICATES – ANTI-RECONSTRUCTION**
A student seems sick.
i. A specific student seems sick. (a student >> seems)
   *(a student >> seems)*
ii. *There seems that a student is sick.*

(155) The librarian considered a book available.
i. There is a specific book such that the librarian considered it available.
   *(a book >> available)*
ii. *The librarian considered that there is a book available.*

Another prediction made by the analysis discussed above is that the shared DP in secondary predicates has to be merged as an internal argument of a small clause configuration. Assuming a very simplified representation of small clauses, the diagrams below illustrate the required structures for the *seem* context (156), as well as for the *consider* configuration (157).

(156) **SEEM + SECONDARY PREDICATE**

![Diagram](image-url)
If the anti-reconstruction effect is explained along the lines of the analysis in B & W (2005) then it must be the case that seem is a lexical (restructuring) predicate; remember that lexical predicates are those predicates associated with a thematic domain. In more canonical terminology, lexical predicates are like control predicates. This is in sharp contrast with the classification put forward in Wurmbrand (2004), where seem is taken to be functional. This problem is not lethal, nevertheless. As already said, it has been observed several times that seem is not a strict, unambiguous raising predicate, as the classical GB picture assumed (see also Heycock 1995, or Landau 2009). For example, in a sentence like (158), seem appears to behave like a raising predicate:

(158) Someone from New York seems to be likely to win.

But in a sentence like (159), it is definitely not a ‘raising’ predicate:

(159) The man seemed like he was having a nervous breakdown.

Taking a detour now, if seem can alternate between control and raising properties, what diagnostics will help disambiguate between the two? And what do we do with the scope contrasts be-
tween infinitives and secondary predicates when embedded under *seem* (repeated in 160, and 161)?

(160) A student seems to be sick.
   i. There seems to be a student sick. (seem >> a student)
   ii. There is a specific student and that student is sick. (a student >> sick)

(161) A student seems sick.
   i. *There seems to be a student sick.
   ii. There is a specific student and that student seems to be sick. (a student >> sick)

The *seem* contexts are, therefore, true trouble-makers. Trying to connect the lexical/functional distinction to the absence/presence of reconstruction will end up again in circularity – *seem* is functional when there is anti-reconstruction, and anti-reconstruction is possible when functional matrix predicates embed non-finites. Even so, it won’t explain the alternation in (158) and (159).

A more promising line of inquiry would be to assume that i) secondary predicates are, in the first place insensitive to the canonical distinction *control-raising*; ii) the predicate *seem* itself does not feed such a distinction (as shown by sentences like 162):

(162) She seems like she’s sick.

Reconstruction patterns would be dictated by the size of the complement embedded under *seem* (against the detailed argumentation to the contrary in Lectures in Government and Binding). If *seem* merges with an IP, then the embedded predicate will contain a base-generated subject position which can reconstruct. If *seem* merges with a complement smaller than IP/a predicative complement which does not introduce its own argument, then reconstruction effects won’t arise (see Matushansky 2002, in the preceding section for a distinction in the size of the complement *seem* can take).

Going back to B & W 2005, the induced agreement generalization is even more problematic. If agreement relations are checked at LF, and require strict locality, then it follows that the shared argument cannot be found in the lower position (inside the small clause) when Agree is evaluated. But if the DP is in the main predicate domain, and the small clause counts as yet a separate agreement domain (in order to explain anti-reconstruction), then it’s not clear how agreement is realized on the secondary predicate itself. Recall than one vey puzzling aspect of secondary predicates is that they exhibit phi-feature and Case agreement with the shared argument. One could assume that the phi-feature agreement is established by first merge, when the DP is still in the small clause (as a type of concord, or feature copying). This is what the early
minimalist analyses (Chomsky 1991, 1993, 1995) argued for, as well as the more recent discussion on past participle agreement in the more recent paper (Chomsky 2001, for example). Initial merge phi-feature agreement does not pose a problem. But agreement in Case does raise a possibly lethal issue. Following BW (2005), the DP has unvalued features; the agreement barrier induced by the matrix predicate requires raising of the DP. When licensing is checked at LF, the DP has to be in the domain of the main predicate, in order to respect locality. But if the DP cannot lower to be in the domain of the secondary predicate, how is the Case information transmitted to the adjectival head if only a local agreement relation is possible (164)? Recall that the Case on the secondary predicate has a non-trivial contribution. It’s not clear how the Russian data in (163), for example, would ever be explained. It has been noted that in Russian the Case alternation on the secondary predicate (mirroring agreement with the shared DP) is sensitive to aspectual interpretation (which is also presumably computed at LF). Examine the contrast below, with a detailed description of the two readings (from Richardson 2007):

(163) RUSSIAN  
Ivan prišel domoj iz bol’nicy zdorovyj/  
Ivan-NOM. arrived home from hospital healthy-NOM/-healthy- INSTR.  
zdorovym  
‘Ivan arrived home from the hospital healthy (/cured - INSTR.)’

a. INSTRUMENTAL CASE MARKING ON THE ADJECTIVE  
i. The healthy state is a change of state: he went to the hospital unwell and returned healthy (cured)  
ii. The health state is perceived as complete  
iii. The subject came home from the hospital healthy, but he is not necessarily healthy at the time of this utterance, i.e. the healthy state holds true at a particular point in time.

b. CASE AGREEMENT ON THE ADJECTIVE  
i. No change of state implied: the adjective simply describes this state.  
ii. No interpretation that the antecedent’s healthy state is complete, e.g., he might be feeling a little bit dizzy  
iii. The antecedent could still be healthy at the moment of the utterance, i.e. the healthy state does not hold true at a particular point in time only.

The only way to escape this conundrum would be to assume that Case agreement is not subject to the induced agreement generalization, in the same way as reconstruction is. Such an explanation might turn out to be viable; but it does not explain what the source of anti-reconstruction is. It simply amounts to saying that anti-reconstruction occurs because it occurs.
And there is yet another very problematic assumption BW (2005) are forced to make. In order to obtain the correct distribution, DP movement cannot be successive-cyclic; instead it has to take place in one single step, from the embedded position to the Case-checking/agreement position. This is problematic not only because it violates successive cyclicity, but also because it is too strict. If this type of movement is done in one fell swoop, it becomes impossible to explain long distance agreement patterns in which the DP is found at the edge of the embedded clause. Assuming that the embedded clause is a phase, and movement proceeds along a distinct pattern in those configurations amounts to saying that they are phases. This will be at odds with secondary predicates. The evidence available unambiguously demonstrate that the secondary-predicate (or the small clause) cannot be a *strong phase* - the Case feature on the adjective which is dependent on the Case feature checking on the DP (whose valuation takes place outside the embedded predicate domain) will remain unchecked. And we are back where we started; therefore, anti-reconstruction cannot be accounted for in terms of an induced agreement domain.
2.4.2 Boeckx (2001): Case checking condition on scope taking

Boeckx (2001) proposes an account according to which interpretation of DPs is tightly correlated to Case checking. Once Case is checked, the element is freed for interpretation. Arguments have to be interpreted in the position where their uninterpretable Case feature is erased. Those indefinites that can accept an existential reading escape this requirement due to the covert insertion of an expletive. In a similar feature to Chomsky (1993), lowered readings are demonstrated to involve literal lowering of the quantifier.

The starting point is the following paragraph from Fox (1999): “the necessary stipulation about A-movement could be derived from an assumption that has the air of an explanation to it, namely, the assumption that copies must receive Case”. Boeckx (2001) further extends the limits and purpose of the Visibility Condition; originally seen as a necessary condition for the theta-criterion (Aoun 1979, Chomsky 1986), it is now the necessary means for marking a syntactic object interpretable for intensional notions like scope. But this starting point has to be obviously qualified: in its simplest form it would predict that lowered readings are possible in all positions a syntactic object is found during a derivation, because checking of a Case feature takes place in all the members of a chain. Thus it would be expected that all copies are available for interpretation, and the anti-reconstruction patterns would remain a mystery. In order to solve this dilemma, and further avoid the introduction of technical machinery that does not have independent motivation (such as the distinction between checking and erasure, for example), Boeckx (2001) implements a theory of Case checking on the lines of Pesetsky and Torrego (2000). Uninterpretable features are seen as features that “happen to be on the wrong element”, or misplaced. This twist is used to motivate the logic behind reconstruction – misplaced features can only be interpreted in the position in which they are put back into place, on just one occurrence, which for A-movement happens to be the highest one. If the canonical process of checking involves the whole chain, mis/replacement affects the highest position only.

In order to account for the lowered readings, Boeckx (2001) starts from the connection between existentials and reconstruction which was introduced in section 2.1.1. To repeat, what was noticed in that section was that in normal conditions only weak quantifiers are allowed to reconstruct. Weak quantifiers/DPs are those elements which are possible as associates of there. Boeckx (2001) captures this generalization by postulating a late insertion of a null counterpart of
there, post-Spell-Out, in the covert component. A-cyclic insertion is only granted to elements with weak features (those features that do not have to be checked overtly; see early minimalist works for the distinction: Chomsky (1993), etc.).

The a-cyclic insertion of there \((\text{there}_{\text{LF}})\) is realized at the IP level, on top of the raised indefinite. “The function of \(\text{there}_{\text{LF}}\) is to turn the overtly raised quantifier into an associate, and “push it down’ the tree, as it were, for purposes of interpretation”. As is obvious by now, Boeckx (2001) explains the particular behavior of certain classes of quantifiers, and their capacity to lower by the existence of a covert process of \(\text{there}_{\text{LF}}\) insertion. The question is now: why does the a-cyclic insertion happen only in those cases and not in others? And why don’t secondary predicates (as well as other wide-scope contexts) permit the process of \(\text{there}_{\text{LF}}\) insertion? Boeckx (2001) does not provide an answer to the question of why there insertion takes place in precisely those contexts in which it does. But his remarks about the interaction with existentials appear to be supported by empirical data, as shown above. In order to see how a more explanatory account can be offered, there is yet another technical possibility which has to be rejected.

### 2.5 Sportiche (2005): acquiring D heads derivationally

A quite ingenious attempt to deal with reconstruction cases is seen in Sportiche (2005). Sportiche’s assumption is that portions of nominals, more specifically the determiner and the quantifier head are generated outside the thematic domain (outside the small clause, in our case). Sportiche (2005) goes beyond observations that an NP can get its D derivationally (see the classic discussion of relative clauses in Vergnaud 1974) and postulates that it is always the case that a DP is assembled derivationally. On the other hand, a tension arises because of the postulate that some semantic relations (among which wide scope readings) must be coded syntactically as structurally local relations.

The structure Sportiche (2005) assumes for a simple sentence containing an intransitive predicate and quantified DP is given below:
D’s are part of the functional structure of the clause; they take as their first argument the projection encoded by X (which includes the predicate VP), and a second argument is a projection containing N. N and D form a unit via a type of sideward movement (movement to a non c-commanding position). This operation should be allowed because Sportiche (2005) assumes that the Extension Condition is not relevant or independently supported for Move (as opposed to Merge).

The lack of lowered readings with secondary predicates is attributed to the reduced status of small clauses; they are types of constituents which cannot host a D (with existential value). The only way for the NP to be interpreted is to raise to a D head above the main predicate, and obtain a wide scope interpretation.

Although Sportiche (2005) might explain the anti-reconstruction patterns, there are some non-trivial problems with this kind of analysis: first of all, it appears to contradict the generalization that raising of N to D is required in order to turn a noun into an argument (Longobardi 1994). Another problem is the presence of massive sideward movement, which is not motivated as a means of constructing nominals. Also, assuming that NPs only are merged in the theta domain, one conclusion one can draw is that theta roles are assigned to predicates (NPs lacking the DP layer are usually taken to be predicates). Under this specific implementation, the analysis would run into serious shortcomings. First of all, predicates obligatorily reconstruct, as Huang (1993) has accurately shown. One example Huang (1993) provides is the sentence in (166), in which the ungrammaticality suggest availability of predicate reconstruction all the way down the tree; interpreting a copy of the predicate inside the embedded clause leads to a Condition A violation.

(165) a. every cat slept
b. 
```
D
   D X
   D N .... V
```

(166) a. *How proud of herself does Mary think than John is?
b. <how proud of herself> does Mary think that John is <how proud of herself>?
(Condition A violation)
Assuming that NPs are basically like predicates, it’s not clear why an interpretation in the base-generated position, before the N head raises to D is impossible. Such an interpretation would presumably be “existential-like”; in any case, it would probably resemble a narrow-scope reading. Moreover, an explanation according to which what we see here is Binding Reconstruction, as opposed to reconstruction in terms of scope does not seem to be necessarily valid. Examples can be modeled in which in which predicate phrases containing quantifiers require being interpreted in-situ. As examples with predicates containing universal quantifiers are easier to construct, let’s examine the example in (167), in which (at least) three readings are possible. The reading in (167a) corresponds to a context in which we are referring to some specific student who seems to be interested in every book. (167b) would convey the idea that the range of books varies with the range of students (every takes wide scope with respect to some). The context we are most interested in is the one in (167c), in which some takes a lowered reading with respect to seem but also outscopes every. Crucially, a reading in which every takes wider scope than some under seem is not an option.

(167) Some student seems to be interested in every book.
   a. Some specific student is such that s/he seems to be interested in every book.
      \[<\text{every book}> <\text{some student}> \text{ seems } <\text{every book}> <\text{some student}> \text{ to be interested } <\text{in every book}>\]
      (some >> seem >> every)
   
   b. For every book, there is some student who seems to be interested in it.
      \[<\text{every book}> <\text{some student}> \text{ seems } <\text{every book}> <\text{some student}> \text{ to be interested } <\text{in every book}>\]
      (every >> seem >> some)
   
   c. It seems that there is some student (or the other) who is interested in every book.
      \[<\text{every book}> <\text{some student}> \text{ seems } <\text{every book}> <\text{some student}> \text{ to be interested } <\text{in every book}>\]
      (seem >> some >> every)
   
   d. *It seems that for every book, there is some student who is interested in it.
      \[<\text{every book}> <\text{some student}> \text{ seems } <\text{every book}> <\text{some student}> \text{ to be interested } <\text{in every book}>\]
      (seem >> every >> some)

Also, the account won’t still explain why in some cases one could see selective reconstruction effects only. The sentence in (168) is such an example (originally provided by Zubizarreta 1982, and further discussed by Higginbotham 1995, Lasnik 1998 b, Sportiche 2005, Matushansky 2002, etc.). Zubizarreta (1982) attributes to Noam Chomsky the insight that this sentence can
have a reading according to which *a man* scopes under *is likely*, while the same indefinite cannot scope under *seem* and the negation.

(168) A man is likely not to win the lottery.
   \[\text{Ok. It is likely <a man> not to win the lottery.} \]
   \[\neq \text{It is not likely <a man> to win the lottery.} \]

Contrasting (167) with (168) under the assumption that indefinites are NPs (predicates) would leave unexplained why in some contexts predicates fully reconstruct, while in others only partial reconstruction is allowed.

Also, as another observation, it can’t always be the case that small clauses lack a D head (with existential specification). In the two sentences below, the object of the preposition or the adjective can receive an existential reading:

(169) Mary seems in love with a hat like mine. (Moulton 2011, ex. 26)
(170) Mary seems annoyed with a friend.
(171) Mary seems interested in a linguistic theory.

Another important classe of claims Sportiche (2005) makes is that the small clause analysis is supported by appeal to contexts in which secondary predicates illustrate: a) expletive subjects; b) idiom chunks; c) overt morphological agreement (dependencies); d) the presence of derived subjects (see Sportiche 2005, a.o.). However, at a closer look it turns out that none of these arguments is as strong or clear-cut as initially thought. Each of these argument will be examined below in detail.

A) **Expletive subjects**

This environment is illustrated by examples like the following:

(172) It seems obvious that....

The reasoning is as follows: only raising predicates allow expletives, which are inserted as a last resort in order to check the EPP feature of the matrix T. When *seem* (a raising predicate, potentially) merges with a small clause, the subject of the small clause has to raise for Case reasons, and checks the EPP feature of matrix T.

(173) a. \[\text{T seems [the man tired]} \]
    \[\text{[EPP]} \quad \text{[uCase]} \]

b. \[\text{the man T seems [the-man tired]} \]
    \[\text{[Nom]} \quad \text{[EPP]} \quad \text{[uCase]} \]
If there is no lexical argument in the subject position of the small clause, an expletive must be inserted in order to avoid crash of the derivation (as the EPP feature is not satisfied). This is taken to provide evidence that *seem* is a raising predicate (at least in the adjectival small clause contexts). Due to its raising character, in a sentence like (173), the DP *the man* cannot be an argument of (receive a theta role from) *seem*. And by extension, all cases in which *seem* is found are taken to be raising contexts. That this conclusion is too hasty has been proved several times.

It is well known that the predicate spelled out as *seem* can be seen in at least two semantically and syntactically distinct contexts: the *evidential* use, and the *pure raising* use. For example, *seem* is allowed in the Copy-Raising Construction, out of which example (174) is the most difficult to account for under a raising assumption (as *seem* merges with a finite CP which contains its own external argument). In order to account for the empirical data, it is generally assumed that in Copy Raising the main clause subject *is* an argument of the copy raising verb, the so-called Perceptual Source Argument (Asudeh and Toivonen 2010, Landau 2009):

(174) Tom seems like he’s cooking pasta.
(175) Tom seemed/looked like Mary has said something awful. (Landau 2009)

Copy Raising is taken to involve an *evidential* reading of *seem* as the construction is possible only if the external argument in the main clause can be interpreted as the entity subjected to direct evidence. Compare the two examples below illustrating the Puzzle of the Absent Cook in Asudeh and Toivonen (2010):

(176) *A and B walk into Tom’s kitchen. Tom is at the stove doing something, but exactly what is a little unclear.*
   a. Tom seems to be cooking pasta.
   b. It seems that Tom is cooking pasta.
   c. Tom seems like he’s cooking pasta. (Asudeh and Toivonen 2010, ex. 27)

(177) *A and B walk into Tom’s kitchen. There’s no sign of Tom, but there are various things bubbling away on the stove and there are several ingredients on the counter, apparently waiting to be used.*
   a. Tom seems to be cooking pasta.
   b. It seems that Tom is cooking pasta.
   c. # Tom seems like he’s cooking pasta. (Asudeh and Toivonen 2010, ex.27)

The analysis Asudeh and Toivonen propose for Copy Raising is that the matrix subject is *an argument* of the copy raising predicate, more specifically a Perceptual Source Argument. The same conclusion is endorsed by Landau (2009) in a discussion of examples similar to (177).
Going back to the secondary predicate examples, it is important to note that they also require the direct evidential interpretation of *seem*. This puzzling fact has been previously noted in the literature. See for example the Puzzle of the Absent Squire in Matushansky (2002):

(178)  *I walked into the squire’s room when he wasn’t there. I saw medicine bottles, Kleen exes, and smelled a foul, sickly stench.*
  a. The squire seemed to be sick.
  b. # The squire seemed sick.

This indicates that the *seem* variant constructed with secondary predicates is not the *raising*, but rather the *evidential* type (the latter argued to be able to take arguments, and assign thematic roles). Hence, the impossibility of the indefinites to take low scope with respect to the main predicate, and to be interpreted existentially. To repeat, the only well-formed interpretation in (179) is one in which *a student* obtains a reading related to specificity (a specific student appear to be sick). *A student* cannot get an existential interpretation, conveying that a student or other seems sick.

(179)  *A student seems sick.*
  a) 0.K a student >> seems
  b) # seems >> a student
  c) # It seems that a student is sick.

This discussion implies that *seems* is not necessarily a raising predicate. Going back to the sentence in (172), repeated here as (180), remember that Sportiche’s argument that it involved a raising predicate was based on the presence of the expletive *it*.

(180)  *It seems obvious [CP Shared Argument that....*

But one cannot help noticing that there are confounding factors related to this sentence – the argument (associate of the expletive) appears to be full CP (finite clause). If the complex predicate story pursued in this paper is correct, one would expect consequences at the PF (morphology) – interface. Assuming that the CP is the shared argument, the configuration obtained is as in (181):
The CP is too large a component to be embedded between the two predicates after *seem* head raises to $v$. There are two possibilities: 1) either the CP further moves to [Spec, T] to satisfy the EPP (as in 182); 2) the complex *seem* + *sick* raises above the CP. In this case the EPP is satisfied by merging *it*, which will be coindexed with the shared CP\textsuperscript{17} (as in 183).

(182) $\left[CP \text{That} . . . . \right]$ seems obvious.

The strong assumption is that adjectival secondary predicates form *complex predicates* with the main predicator in a mono-clausal structure. The mechanics employs the uninterpretable complex predicate feature of the $v \text{RESTRCT}$. Such feature can be checked when a probe-goal relation is established *at a distance*, given that more than one predicate (with the corresponding matching feature) is available in the relevant domain. In the simplest scenario, $v \text{RESTRCT}$ might require overt raising of the *first* predicate, an option which is possibly parametrized (there is indication that in English the matrix predicate raises above the shared argument, given the unmarked

\textsuperscript{17} Putting aside a discussion that goes beyond the scope of this thesis, it is not even clear that in such sentences *it* is interpreted as a true expletive.
word order in which the former precedes the latter). In normal conditions the checking operation
does not require the overt raising of the second, third, etc. predicate. Contexts in which the
shared argument is a sentential complement complicate this picture. The information that two
predicate units form a complex is relevant at PF (and morphology). When a large unit intervenes,
the dependency relation between the two predicates might be lost due to the opacity created by the
heavy argumental constituent. Hence various rules of PF might reorder the constituents under
three logical possibilities: a) the argumental CP is raised to Spec, T in order to check the uninte-
pretable EPP feature of T (182); b) the secondary predicate incorporates into the matrix predi-
cate, and the complex is then raised to \( v_{\text{RESTRICT}} \) (183); c) the shared argument CP undergoes a
process similar to \textit{Heavy NP Shift} (Ross 1967, Larson 1988, 1990, Culicover and Jackendoff
2005), i.e., movement to the right of the secondary predicate. The observation that cross-
linguistically, secondary predicates can overtly incorporate into the matrix predicates gives more
support to option (b) than (c)\(^{18}, 19, 20\).

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\(^{18}\) Leaving aside possibility (c), the facts appear to suggest that there is optionality between (a) and (b). But is this true optionality? This question will be left open here.

\(^{19}\) A question can be raised about the movement to \( v_{\text{RESTRICT}} \). \[\text{seem obvious} \] is potentially a \textit{phrasal} component, while \( v_{\text{RESTRICT}} \) is a head (zero-level marker). Such movement would violate the Head Movement Constraint, among other restrictions (Travis 1984, Baker 1988, etc.). Such constraints, initially formulated in GB, have a theory-internal status, and it’s not clear what output conditions they follow from. In a minimalist framework, where operations, mechanisms, and implementations have to be motivated by independent factors, rooted in the interface conditions, restricting phrasal movement to head positions becomes somehow problematic. That phrases cannot overtly incorporate into heads can be at most a constraint the \textit{morphology} of some languages might impose. The observation that phrasal material can incorporate or be visible inside compounds or what look like morphological complexes has been attested in various languages (see Dowty 1979, chapter 3 for a discussion on Greenlandic, Sadock 1980, 1985, Spencer 1991, Spencer and Zwicky 1998, Haspelmath 2002, di Sciullo and Williams 1987, Massam 2001, Scalise and Vogel 2010, etc.). Moreover, as Chomsky (1994) also makes clear the status of a marker as a head or phrase is established with respect to the output, and not set changeable during the derivation. Chomsky (1994) precisely discusses the case of clitics, as well as phrasal movement into the V head in the case of causatives. What this thesis assumes is that the bare phrase structure approach extends to the structure of secondary predicates, extending in fact similar observations about phrasal movement into head positions required for copular constructions, as discussed in Carnie (1995). See more about the \textit{necessity} of permitting phrasal movement into heads in Nunes (1998), and Toyoshima (2000).

\(^{20}\) The fact that the (complex) V raises to \( v_{\text{RESTRICT}} \) might raise a problem of locality, as the Sit. head is skipped. However, under an account of minimality relativized (Rizzi 1990) to semantic features this complication might be avoided.
B) Idiom chunks

The data from idiom chunks raises interesting issues. Examine the following example from French further provided in Sportiche (2005):

(184) La hache de guerre semble enterrée pour l’instant.
The hatchet seems buried for now.
‘The hatchet seems buried for now.’ (i.e. the fight/war seems to have stopped)

This idiom is constructed from the transitive *enterrer la hache de guerre* (‘to bury the hatchet’), more specifically the adjectival/passive *la hache de guerre est enterrée* (‘the hatchet is buried’). There are two observations to be made here; the sentence in (184) contains a secondary predicate merged with *seem*, which causes problems due to its multiple readings. The fact that the idiom chunk cannot be interpreted existentially indicates that the evidential *seem* is at stake here. We have seen above that this variety permits the introduction of the shared argument in the matrix domain. On the other hand, idioms require semantic transparency (that is, the lexical interpretation of *bury* to be preserved as much as possible), and a verb like *seem* does not seem to be heavily loaded from a lexical semantic point of view. In simpler terms, the lexical semantics of *seeming* is such that it does not have the strength to alter/blur/enrich/make inaccessible the lexical semantics of the secondary predicate. What one should be testing is whether the idiom interpretation is preserved once predicates that are more control-like are used. A language in which the
contrast is clearly illustrated is Romanian; the idiom chunk can be constructed with the verb *arrive*, under its reading of ‘get to a destination’:\(^{21}\):

\[(185)\] **ROMANIAN**

Securea războiului a ajuns (deja) îngropată
Hatchet.the war.GEN.the has arrive.PST.PRT. (already) bury.F.SG.
at us.
lă noi.
‘The hatchet arrived buried at us.’

The sentence in (185) can obtain either a non-idiomatic reading (if a specific hatchet arrives buried in soil found inside a box, for example) or an idiomatic interpretation. The latter reading is made clearer in a context like the following: let’s say that two parties are having a conflict about a specific issue. As they cannot solve the problem, they decide to appeal to a third party (us). If when we investigate the issue we realize that the conflict is non-existent as the two parties had in fact proposed pertinent solutions to clear it, we can utter the sentence in (185), meaning that the conflict was appeased before and arrived at us as such. Under all possible analyses in GB, a verb like *arrive* (‘get to a destination’) is unambiguously control; that is the argument *hatchet* has to receive a thematic role from it. Interestingly, Romanian appears to show a more impersonal (GB raising?) use of the verb *arrive*, and in this case the reading is more like ‘to be enough’:\(^{22,23}\):

\[(186)\] **ROMANIAN**

(Nu) ajunge să fi fi bogat.
(Not) arrive.3.SG. SUBJCT. be.2.SG.SUBJCT. rich.M.SG.
‘It is (not) enough to be rich.’

Crucially, the *be enough* reading does not preserve the idiomatic interpretation:

---

\(^{21}\) The other readings of this verb are “become rich”, and “be enough”.

\(^{22}\) That this reading is more like *raising* is demonstrated by the contrast seen with (i) and (ii). Sentence (i) can mean either that it is enough that the man/men (if the singular is generic) be rich or that the man becomes rich (i.e. arrives at the characteristic of being rich):

(i) Omul ajunge să fie bogat.
Man.the arrive.3.SG./be enough.3.SG. SUBJ be.3.SG.SUBJ rich.M.SG.
A) Lit. ‘The man arrives to be rich.’ = ‘The man becomes rich.’
B) It is enough that the man be rich.

On the other hand, in sentence (ii), the argument is inside the embedded subjunctive clause, and the only interpretation possible is the *be enough* one:

(ii) Ajunge ca omul să fie bogat.
Arrive.3.SG (=be enough.3.SG.) SUBJ man.the SUBJ be.3.SG.SUBJ rich.M.SG.
‘It is enough that the man be rich.’

# ‘The man becomes (i.e., arrives to be rich).’

\(^{23}\) Romanian is pro-drop language, and does not allow overt expletives. Hence the sentence in (186) is normally analyzed as containing a null expletive.
What these examples from Romanian illustrate is that with secondary predicates the idiomatic reading is not lost when typical GB control predicates are present in the structure. Therefore, a complex predicate analysis cannot be rejected a priori, in favour of a small clause which contains the shared argument underlyingly. The fact that the idiomatic reading is lost with more typical raising predicates is moreover a strong indication that a small clause account is not what necessarily characterizes such constructions. Instead, they appear to embody sophisticated types of complex predicates.

C) overt morphological agreement (dependencies)

The third piece of support for the small clause account refers to the overt morphological agreement on the secondary predicate, creating covariance with the features of the shared argument. As this property is extremely suggestive when secondary predicates are analyzed, long distance agreement patterns will be discussed separately in Chapter 3. Anticipating the more detailed discussion, both the arrive-type, as well as the adjunct-types would require PRO under a small clause account. Nevertheless, under current and more traditional assumptions about the nature of this element (Chomsky and Lasnik 1995, Martin 2001, Chomsky 1981, Bouchard 1982), it is not clear how the intricate predicative Case patterns of secondary predicates would be accounted for. What would be needed is a theory of PRO in which its Case properties are in a sense unspecified, but at the same type predicting the correct co-variance. This amounts to stipulating features according to separate contexts, and enriching the nature of PRO to a point that its presence becomes superfluous; as the patterns can be explained by independent long distance/multiple agreement phenomena, minimalist postulates dictate that such a category is probably not necessary.
D) **cliticization**

The fourth argument brings into discussion sentences containing specific types of cliticization. Examine the data in (177) from French:

\[
\text{FRENCH} \\
\text{La porte en semble fermée.} \\
\text{The door of it seems closed.}
\]

According to Sportiche (2005), the generalization is that *en* cliticization is possible only if the subject is not an underlying external argument of the main predicate. The analysis provided in this paper avoids this problem; the shared argument is *not* an argument of the main predicate, and moreover it is merged inside the complex predicate domain. What *en* appears to be sensitive to is the presence of an external argument merged above *vP* (the domain of the predicate). In conclusion, due to all these problems, it appears that Sportiche’s (2005) account is untenable. The small clause analysis proves to be problematic on all respects. Two other implementations which also appear to be extremely difficult to sustain are discarded first, before further specifying the account of anti-reconstruction patterns argued for in this thesis.

### 2.6 Other problematic accounts

#### 2.6.1 Heim and Kratzer (1998)

The entire discussion above has shown that indefinites behave unexpectedly reconstruction. Canonical cases of reconstruction with A-bar movement or the partial contexts of A-movement (of the type discussed in Abusch 1993) show that the interpretive process must have access to the highest position of the chain formed. Indefinites under A-movement are special in that for them reconstruction appears to be *total* - the lower copy is interpreted, while the head position of the chain behaves as if absent. A theory of movement and reconstruction interpretation has to be modelled in such a way as to give the right predictions in this particular case. Accounts which employ variable binding under movement would be *prima facie* incapable of capturing the total reconstruction pattern. In order to illustrate the problem, the most well-known analysis in this class, namely Heim and Kratzer (1998) is briefly examined here. According to the two authors (see also Boeckx 2001, page 524, or Bhatt 1999 for extensive discussion), a movement operation respects the steps in (189):

\[
\text{(189) Movement: when XP moves from a position inside YP to the sister position of YP, the following operations take place:}
\]
In Heim and Kratzer’s (1998) implementation, built on Cooper (1979), movement is taken to create a predicate which in turn applies to the moved constituent. XP-movement out of YP creates two new constituents on top of YP. These two new constituents are both necessary: YP' (the lower one) is a functional abstract over the variable left in the original position of XP, and YP'' results from the interpretation of the function YP' applying to the meaning of the moved constituent XP. The main problem this type of account has with reconstruction of indefinites under A-movement is that such process can never be total. If the higher copy (XP₁) is treated as invisible by the interpretive component, the lambda-abstract will be unbound. This will result in a lethal violation of the Proper Binding Condition, as formulated in Fiengo (1977), etc., which dictates that traces must be bound in order to receive an interpretation.

2.6.2 Elbourne and Sauerland (2002)

Another possibility to account for reconstruction patterns is to relegate the process to the PF-component. This is what Sauerland (1999), and Elbourne and Sauerland (2002) propose in order to avoid the problems which fall out from a violation of the Proper Binding Condition. The two authors basically deny the existence of a process of reconstruction with its special mechanics (copy activation, quantifier lowering, or other implementation). The canonical EPP-driven movement applies in the PF-component, instead. And the moving element will end up interpreted in-situ. This is illustrated in the representation below:
(191) [Someone from New York] is likely <someone from New York> to <someone from New York> to win the game.

Reconstructed reading at Spell-Out – LF visibility

The existence of PF movement cannot obviously block a syntactic A-movement operation; if that were the case it’s not clear how the wide scope readings would be accounted for. Even if one finds a solution around this, those instances in which movement/reconstruction interacts with Binding or intervening quantifiers are clearly problematic (see also Boeckx 2001). An example illustrating Trapping is given below:

(192) Someone seems to himself <someone> to be <someone>a genius.

If movement of someone is not an operation of Narrow Syntax, himself will be unbound. Note that Elbourne and Sauerland (2002) do not block the syntactic movement per se, but do not either parameterize the two options. How does the system know when to apply PF-movement as opposed to narrow syntax displacement? Moreover, it would be almost impossible to formulate an account in which scopal interactions are interpreted are a result of PF processes only. This, correlated with the implausibility of a A-movement as PF operation to begin with (PF movement has other characteristics among which strict locality), leads to a rejection of an account along these lines.

2.7 Other arguments for small clauses and their problems

The previous sections have shown that the evidence assumed to support a small-clause analysis of adjectival secondary predicates does not hold under detailed examination. However, it must be acknowledged that, leaving aside the scope facts, the small clause configuration has been claimed to make good predictions regarding other empirical facts. This section further investigates the formal grounds of these claims; the following four classes of tests are generally taken in the literature to support the superiority of the small-clause analysis when a broader picture of grammatical processes is scrutinized:

a) Intervention effects with reflexive clitics
b) SPs and expletives
c) Subject Condition Effects
d) Evidence from binding
a) **INTERVENTION EFFECTS WITH REFLEXIVE CLITIC**

This test addresses examples originally provided by Rizzi (1986) for Italian; sentences like (193) and (194) are used to support the conclusion that the reflexive clitic (*si*) cannot intervene between NP trace and its antecedent.

(193) **ITALIAN**

*Gianni* *si* *sembra* [t* i* non fare il suo dovere].

Gianni REF.L.DAT. seems non to-do the his duty.

‘Gianni seems to himself not to do his duty.’

(194) *Gianni* *si* *sembra* [t* i* intelligente].

Gianni REF.L.DAT. seems intelligent.

‘Gianni seems intelligent to himself.’

Rizzi’s (1986) discussion assumed a representational analysis of chain formation with the further requirement that each link in an A-chain involve local binding. Under this approach, what is problematic in these sentences is a local binding relationship established between the reflexive clitic and the trace of the subject DP (*Gianni*). As the clitic is bound by the subject, it will also end up binding the subject’s trace. Obviously, this demonstrates that the trace must be present inside the small clause. Prima facie, this proves to be a very strong piece of evidence in favor of small clauses. However, there are some data confounds which weaken the usefulness of this test. First of all, when consulted, many native speakers of Italian agree that these types of sentences are not syntactically ill-formed, but rather semantically odd. The deviance is due to a clash between the evidential component of *seem* which specifies the *external* nature of the property embedded and the semantic contribution of the reflexive which restricts the evidence to the *internal* world of the experiencer. Secondly, it is also known that the effects might not hold (to the same degree) cross-linguistically. For example, they do not arise with English infinitivals:

(195) **ENGLISH**

John seems to himself [<John> to be happy].

Rizzi (1986, page 84, footnote 13) himself notices in fact that ‘the quality of the data strongly suggests that the basic fact to be explained is the general deviance of these structures, and the existence of marginal areas of variation is to be attributed to *peripheral* mechanisms.’ On a closer scrutiny, it turns out that (at least) some of these peripheral mechanisms have a non-negligible status in the grammar. One non-trivial contribution is made by evidence component of perceptual verbs like *seems*. As this specification is at the root of the clash mentioned above, it deserves further analysis. Therefore, let’s take a brief detour at this point in order to show more
clearly how the lexico-syntactic composition of perception predicates dictates the configuration they will be merged into.

A simple cross-linguistic investigation indicates that the type and size of the predication-al/sentential complement of seem distinguishes among at least two sub-types: a) what will be labeled here the evidential seem, which must merge with adjectival secondary predicates; b) the non-evidential seem which embeds clausal structures. In order to be semantically/pragmatically well-formed, the evidential seem requires a DP argument which is under its direct (or indirect) evidence scope. This is seen in sentences like (196) which are odd if the speaker does not have direct evidence of the entity whose predicate property is under discussion. The absence of such entity gives rise to various puzzles, among which the puzzle of the absent squire discussed in Matushanksy (2002), a.o.:

(196)   ENGLISH: PUZZLE OF THE ABSENT SQUIRE       [Matushansky 2002]
        I walked into the squire’s room when he wasn’t there. I saw medicine bottles, Kleen
        exes, and smelled a foul, sickly stench.
        a. The squire seemed to be sick.
        b. # The squire seemed sick.

This requirement can be formalized by assuming that a predicate like seem lexically incorpo-
rates a feature evidence. This lexical make-up would be similar to a predicate like see which lex-
ically specifies a feature [+visual cognitive operation]. Such featural requirement is salient for both internal and external arguments. If the latter are semantically specified as clausal, then this specification is not salient, and predicates like seem and see are reinterpreted as encoding to a [+ cognitive operation ] component. See the distinction between (196 a) and (197 b), as well as the contrast in (197) below:

(197)   a. I see the man.
        b. I see what you are saying.

Clausal constituents could be, by their very nature, insensitive to the feature [+visual cognitive operation]. DP entities on the other hand do care about this. A predicate like see introduces the presupposition that both the entity initiating the seeing operation as well as the entity undergoing the eventuality of seeing exist and be present in the relevant context. This much is undisputable, and canonical (in a sense). What requires further explanation is why adjectival secondary predicates must merge with the evidential seem (as seen in 195, and 196). And, moreover, if there are two types of seem predicates, how precisely the distinction between them is encoded structurally.
This section will provide further morpho-lexical, as well as syntactic evidence demonstrating that what is spelled-out as *seem* in English can correspond to (at least) two distinct syntactic structures. Then, building on this type of data, it will be shown that the *evidential seem* results from the merger of a root √ *seem* and a head specified as evidential, which introduces the shared argument (corresponding to the entity found under the scope of evidence). Lastly, it will be shown how this structure interacts with the specification of the reflexive leading to semantic or pragmatic clash (the precise nature is beyond the scope of this thesis, and will be left for future work).

The first type of data comes from languages in which the two varieties of *seem* correspond to two distinct lexical forms. Two such languages are Turkish and Romanian. Examine the two sentences below from Turkish:

(198) **TURKISH SEEM + SECONDARY PREDICATE**

Bir adam mutlu gözük-ü-yor-du/mus.
A.SPECF. man happy seem-EP.V.-PROG.-DIR.EV.PST./INDIR.EV.PST.
‘A specific man seemed happy (and I have direct/indirect evidence for uttering this).’

(199) **TURKISH SEEM + CLAUSAL COMPLEMENT**

Bir adamin multlu olduğu belliydi/*gözük-du.
A GEN. man GEN. happy be.PART. seem-DIR.EV.PST.
‘A (non-specific) man seemed to be happy.’ ⇒ ‘it seems that a (non-specific) man was happy.’

As can be seen in (198) and (199), the adjectival secondary predicate with a shared argument interpreted as [+ specific] only accepts the lexical form *gözük* (*seem* under the reading of ‘look like’), while clausal participials require the so-called *impersonal seem*, which is mapped to a distinct lexical form. Note that if the shared argument can be interpreted non-specifically, then the form *gözük* is impossible.

Similar facts come from Romanian, too. In this language there are at least three types of *seem*, as illustrated in Chart 1 below.

<table>
<thead>
<tr>
<th>Possible with AdjSPs</th>
<th>• the so-called ‘control’ <em>seem</em>: părea + subject agreement (SEEM₁)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• DATIVE experiencer + SE + părea + subject agreement (SEEM₂)</td>
</tr>
<tr>
<td>Disallowed with AdjSPs</td>
<td>• the so-called ‘impersonal’/ ‘raising’ <em>seem</em>: Impersonal SE + părea + default agreement (SEEM₃)</td>
</tr>
</tbody>
</table>

**Chart 1. Romanian seem**
The control/raising distinction mentioned in Chart 1 should not be taken as indicating that these two predicates correspond exactly to traditional control/raising structures, as defined in LGB (1981), for example. Their detailed syntactic structure will not be discussed here (see Dobrovie-Sorin 1996 for a more detailed presentation); what is important at this stage of the discussion are the following issues: a) lexical non-identity; b) behavior under idioms; c) interactions with reflexives. For the first test, as the table illustrates, there is a morpho-lexical distinction between the ‘raising’ *seem* which obligatorily takes the impersonal SE, and requires default agreement. One ‘control’ variant of *seem* (SEEM 2) does not accept the reflexive SE, but rather the middle (medio-passive form)\(^{24}\), and imposes subject-agreement. Also note that the medio-passive SE is only possible with a ‘control’ variant if an overt experiencer is present. If the latter is not specified, then SE is not an option, as seen in (200 a), which illustrates the only ‘control’ variant possible with adjectival secondary predicates, in the absence of an experiencer. As illustrated in (200b), when an idiom is embedded under this variant of SEEM, the relevant reading is lost. The relevant idiom here is ‘câinele moare de drum lung’ (LIT ‘the dog dies from a long walk’)\(^{25}\) used to describe a person who cares too much about other people’s business. As this idiomatic reading is lost with ‘control’ SEEM, sentence (200b) can only be uttered if the speaker is seeing a specific dog collapsing to death, and knows that a long walk has caused such a tragic outcome.

(200) **Romanian SEEM\(_1\), Secondary Predicates and Idioms**

\[\begin{align*}
\text{a)} & \quad \text{Copi-i-i pâre-a-u bolnav-i.} \\
& \quad \text{Child-PL.M.-the seem\(_1\)-IMPF.PST-3.PL. sick-M.PL.} \\
& \quad \text{‘The children seemed/looked sick.’} \\
& \quad \text{[direct evidence is required; highest degree of evidentiality]} \\
\end{align*}\]

---

\(^{24}\) The reader has probably noticed that the two SE appear to be identical on the surface. However, this is only an illusion when it comes to their structures. There are various tests that distinguish these two variants of SE, among which the presence vs. absence of overt subject agreement. Impersonal SE always requires default agreement, while the medio-passive is well-formed only if there is overt non-default agreement. See Dobrovie-Sorin (1996) for more diagnostics.

\(^{25}\) The more detailed translation is provided below:

\[\begin{align*}
\text{câîne-le moare de drum lung.} \\
\text{dog- the.M.SG. die-PRES.INDIC.3.SG. of/from walk long.} \\
\rightarrow & \quad \text{said about a person who cares too much about other people’s business}
\end{align*}\]
b) **IDIOMATIC READING LOST**

\[
\begin{align*}
&Dog\text{-the.M.SG.} \quad \text{seem}_1\text{-PRES.INDIC.3.SG.} \quad [\text{CP that} \\
&<\text{câinele}> \quad \text{moare} \quad \text{de} \quad \text{drum lung.} \\
&\text{die-PRES.INDIC.3.SG.} \quad \text{of/from} \quad \text{walk long.}
\end{align*}
\]

(sentence possible only in that context where the speaker sees a specific dog collapsing as a result of exhaustion)

As opposed to SEEM1 which does not preserve the idiomatic readings, SEEM3 behaves like a true ‘raising’ predicate: idioms are transparent in this context (201c). But, remember that SEEM3 which imposes defaulr agreement is not possible with secondary predicates, as seen in (201 a):

(201) **ROMANIAN SEEM3, SECONDARY PREDICATES AND PRESERVATION OF IDIOMS**

\[
\begin{align*}
a) &\quad *\text{Copi-i-i} \quad \text{se pârea} \quad \text{bolnav-i.} \\
&\text{Child-PL.M.-the} \quad \text{SE} \quad \text{seem-IMPF.PST-3.SG.} \quad \text{sick-M.PL.} \\
&\quad \text{‘It seemed that the children looked sick.’}
\end{align*}
\]

\[
\begin{align*}
b) &\quad *\text{Copi-i-i} \quad \text{se pârea-u} \quad \text{bolnav-i.} \\
&\text{Child-PL.M.-the} \quad \text{SE} \quad \text{seem-IMPF.PST-3.PL.} \quad \text{sick-M.PL.}
\end{align*}
\]

\[
\begin{align*}
c) &\quad \text{IDIOMATIC READING PRESERVED} \\
&\checkmark \quad \text{Câine-le} \quad \text{se pare} \quad \text{câ} \\
&Dog\text{-the.M.SG.} \quad \text{SE} \quad \text{seem}_2\text{-PRES.INDIC.3.SG.} \quad [\text{CP that} \\
&<\text{câinele}> \quad \text{moare} \quad \text{de} \quad \text{drum lung.} \\
&\text{die-PRES.INDIC.3.SG.} \quad \text{of/from} \quad \text{walk long.}
\end{align*}
\]

That 201 (a &b) are not ruled out because of an intervention effect by SE is demonstrated by other A-movement configurations which do not give rise to deviance/unacceptability:

(202) 

\[
\begin{align*}
&\text{Copi-i-i} \quad \text{se pârea} \quad [<\text{copiii}> \quad \text{a fi mâncat}.] \\
&\text{Child-PL.M.-the} \quad \text{SE} \quad \text{seem-IMPF.PST-3.SG.} \quad \text{to be eaten.} \\
&\quad \text{‘It seemed that the children had eaten.’}
\end{align*}
\]

(203) 

\[
\begin{align*}
&\text{Copi-i-i} \quad \text{se pârea} \quad [<\text{copiii}> \quad \text{că} \\
&\text{Child-PL.M.-the} \quad \text{SE} \quad \text{seem-IMPF.PST-3.SG.} \quad \text{that} \\
&<\text{copiii}> \quad \text{veni}.]
\end{align*}
\]

\[
\begin{align*}
&\text{FUT.3.PL.} \quad \text{come-INF.} \\
&\quad \text{‘It seemed that the children will come.’}
\end{align*}
\]

Finally, SEEM 2 ‘se + pârea’ appears to lexicalize the weakest source of evidence. It is possible with AdjSPs only if an experiencer is introduced in order to specify how the information is evaluated; default agreement is nonetheless not a possibility (as shown in 204 c and d):

---

26 Example illustrates extraction from within a finite CP (a Balkan Sprachbund phenomenon; the details of the operation are not important here; see Dobrovie Sorin 1994, Motapanyane 1991, Alboiu 2000, etc.)
(204) \text{SEEM}_2 + \text{SECONDARY PREDICATES} – \text{IDIOMATIC READING IMPOSSIBLE}

\begin{itemize}
\item[a)] \text{Copi-i-i} \quad mi \quad se \quad păre-a-u \quad fericī-t-i. \\
\text{Child-PL.M.-the} \quad \text{CL.1.SG.DAT.} \quad \text{SE}_2 \quad \text{seem-IMPF.PST-3.PL.} \quad \text{happy-PL.M.}
\item[b)] ?\text{Copi-i-i} \quad îmi \quad păreau \quad fericīt-i. \\
\text{Child-PL.M.-the} \quad \text{CL.1.SG.DAT.} \quad \text{seem-IMPF.PST-3.PL.} \quad \text{happy-PL.M.}
\item[c)] *\text{Copi-i-i} \quad mi \quad se \quad păre-a \quad fericī-t-i. \\
\text{Child-PL.M.-the} \quad \text{CL.1.SG.DAT.} \quad \text{SE}_2 \quad \text{seem-IMPF.PST-3.SG.} \quad \text{happy-PL.M.}
\item[d)] *\text{Câine-le} \quad mi \quad se \quad pare \quad că \\
\text{Dog-the.M.SG.} \quad \text{SE}_2 \quad \text{seem}_2\text{-PRES.INDIC-3.SG.} \quad [\text{CP that} \\
< \text{câinele}> \quad \text{moare} \quad \text{de} \quad \text{drum lung}]. \\
\text{die-PRES.INDIC.3.SG.} \quad \text{of/from} \quad \text{walk} \quad \text{long}.
\end{itemize}

(idiomatic reading impossible)

At this point, after a rather long detour, we are now in the position to go back to Rizzi’s data in (193) and (194), repeated below in (205) and (206). Remember that Rizzi (1986) assumed that such examples are ungrammatical (hence the star marking in his paper), because under a small clause analysis the reflexive pronoun (si) ends up c-commanding the R-expression (Gianni):

\begin{itemize}
\item[(205)] \text{ITALIAN}
\item[*Gianni, si] \quad \text{sembra} \quad [\text{t_i non fare il suo dovere}]. \\
\text{Gianni} \quad \text{REFL.DAT.} \quad \text{seems} \quad \text{non to-do the his duty}. \\
‘Gianni seems to himself not to do his duty.’
\item[(206)] *\text{Gianni, si} \quad \text{sembra} \quad [\text{t_i intelligente}]. \\
\text{Gianni} \quad \text{REFL.DAT.} \quad \text{seems} \quad \text{intelligent}. \\
‘Gianni seems intelligent to himself.’
\end{itemize}

However, as already mentioned native speakers do not necessarily attribute a syntactic deviance status to these sentences. Romanian provides in fact an illuminating answer to this problem. Reflexive pronouns used with \text{SEEM}_1 give rise to \text{semantically} deviant readings; the ‘control’ \text{seem} entails strong evidence which cannot be disputed by the audience; the reflexive pronoun relativizes it to the speaker only, giving rise to a clash. A sentence like (207) is acceptable under a reading in which according to the evidence Ion has, he seems sick to himself. As \text{SEEM}_1 encodes a strong evidential component built on direct evidence, the entailment/implicature obtained is that to other people Ion does \text{not} seem sick. In other words, by restricting the evidence to the personal self, the reflexive cancels the existence of direct/visible evidence. But as the latter is built-in in the composition of \text{SEEM}1 (leading to various puzzles, among which the ‘puzzle of the absent squire’), attempting to cancel it can only lead to the odd flavor of such sentences.
(207) **SEEM₁ + REFLEXIVE**

Ion  şi   pare  bolnav  (lui  însuşi).

‘John seems sick to himself.’ (acceptable under a reading in which John is delusional)
[John looks sick to himself, despite the fact that it’s obvious to everyone that he’s not sick]

**SEEM₂ + SE** encodes a weaker type of evidence, and should be possible with a reflexive dative. Unfortunately, the sentence cannot be tested with the reflexive *se* because of the OCP effect (a morphological constraint that blocks the pronunciation of two adjacent *SE*). As opposed to Italian (or Spanish), Romanian does not have a phonetically distinct reflexive that can be used there:

(208) Ion  *şi*  se  pare  bolnav.

However, if the personal pronoun clitic is used as a reflexive, the sentence is acceptable, contrary to what Rizzi (1986) predicts:

(209) Ion,  i,  se  pare  chiar  lui  însuşi
    John  3.DAT.SG.  SE  seem.3.SG.  even  DAT.3.SG.M.  self.M.SG.
    prost.  idiot.M.SG.

‘John seems idiot even to himself.’

If reflexives are indeed possible with secondary predicates, Rizzi’s arguments supporting a small-clause analysis of secondary predicates do not hold.

b) **ADJ SPs AND EXPLETIVES**

The grammaticality of sentences similar to (210) and (211), which contain the expletive there has also been taken to provide evidence that AdjSPs form small clauses (Lasnik 1996, Matushansky 2002, etc.,):

(210) I consider there likely to be a problem with this analysis.
(211) I consider [S there likely [IP <there> to be a problem with this analysis]]

However, the existence of these examples does not constitute a knock-down argument against a complex predicate analysis. First of all, it appears that expletives are possible only when a *claus-*

---

27 Note that *i* cannot represent a clitic doubling marker, as subjects do not allow doubling in Romanian.
al constituent is also present. Examples in which an expletive merges with a DP associate directly are ruled out cross-linguistically

(212) * I consider [there a man].

The stylistic properties of the infinitivals of the type of (210 and 211), as well as their phonologically heavy status rather imply an analysis in which the expletive is inserted at PF after the heavy NP shift of the clausal material, following an analysis along the lines of Larson (1988), as already mentioned (see footnotes 18, 19, 20), as well as the discussion on pages 102-104). The idea behind the shift is that the presence of the clausal infinitive would disrupt the (morphophonological) implementation of agreement inside the complex predicate. Once the long constituent is heavy-shifted the two predicates become adjacent, and the multiple agreement can be implemented.

c) SUBJECT CONDITION EFFECTS

This test is related to Kayne’s (1984) subject-object asymmetries. After an examination of extraction possibilities Kayne (1984) reaches the conclusion that shared argument behaves more like a regular subject than a (direct) object with respect to Subject Condition effects (as initially formulated in Chomsky 1973). As can be seen in the examples under (213) and (214), the shared argument does not permit extraction, appearing to behave more like a true subject in this respect:

(213) SUBJECT CONDITION EFFECTS – SUBJECTS VS. OBJECTS
a) *Who would [[for John to visit <who>] bother you?]
   b) Who would it bother you [[for John to visit <who>]]?
   c) *Who would [[John’s having visited <who>] bother you]?
   d) Who were you annoyed at [[John’s having visited <who>]]?

(214) SUBJECT CONDITION EFFECTS – SHARED ARGUMENTS
a) ?*Who do you consider [[the oldest sister of <who>] foolish]?
   b) ?*Which book did you find [[the author of <who>] eloquent]?

Once again, these contrasts do not automatically entail that shared arguments have subject status.

It should be noted, first, that there is variability in judgments, especially when it comes to the sentences in (214). Moreover, the observation that a certain element does not allow the extraction of its sub-constituents does not automatically imply subjecthood status; this would be a reliable test only if we knew what grammatical relations correlate with extractability in a very precise manner. However, non-extractability is not a property of subjects only. Many types of indirect
objects, applicatives, circumstantial objects, etc. do not permit their subsconstituents to be extracted. Crucially, (many of) these latter categories cannot be considered to carry subject status. Even more importantly, among (direct) objects, Differential Objects, which are characteristic to AdjSPs resist extraction cross-linguistically. This is attributed to the fact that they are protected by a layer of functional structure (seen overtly in many languages, among which Romanian, examples under 215). Moreover, as the shared arguments of secondary predicates are introduced by a Sit. Head (specifying the source of evidence), it will be predicted that they should not undergo extraction. The presence of this layer of functional structure would block this process:

(215) **SUBJECT CONDITION EFFECTS – OBJECTS VS. DIFFERENTIAL OBJECTS IN ROMANIAN**

a) **REGULAR OBJECT**

\[
\text{A cu}i\ \text{ai văzut sora <cui>}
\]

\[
\text{Gen who.Gen. Aux.2.sg. see.Pst.Prt. sister.the.F.sg.}
\]

‘Whose did you see the sister’?

(the presence of the genitive morpheme controls for the possessor extraction interpretation, as opposed to a possessor dative)

b) **DIFFERENTIAL OBJECT – EXTRACTION IMPOSSIBLE**

\[
*\text{A cu}i\ \text{ai văzut-o pe}
\]

\[
\]

\[
\text{sister.the.F.sg.}
\]

c) **DIFFERENTIAL OBJECT – EXTRACTION IMPOSSIBLE**

\[
*\text{Pe a cu}i\ \text{ai văzut-o}
\]

\[
\]

\[
\text{sister.the.F.sg.}
\]

d) **DIFFERENTIAL OBJECT – EXTRACTION IMPOSSIBLE**

\[
*\text{A cu}i\ \text{ai văzut pe}
\]

\[
\]

\[
\text{sister.the.F.sg.}
\]

The data with differential objects hence indicates that a subjecthood status of shared arguments of secondary predicates cannot be correct.

d) **BINDING EVIDENCE**

This diagnostic is based on the canonical implementation of binding domains in GB. Subjects induce opacity effects for the binding of anaphors and pronouns (Chomsky 1981, et subseq.). Stowell (1991, 1983) presents relevant examples indicating that an anaphor in the small predicate must be bound within the small clause by the shared argument:
This argument is quite weak, as Stowell (1991) himself also admits. It is not the case that the complex predicate analysis cannot derive the facts; opacity can be defined in terms of predication domains, as Stowell (1991) also notices (the binding category for \( \alpha \) being defined as the minimal predication domain that containing the element that c-commands \( \alpha \); a minimal predication domain – the minimal constituent containing a predicate phrase and a DP that the predicate is predicated of). Such an analysis has the theoretical advantage of following a more minimalist implementation of binding. Due to the difficulties of correlating such constraints to the subject domain, many researchers have recently been exploring the possibility that binding correlations should rather be relativized to possibly distinct domains (see the detailed discussion in Chomsky 2008).

2.8 The nature of the shared argument

To recap, the conclusions established above are the following: a) shared arguments of secondary predicates trigger a strong interpretation, disallowing reconstruction in a lower position, inside the small clause (as discussed in section 2.1); b) existential readings are possible when an existential operator c-commands the shared argument, or when modal adjectives are seen in the structure (see sections 2.3, 2.6); c) various classes of accounts in which the shared argument is base-generated inside the small clause, this position being subsequently unavailable for reconstruction have been shown to raise insurmountable problems and have to be rejected (2.7). d) further types of evidence supporting a small-clause status of configurations containing secondary predicates do not hold when examined in detail (section 2.8).

A straightforward explanation for these facts results if one assumes an analysis in which the shared argument is merged above the main predicate. In this case, the anti-reconstruction patterns are derived automatically (there is no low position, hence no copy to be interpreted/no position for the lowered quantifier to attach to). But if the shared argument is merged above the main predicate, how is it introduced? The answer proposed in this thesis is that a functional projection encoding reference to a specific situation the (two) predicates are bound to introduces the argu-
ment. To better understand the details, it is instructive to look at two other important contexts where anti-reconstruction is also impossible: Copy-Raising (193), and Physical Perception verbs (194, see Rogers 1971, 1972, 1974 a, b^28).

(217) **COPY RAISING**
Richard seems like he smokes.

(218) **EXPERIENCE PERCEPTION VERBS**

  a. It seems like Richard smokes.
  b. Richard smells/feels/looks/sounds/tastes like/as if/as though he smokes.

(219) **SECONDARY PREDICATES**

  a. Richard seems/looks/smells drunk.

Copy Raising and Experience Perception verbs form contexts containing verbs which according to the GB taxonomy would be classified as raising, have an argument in the matrix which is coindexed with a pronoun in an embedded *finite* clause. As the examples above show, the same group of verbs (*seem, appear* = ‘act like’, ‘put on the appearance of’, *look, sound, feel, taste*) also take secondary predicates.

Similarly to secondary predicate contexts, both classes can alternate with a subject expletive environment, as shown in (220-222):

(220) It seems like Richard won.
(221) It looks/smells like Richard is drunk.
(222) It seems impossible to do the job.

Again, similarly to secondary predicates, their subjects can have only a wide scope interpretation. Compare the subject raising construction with the CR one, and the secondary predicate one:

(223) Two people seem to have won the lottery.2 >> seem; seem >> 2

  a. Wide scope of DP: Two people are such that they seem to have won the lottery.
     2 >> seem
  b. Narrow scope of DP: It seems that two people have won the lottery.
     Seem >> 2

(224) Two people seem like they have won the lottery.2>> seem; *seem>>2

  a. Two people are such that they seem to have won the lottery.
     2>> seem
  b. ≠ It seems like two people have won the lottery.
     Seem >> 2

^28 Physical perception verbs and copy raising have received either a unitary analysis (Potsdam and Runner 2002 or Bender and Flickinger 1999) or a disjoint semantic account, which keeps the syntax identical (Asudeh 2002).
Two people seem sick.  

2>> seem; *seem>>2

a. Two people are such that they seem sick.  
2>> seem

b. ≠ It seems that two people are sick.  
seem >> 2

A second unifying context is an interpretational contrast with canonical infinitives when it comes to scopal interactions with adverbs of quantification. As Potsdam and Runner (2001), as well as Lewis (1975), Diesing (1992), or Kratzer (1995) have noticed, in a canonical raising contexts the subject can be interpreted as being bound by an adverb of quantification in the main clause or in the embedded clause. Copy raising contexts, as well as secondary predicate contexts only allow binding in the matrix domain:

(226) Cows rarely seem to be intelligent.  

a. = Few cows seem to be intelligent.  
b. rarely_x cow (x) seem [...]

(227) Cows seem rarely to be intelligent.  

a. = It seems that few cows are intelligent.  
b. seem [rarely_x cow (x) ....]

With a copy raising context, if the adverb of quantification is placed in the embedded clause, the sentence is ill-formed/anomalous.

(228) Cows rarely seem like they are intelligent.  

a. = Few cows seem like they are intelligent.  
b. rarely_x cow(x) seem [...]

(229) *Cows seem like they are rarely intelligent.  

a. ≠ It seems like few cows are intelligent.  
b. *cow(x) seem [rarely_x...]

(230) Cows rarely seem intelligent.  

a. = Few cows seem like they are intelligent.  
b. rarely_x cow(x) seem [...]

(231) ??Cows seem rarely intelligent.  

a. ≠ It seems like few cows are intelligent.  
b. *cow(x) seem [rarely_x...]

Copy Raising (also called the Richard construction) has not received extensive attention in the literature, as compared to the classic Raising processes. The original analysis is due to Rogers in a series of papers (1971, 1972, 1974 a &b). The main gist of these works is the introduction of a construction-specific transformation which moves the subject of the embedded clause into the matrix subject position leaving a pronominal copy behind. An early minimalist account is to be

(232) Igbo

Ezei dt mi ka oĩ hoi-oi Ada.
Ezes eems to me COMP he see- ASP Ada.

‘Eze seems to me like he saw Ada.’

What CRs sentences appear to illustrate is that a syntactic element moves from the subject position of a tensed clause. This position is a position in which Case is checked, leaving the DP inert to other movements, as there’s no motivation for such operations. This restriction on movement is generally known as the *Tensed S Condition* (Chomsky 1973):

(233) TENSED S CONDITION

A-movement is impossible from a tensed clause.

In order to account for copy raising contexts, Ura (1998) relaxes the general conditions on movement. In his implementation, an element is allowed to move if the derivation would otherwise be illegitimate or crash. In his feature driven checking proposal, an important distinction is established between EPP features which are strong and have to be checked in narrow syntax, and Case and $\phi$-features which are weak. The derivation will not crash as long as the latter are checked at LF. Cyclically, the embedded clause is assembled first, and the EPP feature on T is valued by merging of *Eze*; but the Case and $\phi$-features are not checked at this stage.

(234) \[ [\text{cp COMP } [\text{tp Eze T}] [\text{vp see Ada}]] \]
\[ \sqrt{\text{EPP}} \]

When the matrix clause is assembled, the DP *Eze* raises to main Spec, TP in order to check the EPP, Case, and $\phi$-features.

(235) \[ [\text{tp Ezei T} \ [\text{vp seems } [\text{cp COMP } [\text{tp t}_i T] [\text{vp see Ada}]]]] \]
\[ \sqrt{\text{EPP}} \quad \sqrt{\text{EPP}} \]
\[ \sqrt{\text{Case, } \phi\text{-features}} \quad \times \text{Case, } \phi\text{-features} \]

This movement operation leaves the Case and $\phi$-features features of the embedded T unchecked; unless the computational system performs an operation of the adequate type, the derivation would crash. Ura (1998) assumes that there is a last resort mechanism, which might be called *Pronominal Copy insertion* which provides a pronominal copy to replace the trace. This pronoun will check the uninterpretable Case and $\phi$-features of the embedded T saving the derivation.
Pronominal Copy Insertion
A language particular rule that “supplies an intermediate position of the A-chain with the pronominal copy of the head of the chain”.

\[
\begin{align*}
T_E T & \quad [\text{TE} \text{seems} \text{CP} \text{COMP} \text{TP} T_{\text{VP see Ada}}] \\
\sqrt{\text{EPP}} & \quad \downarrow \\
\sqrt{\text{Case, } \phi\text{-features}} & \quad \text{he} \\
\sqrt{\text{EPP}} & \quad \sqrt{\text{Case, } \phi\text{-features}}
\end{align*}
\]

Although Ura (1998) is able to elegantly account for some properties of the Copy Raising construction in Igbo (such as the presence of a pronominal in the embedded SpecT), there are some problems which appear to lower its value. First of all, it is not clear how the Tensed S Condition mentioned above is avoided (Ura’s claim that such constraint is not active in minimalism does not seem to be fully accurate). Secondly, there are some issues regarding the nature of the pronoun inserted to replace the trace. As Potsdam and Runner (2001) also notice, the associate of the subject in a Copy Raising construction does not seem to have the status of a syntactic object inserted as last resort. The two authors show this by presenting some of the cases in which illicit traces in A-bar chains can be improved/saved/made acceptable (Chomsky 1977, Kayne 1984, Sells 1984) by being spelled out as pronouns (the so-called intrusive pronouns, in Sells 1984).

**Intrusive Pronouns**

a. *This is the painting that everyone wonders whether *t* will be for sale.

b. *This is the painting that everyone wonders whether *i* will be for sale.

As Heycock (1994) shows the pronoun seen in CR is fully grammatical, and seen as ‘natural’ by native speakers, while intrusive pronouns might not uniformly/generally be accepted. Moreover, Chao and Sells (1983) present at least a context which demonstrates that intrusive pronouns are different from regular pronouns: intrusive pronouns cannot be bound variables\(^{29}\), while the pronouns seen in Copy Raising sentences can (see also Lappin 1985):

**Intrusive Pronouns Don’t Function as Bound Variables**

a. *I’d like to meet every linguist that we can’t remember when we had seen *him* last.

b. *There is no painting that John wonders whether *it* will be for sale.

**Pronouns in Copy Raising Can Function as Bound Variables**

a. No one seems like she wants to go to America. (Potsdam and Runner 2001, ex. 31)

\(^{29}\) Because such pronouns are assumed to be of type ι in Sells (1984).
b. Many students appear as if they won’t pass this time.

c. Every argument seems as though it is flawed.

An account which avoids these problems, and which comes very close to the analysis in this thesis is Potsdam and Runner’s (2001) base-generation analysis. The authors take the CR subject to be merged directly into the subject position of the matrix clause, after the embedded clause has been formed. A syntactic relation is licensed between the two subjects in order to allow the matrix subject to obey the FI. They identify the relation with a base-generated A-chain, represented by coindexation.

\[(241) \quad [_{TP} \text{Richard}, T \text{ seems } [_{XP} \text{ like } [_{TP} \text{ he } T \text{ [}_{VP} \text{ is in trouble]}]]]\]

This account requires the formation of an A-chain (as a result of Agree) between two base generated DPs without the assignment of a theta-role at LF. The two authors motivate the introduction of this condition on the observation that as long as well-formedness conditions are respected, chains may be freely formed. The condition they make reference to is locality (chain links must be local, according to Chomsky’s Minimal Link Condition, and Rizzi’s Relativized Minimality). The only problem is that more needs to be said about the subject of the Copy Raising construction, which needs to be seen as ‘special’ (in a sense) by the computational system. Otherwise, it won’t be clear why other embedding contexts do not appear to use the same A-chain mechanism between two XPs. Another account that comes closer to specifying the nature of this type of ‘subject’ is Asudeh and Toivonen (2010). The analysis they propose comes closest to offering a full explanation of Copy Raising. The embedded structures are seen to be predicative PPs (Maling 1983, Heycock 1994), similarly to secondary predicates. Like and as have the status of prepositions (see the data in 31-33, page 7). Asudeh and Toivonen (2010) further analyze the matrix subject as a Perceptual Source Argument of the copy raising verb. The same idea, with sight qualifications, is seen in Landau (2009). On the other hand, Moulton (2011) in a discussion of seem in secondary predicate contexts makes the proposal that this verb has an Evidence Source Argument which denotes a (concrete) situation.

\[(242) \quad \begin{align*}
a. \text{seem} & \rightarrow \lambda p \lambda s \lambda w. \forall w' \text{ in seem}(s)(w): p(w') \\
b. \text{seem}(s)(w) & \text{ the set of worlds compatible with (the evidence made available by) } s \text{ in } w
\end{align*}\]

The contexts seen above do indeed show that the shared arguments of secondary predicates, as well as the subject of Copy Raising, appear to be interpreted as if they are subject to direct evi-
dence. But not all secondary predicate contexts are as such nevertheless; it could be possible to construct sentences in which evidence is rather second hand. See the example in (208) below from Moulton (2011), in which the answer in B is acceptable for some native speakers.

(243)  Phone conversation between A and B
A: Yeah, my cat has watery eyes and is grumpy.
B: He seems sick.

One condition that has to hold, nevertheless, is that the shared argument be specific, contextually salient. In order to capture this, the proposal in this thesis is that shared arguments are introduced by a head whose semantics encodes the situation, and specifies the source of evidence of the matrix predicate; this is normally a silent, contextually supplied situation representation, which does not have the status of a theta role. Intuitively, the (concrete, particular) situation is necessary in order to identify those contexts in which both predicates hold, because of the semantic restrictions imposed by the head introducing the secondary predicate, as well as because of the lexico-semantic constraints holding with verbs like seem or consider. On the one hand, human language grammar treats relations of overlap, inceptivity, and resultativity as holding over bounded eventualities. What this says in simpler terms is that in order to overlap two eventualities they have to be temporally/aspectually restricted. In Chapter 4 it is shown in more detail that secondary predicates cannot be constructed with purely stative verbs (like own), and that only those adjectives that are inherently gradable can function in such contexts. The situation head triggers the specificity semantics, unless it is bound/closed or found in the scope of an existential operator.

(244)  Situation
       / \  
      /   \  
     /     \  
    /       \  
   /         \  
  Shared argument Situation
           / \  
          /   \  
         /     \  
        /       \  
       /         \  
      Situation    Predicate_1
                / \  
               /   \  
              /     \  
             /       \  
            /         \  
           Predicate_1  Predicate_2
               /   \  
              /     \  
            Dep/Res  Predicate_2

One important question that has to be answered about the configuration in (244) is how the distinction between object and subject shared argument is encoded. Assuming that all shared arguments are introduced by a functional projection specifying the situation/source of evidence appears to be counterintuitive in a sense. Although it is true that both subjects and objects are nor-
mally restricted to specificity readings, they are obviously morphologically marked according to their syntactic/thematic status. In fact, what one finds cross-linguistically with these types of shared arguments is the absence of specific morphology that would be reserved for shared arguments with secondary predicates only. For example, differential object marking is a strategy employed in other instances beside the secondary predicate contexts. These robust morphological facts require an adequate explanation. This thesis proposes an implementation following the notion of projection bundling, as discussed in Pylkkänen (2008). In order to account for the observation that in some languages causatives are introduced by specialized morphology and have a distinct syntactic status that true external arguments introduced by Voice, while in others this split is not realized, Pylkkänen (2008) assumed that CAUSE (introducing the causer) and VOICE (introducing the external argument) can be found in two structural configurations: a) as projecting independently (as in 245), or as bundled under the same head (as in 246):

(245) CAUSE and VOICE projecting independently

```
    External Argument
      V
      O
      I
      C
      A
    C
    A
```

(246) CAUSE and VOICE bundling

```
    External Argument
      C
      A
      V
```

For secondary predicates, the Situation functional projection specifies the source of evidence necessary for the construction and interpretation of perception verbs, and introduces the argument which will be read off as the entity under the scope of evidence. Nevertheless, this head does not contain the relevant features to check Case, and does not specify the thematic relation of the argument. Whether an argument is interpreted as an agent, theme, etc., or in broader syntactic terms as a subject versus an object is dictated by the projection with the Situation head bundles. If the Situation head is bundled with VOICE (or other subject introducer), the shared argument will be interpreted as an agent. If the Situation head bundles with an Aspectual head, the shared argument will be interpreted as an affected object, etc. This is schematically shown in the two representations below.
Note that this type of implementation requires a low attachment of the Voice head; crucially, it has to be located below the restructuring head which initiates the multiple agreement process. But this is not necessarily a problem – the position of subjects is a highly debated topic, with analyses alternating between a VP-internal account (for older accounts, see Koopman and Spoortiche 1988, Speas 1994, among many others), and an external placement (Voice in Kratzer 1996, recent minimalist discussions as in Chomsky 2008, etc.). The low placement of the head introducing the external argument is motivated here by the special status of secondary-predicate constructions (as types of sophisticated restructuring configurations), as well as by the sensitivity of subject shared arguments to the same types of constraints as the object shared arguments.
3 CASE AND AGREEMENT MATTERS

The previous chapter has shown that secondary predicates require the structure in (1). Wide scope readings of shared arguments, as well as general facts regarding the syntax of these constructions argue for an architectural representation in which the two predicates merge first, while the shared argument is introduced by a separate projection specifying the situational contour. The configuration obtained is further flagged by the merger of a complex predicate functional projection:

\[
\begin{align*}
(1) & \quad \ldots \quad v_{\text{COMPLEX PRED.}} \quad \text{SITUATION} \\
& \quad \text{Arg} \quad \langle \text{Shared} \rangle \\
& \quad 0 \quad \text{SITUATION} \\
& \quad \text{Pred}_2 \quad \text{Pred}_2 \quad \text{Pred}_1 \\
& \quad \text{Pred}_1 \\
& \quad \text{DEP/RES} \\
\end{align*}
\]

There are many other questions that have to be answered about secondary predicates, including agreement facts and predicate Case issues. In order to address these, it is necessary to make clear what is meant here by the *predicative* nature of the embedded constituent. As already shown, an account that gives a non-stipulatory answer to the scopal interactions and the strong readings of the shared argument has to assume that the shared DP/NP is merged higher than the main predicate. This in turn implies that the secondary predicate constituent has to be conceived as having a *predicate* status, as opposed to representing a clausal instantiation. The list of possibilities is, in fact, larger than that, if the interaction between syntax and semantics is examined. This question in fact recapitulates the debates on the status of non-finite structures as introduced by control/raising predicates. The literature has shown several times that a list of analytical possibilities can be constructed (Larson et al. 1992, Chierchia 1985, Landau 2000, etc.), as shown in Table 4. What this Table shows is that such embedded structures can be analyzed as *clausal* or *non-clausal* in their syntax, or *propositional* vs. *non-propositional* in their semantics.
To better exemplify the various approaches, let’s see what each of them would assume about the syntactic-semantic structure of the infinitival ‘to win’ in John hopes to win (see also the discussion in Larson et al. 1992, Landau 2000).

The variant labeled A, which claims that such constructions are *both clausal and propositional* (Chomsky 1981, 1986b, Manzini 1983, Koster 1984, Higginbotham 1992) would take the infinitival to be invariably clausal, despite the presence of surface gaps (Chomsky 1981). Variant D instantiates the opposite of the assumptions put forward in variant A (Thomason 1976, Chierchia 1984, in the Montagovian tradition). For Chierchia (1984), for example, the embedded non-finite part of control constructions *is neither clausal nor propositional*. Rather, the verb that introduces the infinitive is analyzed as expressing a relation (hope*) between an individual (John) and a property (*to win); (see the discussion in Larson et al. 1992 for more details.).

(2) a) John hopes to win.
   b) John [VP hopes [VP to win]].
   c) hope* (John, *to win)

Moreover, there is no anaphoric relation between overt and covert syntactic elements. And the relation between the infinitival and the corresponding finite clause is captured by postulating “certain semantic entailment relations”, as shown in (3):

(3) a. John hopes that he wins.
   b. hope* (John, *that he wins).
      hope*: a (distinct) clause-selecting predicate expressing a relation (hope*) between an individual and a proposition
   c. ∀x, P [hope* (x, P) \[→\] hope* (x, P(x))]. Meaning postulate.
VP. And lastly, according to variant C, complement verbs in control configurations are non-clausal in their syntax but propositional in their semantics. This is basically the implementation in categorical grammar (Bach and Partee, 1980), or GSPG (Klein and Sag, 1985).

What do these possibilities imply about secondary predicates? The absence of reconstruction effects as well as evidentiality flavors, as seen in Chapter 2, argue for an account in which the subject is not based-generated inside the AP (Stowell 1981, 1983), or inside a ‘small-clause’ containing the subject and the AP (Williams 1983); the strong conclusion is that secondary predicates are not ‘small clauses’ - hence they do not have a clausal status. Variant B would have a problem in giving the right scopal results; if the secondary predicate projects a (small) clausal structure in the syntax, the shared argument will end up being generated lower than the matrix, and anti-reconstruction becomes impossible to explain unstipulatively. Variant C would obviously pose a similar type of problem. Hence option “D” seems to be the most promising line with secondary predicates – non-propositional/non-sentential. A class of supporting pieces of evidence is also reiterated below. First of all, there is the lack of reconstruction effects (pervasive cross-linguistically), mentioned several times and dealt with in more detail in Chapter 2. Related to this is the strong interpretation of shared objects (see also similar observations in Postal 1974); it is known from the literature on specificity and differential objects (Diesing 1992, de Hoop 1994, Aissen 2003, etc.) that such arguments appear to be at LF and PF (and surface structure) above the main predicate. A theory which postulates base-generation in a high position is better than a theory which needs to include various types of movement in order to explain the facts. Third, lack of pronominal resumption in languages that allow this process with other non-finites is also an indication that shared arguments of secondary predicates are not merged inside a small clause. There are also facts pertaining to intervention effects from other DPs (*He seems to me happy as opposed to He seems to me to be happy) which preliminarily point to the same conclusion. One can also add the impossibility to modify indirect objects\textsuperscript{30} – parametrized as resulting

\textsuperscript{30} Further specification is further necessary regarding this claim. There are contributions which claim that secondary predicates are possible with indirect objects and applicatives. For example, Pylkkänen (2008) and other works using her data show examples from languages like Albanian or Venda in which what looks like an adjectival secondary predicate appears to be able to be hosted by an indirect object. On closer inspection it turns out that the native speakers (of both Albanian and Venda) consulted did not find those sentences grammatical. In some contexts in Albanian apparent secondary predicates are in fact displaced attributive adjectives; the distinction is indicated by the differences in stress patterns, lack of focus marking (specific of true secondary predicates), as well as the lack of characteristic semantics of depictives (such as the overlap relation).
from the violation of locality constraints in some languages. But, if the structure in (1) is on the right track, how are the Case and agreement patterns exhibited by secondary predicates explained? And if the argument is shared, how is its case marking resolved?

This thesis adopts an implementation of the Multiple Agree mechanism, as initially formulated by Hiraiwa (2004), in order to account for these complex issues. Crucially, there is a split between case features and more substantive uninterpretable features like gender and number. The two pieces of the structure introduced in Chapter 2 are component parts to the mechanics of agreement and feature valuation. The task is split between $\nu_{\text{CMPLX}}$, which values the uninterpretable $\phi$-features of the secondary predicate (via a Multiple Agree process, which is reduced to feature sharing) and the functional projection introducing secondary predication which values the uninterpretable Case feature of the latter in tandem with the Situation head (by binding).

More generally, the strong claim in this thesis is that Case and agreement cannot simply be ignored as marginal issues. For example, Dalmi (2005) assumes that Case and other type of marking on secondary predicates are peripheral, extremely restricted and a quirk of a very small number of languages. Contrary to this claim, what one finds when examining various types of secondary predicates is that the grammar prefers to mark these structures in one way or another (dedicated case marking, specific particles, adpositions, complementizers, etc.). A quick glance at the list below illustrates the amplitude of the phenomenon, which cannot be left aside; in Japanese, for example, both resultatives and depictives are signaled by what appears to look like case marking (the so-called adverbial case marker –$ni$), the depictive $de$, or the semi-complementizer $to$ (which can be translated as ‘as’).

(4) JAPANESE\textsuperscript{31}

a) RESULTATIVE  
Kare-wa teeburu-o kieri-$ni$ hui-ta  
He-TOP. table-ACC. clean-RES. wipe-PST.  
‘He wiped the table clean.’

John-TOP. wall- ACC. very red-RES. paint-PST.  
‘John has painted the wall red.’

The same facts hold for Chinese, in which adjectival resultatives require the marker de (historically derived from a form of the verb get), while depictives appear to carry a marker which can be spelled-out as de, but appears to have different tone patterns and etymology (Li and Thompson 1981, Iljik 1987, Wang 1974).

(5) **Mandarin Chinese**

a) **Resultative**

Zhangsan ku-de hen shangxin
Zhangsan cried-RES. very sad
‘Zhangsan cried such that he became very sad’.

b) **Depictive**

Wusong rere de he le yi wan jiu.
Wusong hot DEP. drink PRF. one bowl wine.
‘Wusong drank a bowl of wine hot.’ [when the bowl of wine was hot]

In Hungarian and Finnish the split depictive/resultative is signalled by differences in case marking. In Hungarian depictives require a mismatched dative (6a), while resultatives take the so-called transitive case (6b), a form similar to what is seen in Finnish resultatives (7a). Depictives, on the other hand, require the essive case in Finnish, and are normally ungrammatical if any other case marking is used.

32 The native speakers consulted showed a pattern of alternation with respect to this example; some accept only the to variant, while others argue that both to and de are acceptable. Complete agreement was with respect to the presence of the secondary predicate marker; none of the speakers accepted any of the sentences above when the specific secondary predicate marker was absent.

In Georgian, case agreement is normally required between the secondary predicate and its controller. Interestingly, adjectives functioning as secondary predicates require a more complex overt morphological make-up than adjectives with an attributive function: the former may take number agreement, while the latter do not allow it. Georgian does not allow resultative secondary predicates.

Morphological differences between secondary predicates and attributive adjectives or adjectives used in other predicative contexts (main predicates, adjectives in relative clauses) are salient in many other languages. As a relevant exemplification, in Arabic adjectival secondary predicates cannot exhibit agreement in definiteness, while predicative adjectives in relative clauses can. The two sentences in (9) illustrate the contrast:

---

34 Hungarian secondary predicates are also discussed in Dalmi (2005), or Tóth (2000).

35 For secondary predicates in Finnish see also Kiparsky (1998), Karlsson (2008), the various papers gathered in Holmberg and Nikanne (eds.) (1993), Manninen (2003), etc.
ARABIC (Fassi Fehri, 1988, ex. 64 c and 63b)

a) PREDICATIVE ADJECTIVES IN RELATIVE CLAUSES

laqiː-tur-rajul-a l-mariːd-a.
met-I the-man-Acc. the-sick- ACC.
‘I met the man who is sick.’

b) SECONDARY PREDICATE

laqiː-tu zaydan raːkiban/*r-raːkiban
met-I Zayd riding.M.SG.ACC./the-riding.M.SG.ACC.
‘I met Zayd riding.’

Russian and Lithuanian, as well as some other languages in the Slavic domain, constitute an interesting pattern; they appear to accept both the presence of a dedicated Case (the instrumental), or case agreement. Interestingly, as Richardson (2007), as well as (Timberlake 1988) show, there are semantic distinctions between the two morphological markings. Let’s look at example (10) below, repeated from Chapter 1. This sentence perfectly illustrates the two possible case markings. As the glosses show, the instrumental is associated with a special type of overlap semantics, in that it can give access to stages which precede or follow the overlap established at a particular situation time/point in time. Case agreement, on the other hand, is the restricted type of overlap seen in languages like English.

RUSSIAN

Ivan prišel domoj iz bol’nicy zdorovyj/zdorovym
Ivan-NOM. arrived home from hospital healthy-NOM./-healthy-INSTR.
‘Ivan arrived home from the hospital healthy (/cured - INSTR.)

A) INSTRUMENTAL CASE MARKING ON THE ADJECTIVE

i. The healthy state is a change of state: he went to the hospital unwell and returned healthy (cured)
ii. The health state is perceived as complete

---

36 In example (9b), raːkiban is an adjectival form; for more discussion on Arabic adjectives and agreement, see also Fassi Fehri (1980), (1981), Eid (1977).

iii. The subject came home from the hospital healthy, but he is not necessarily healthy at the time of this utterance, i.e. the healthy state holds true at a particular point in time.

B) CASE AGREEMENT ON THE ADJECTIVE
i. No change of state implied: the adjective simply describes this state.
ii. No interpretation that the antecedent’s healthy state is complete, e.g., he might be feeling a little bit dizzy
iii. The antecedent could still be healthy at the moment of the utterance, i.e. the healthy state does not hold true at a particular point in time only.

(11) Lithuanian (Timberlake 1988, ex.6)
Jis pasirodė laimingas/\ˈlaimingu\textsuperscript{38}.
He seems happy.M.SG.NOM./happy.M.SG.INSTR.
‘He seems happy.’

A language like Swiss German which has developed a special agreement marker for depictives, as shown in (12) is also of great interest for the study of secondary predicates. Again, if this marker is excluded, the sentence is ungrammatical under a secondary predicate reading. According to Bucheli Berger (2005), this phenomenon has attracted the attention of researchers of German especially due to the fact that the agreement/special marking is developed inside a system in which adjectival predicates tend to undergo (morphological) simplification.

(12) Swiss German
Du moscht d Mölch abe waam-e trink-e!
You must the milk.F.SG. (but) hot-DEP. drink-INF.
‘You have to drink the milk hot.’ (Bucheli Berger 2008, ex. 14)

A language in which secondary predicates need to be introduced by a complementizer-type element is Korean, as shown in (13). The marker –\textit{ko} is also seen as a complementizer which heads finite embedded clauses, as seen in (14):

(13) Korean
Suna-nun Minsu-lul yongliha-ta-\textit{ko} yoki-nun-ta.
Suna-TOP Minsu-ACC. intelligent-DEC-C\textsuperscript{0} consider-PRES.DEC.
‘Suna considers Minsu intelligent.’

\textsuperscript{38} Timberlake (1988) places a question mark in front of the instrumental form, indicating slight deviance of the use with this case marker. However, the native speakers consulted did not confirm this qualification, but rather mentioned that both forms are acceptable with a difference in meaning which they described as being very hard to pinpoint. On more sophisticated testing, it turns out that the distinction is related to the contrast in the Russian sentence in (10). Timberlake (1988) mentions in passing the existence of the ‘momentaneous/habitual, generic’ differentiation between case agreement and the instrumental.
Related to complementizers are various types of adpositions, which appear with secondary predicates in various families of languages, like Romance. The examples below from Romanian serve as an illustration:

(15) **Romanian**

a) Ne ia de proşti.
CL.1.PL. take.INFL.3.PRES.SG. S.P. idiot.M.PL.
‘He considers us idiot.’

b) Balena l-a mâncat pe peşte de viu.
Whale.F.3.SG.-have eaten ACC.SPECF. fish SP. alive.M.SG.
‘The whale ate the fish alive.’

c) A plecat de nebună.
Has left DEP. crazy.F.SG.
‘She left crazy.’

Dalmi (2005) proposes that the special morphology seen with secondary predicates is a spell-out of agreement. In her book, dedicated to a revival of Agr projections in minimalism, secondary predicates (just like other small clauses) are licensed as complements of this head. The sentence in (16) has the structure in (17):

(16) The man left drunk.

(17) [TP the man; T[VP left [AGR PRO; [AGR:AGR drunk]]]]

The data from Hungarian and Finnish, as well as the contrasts seen in Chinese and Japanese between resultatives and depictives show that more is at stake when it comes to Case marking than the simple Agr0 projection. As we have just seen in these languages, depictives and resultatives are signalled by distinct case marking on the secondary predicate, although it appears to be true that the secondary predicate and the shared argument agree in regular phi-features (like number, in Finnish and Hungarian, or gender in Romance, Bantu, Arabic, etc.). On the other hand, the alternations inside the depictive class itself are significant – it’s not clear how the Russian data would be explained if the case marking is simply a result of agreement. This discussion shows therefore that a more sophisticated theory of agreement and case valuation/checking is necessary.
3.1 Case and agreement in secondary predicates

Given the data seen above, it seems plausible to assume that secondary predicates contain a dedicate functional projection – the special morphology in Romanian, in Korean, etc. are a spell-out of this functional projection:

This functional projection is responsible for specifying how the relation between the two predicates takes place; it can be also assumed to be involved in the Case checking/valuation of the secondary predicate. The most straightforward hypothesis would be to say that it assigns Case to the secondary predicate in a head-complement manner (resuscitating classic ideas from Stowell 1981). This is what works like Pyllkänen (2002/2008), Matushansky (2007, 2009), Bailyn (2001), and others basically propose.

If the local Case checking relation explains the dedicated Case, something else needs to be said about Case agreement, as well as the agreement in more substantive phi-features (gender, and number). Also, another question is: are Case and other phi-features checked/valued under the same operation, or do they involve distinct cycles/stages/mechanics? This is a complex issue, especially given that the configuration argued for in the preceding chapter is one in which the shared argument and the secondary predicate are not found in a local relation at any stage in the derivation.

Let’s review now what the theory proposed has to account for. On the one hand, there is phi-feature agreement (in gender, number); on the other hand, there is the problem of Case – and the specific mechanics of checking, valuation, or other possible instantiations. A theory must be
formulated which is able to explain these agreement phenomena at a distance (Raposo and Uriagereka 1990, Chomsky 2001, Ceccheto and Oniga 2004, Béjar 2003, Béjar and Rezac 2009, etc.). Regarding Case, the patterns that have to be explained are the following:

i) Case-agreement (the predicate is marked with the same case as its controller), as in Latin, Greek, Icelandic, Georgian, Slavic, etc. Some examples from Icelandic are given below:

(20) **ICELANDIC S.P.s – CASE AGREEMENT**  (Sigurðsson 2004, ex. 29a and b, 34)

a) Prestarnir hittu biskuppin
Priests.the.NOM.M.PL. met bishop.the.ACC.M.SG.
druknir.
drunk.NOM.M.PL.
‘The priests have met the bishop drunk.’ (the priests were drunk when they met the bishop).

b) Prestarnir hittu biskuppin
Priests.the.NOM.M.PL. met bishop.the.ACC.M.SG.
druckninn.
drunk.ACC.M.SG.
‘The priests have met the bishop drunk.’ (the bishop was drunk when the priests met him.”

c) Ég taldi þá hafa verið
I.NOM. believed them.ACC.M.PL. have been
sagða hafa verið álítta
said.ACC.M.PL. have been considered. ACC.M.PL.
hafa verið ranglega daemda
have been wrongly judged.ACC.M.PL.
vera seka
be guilty.ACC.M.PL.
‘I believed them to have been said to have been considered to have been wrongly judged to be guilty.’

ii) Dedicated predicative case(s), as seen in Finnish, Hungarian, Slavic, etc.

iii) A combination of the above

iv) Default, or lack of Case (as claimed in Comrie 1997, for some classes of languages)

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39 The intricacies of secondary predicates in Icelandic have been described in many other papers: Thráinsson 1979, Andrews 1983, 1990, Sigurðsson 1989, 2003, Barðal (2001), Homberg and Hróarsdóttir (2003), Bobaljik and Landau (2009), etc.

40 This sentence illustrates multiple secondary predicates in infinitival structures. As shown in the previous chapter, there are solid arguments to distinguish infinitives from bare secondary predicates. The former, unless found truncated in restructuring domains, presumably have a clausal structure (see also Wurmbrand 2001, for more discussion about the typology of infinitives). This example has been included here in order to show the spreading of Case agreement.
v) Lexical Case (similar to the lexical Case assigned by a verb to its complement), as seen in Icelandic. Hence such Case marking cannot be considered secondary predicate dedicated Case (ex. 20)

(21) **ICELANDIC DEPICTIVES – LEXICAL/INHERENT? CASE**

a) Jón vonast til að leiðast
Jon.NOM. hopes to to be bored
ekki einum/*einann/*einn.
not alone.DAT.M.SG./alone.ACC.M.SG./alone.NOM.M.SG.
‘Jon hopes not to be bored alone.’ (Boeckx and Hornstein 2006: 596, adapted)

b) Bjarna langaði ekki til að leiðast
Bjarni. ACC. wanted not to to be bored
einum/*einann/*einn.
alone.DAT.M.SG./alone.ACC.M.SG./alone.NOM.M.SG.
‘Bjarni. ACC. wanted not to to be bored.’ (Boeckx and Hornstein 2006: 595, adapted)

c) **ICELANDIC ‘LEIÐAST’ – QUIRKY CASE ON COMPLEMENT**

Börnunum leiðist maðurinn.
Child.PL.DAT. get bored.SG. man.SG.NOM.
‘The man gets the children bored.’

d) Jón vonast til að sér leiðist ekki
Jon.NOM. hopes to to REFL. bored not
nöktumfullum
naked.DAT.SG./drunk.DAT.SG
‘John hopes not to be bored naked/drunk.’

What one can see in the examples in (21) is a mismatch in case marking between the shared argument and the secondary predicate. The Case the latter bears is nevertheless not a default (Dative cannot function as a default in Icelandic), but rather the quirky/lexical/inherent Case root of the verbal predicate leiðast checks on its internal argument, as can be seen in (21c). That the problem is not necessarily caused by the semi-quantifier secondary predicate einum (‘alone’)

---

41 The example Comrie (1997) provides is the following sentence from Harar Oromo containing an adjectival predicate used in a copular environment:

i. **HARAR OROMO**

Hommish-níi barána güürii.
Harvest-NOM. this year good-CIT.
‘The harvest is good this year.’

According to both Owens (1985), and Comrie (1997), in Harar Oromo (an Oromo language spoken in Ethiopia), the citation form (CIT.) is the case marking used for direct objects. It could be equated with lack of case. Nominative Case, on the other hand, is morphologically marked (as seen in i.).

42 On the assumption that such categories may exhibit idiosyncratic behavior when it comes to Case marking (as in Russian, see Madariaga 2006, Baltin 1995, Moore and Perlmutter 1999, for a detailed discussion) or co-occurrence possibilities.
shown by example (21 d), where *einum* is replaced with a more canonical secondary predicate. The dative Case marking is again obligatory, according to native speakers; nominative or accusative do not seem to be acceptable.

The question is then – how should an account of predicate Case be formulated so that it accounts for these patterns? Before actually presenting some possible analyses, and introducing the Multiple Agree mechanics argued for in this thesis, it is necessary to explain what is meant by the Case terminology (structural, lexical, inherent, etc.) alluded to above.

### 3.1.1 Very short excursus on Case typology

Is predicative Case a type of structural case, or does it instantiate other kinds of Cases? When one examines the literature on Case, a classification along the general lines *structural (syntactic)* vs. *lexical (quirky)* is the norm. Structural Case (i.e., the nominative on subjects corresponding to agents, the accusative on direct objects) is predictable and assigned/valued in the syntax. Lexical case, on the other hand, is taken to be more unpredictable, and can be assigned/valued by certain verbs or prepositions. Taking examples from languages in which overt Case marking is more prominent than in English, one striking observation about structural Cases is that they can be ‘overridden’ by other types of (structural) Cases. Sentences illustrating this observation are given below. In Russian, the verb *čitat* ‘to read’ can merge with an internal argument which will carry the Accusative case ending:

(22) **RUSSIAN STRUCTURAL CASE** *(Richardson 2007, ex. 1)*

<table>
<thead>
<tr>
<th>Ja</th>
<th>čitala</th>
<th>knigu.</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>read</td>
<td>book-ACC.</td>
</tr>
<tr>
<td>‘I read/was reading/used to read a/the/some book.’</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

If the sentence above is negated, the internal argument has to be marked with the genitive Case, as seen in (23):

(23) **RUSSIAN STRUCTURAL CASE UNDER NEGATION**

<table>
<thead>
<tr>
<th>Ja</th>
<th>ne</th>
<th>čitala</th>
<th>knig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>not</td>
<td>read</td>
<td>book-GEN.</td>
</tr>
<tr>
<td>‘I didn’t read a/the/some book.’</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Russian, as well as languages like Latin or German also contains verbs which must assign specific Cases to the (internal) arguments they merge with. For example, the Latin verb *adiuvo* ‘to help’ requires the dative Case on its internal argument, while the Russian verb *kosnut* ‘to touch’
checks the genitive Case, and the verb *upravljan* ‘to manage’ requires an internal argument with genitive Case.

(24) **LATIN**

Adiuvat *hostibus.*

Helps enemy.PL.DAT.

‘He helps the enemies.’

(25) **RUSSIAN**  (Richardson 2007, ex. 2)

a) Ja *kosnulas’ stola.*

I touched table-GEN.

‘I touched the table.’

b) Ona upvravljaet *kanceljariej.*

She manages office-INSTR.

‘She manages the office.’

If the Russian sentences in (25) are negated, the internal arguments can never appear in the genitive Case (the so-called genitive of negation). This is shown in (26), with a sentence containing negation. The instrumental case always takes precedence over possible types of structural Case which are assigned/checked in the syntax. For this reason, the latter types of Cases are called *lexical (quirky).*

(26) **RUSSIAN LEXICAL (QUIRKY) CASE**

Ona *ne upravljaet *kanceljarii/kanceljariej.*

She-NOM. not manage office-GEN./office-INSTR.

‘She doesn’t manage the/a office.’  (Richardson 2007, ex. 4)

That the split structural/lexical is not enough in the classification of Case has been shown by Woolford (2006). Some thematic relations show consistency in their morphological marking, for example goals/beneficiaries which normally require the so-called dative Case no matter what predicate introduces them. Datives hence are kinds of *inherent* Cases – predictable, but at the same time showing precedence over syntax-driven Case markings (keeping to the genitive of negation seen above, Russian datives cannot be replaced by genitives when sentences containing them are negated).

A fourth type of Case identified in the literature is *semantic Case,* whose interpretation is directly linked to its form. In this class morphological shapes like the Latin accusative of duration/location, or the Russian instrumental employed for various adverbial relations can be included. Semantic Case is taken to be different from the three types of Cases already mentioned because of its tight connection with a particular interpretation, as well as because in some contexts it can be replaced by other Cases.
(27) **LATIN SEMANTIC CASE**

a) Ambulabat *diem*.
   Walk-3.IMPF.SG. day-ACC.
   ‘He was walking on/by day time.’

b) Navigabat *marem*.
   Sail-3.IMPF.SG. sea-ACC.
   ‘He was sailing the sea’ (sailing on the sea)

(28) **RUSSIAN SEMANTIC CASE**

On *idet* lesom.
He walks forest-INSTR.
‘He is walking/walks by way of the woods.’

And yet a fifth type of Case appears to be necessary. This is the so-called Default Case (as discussed in Marantz 1992, Schütze 2001, Bailyn 2001, and Karpacheva 1999, among many others). Default Case is different in that it is conceived of as last resort mechanisms. If, due to the properties of a syntactic configuration in a specific derivation, a DP ends up not receiving Case, the Default marking is employed to avoid crash.

This whole discussion about the typology of Case proves to be extremely relevant when predicates are examined. That they carry Case might be a surprise in itself (the Case filter discussed in the GB includes only NP/DPs under its scope\(^{43}\)); obviously, the empirical data imposes an extension of the Case filter to predicates which are not morphologically NPs, and hence the mechanisms by which predicates obtain Case must be worked out. One of the most frequent assumptions about the nature of predicate Cases is they instantiate a type of default Case. This is what Schütze (2001) appears to claim; Moro (1997), on the other hand, notices that the mechanics of Case assignment/checking with non-verbal predicates is obscure. In the literature on Russian, where the topic is repeatedly discussed, some researchers see the instrumental as a type of default (Karpacheva 1999, Bailyn 2001, Bailyn and Rubin 1991, Bailyn and Citko 1999, Pereltsvaig 2001, etc.). But even if adequate for some languages (among which, possibly English), the default Case analysis is untenable as a cross-linguistic picture. It has its own opponents even in the Slavic domain (see the discussion in Matushansky 2008, 2010), mainly due to the observa-

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\(^{43}\) The **Case Filter** in Chomsky (1981) is formulated as follows:

**Case Filter**
Every lexical NP must be assigned Case.

This Filter is supplemented by the **Case Criterion**:

**Case Criterion**
Every NP receives one and only one Case; each Case is assigned to one and only one NP.
tion that Case agreement is possible, and there appears to be a difference in meaning between the instrumental-marked and Case-agreement options. Also, based on other facts in Russian at least, it does not seem to be accurate to propose that the instrumental is the default Case. To this can be added the data from the other languages examined here - in Finnish neither the essive nor the translativ are ever considered default Cases. The same goes for Hungarian, and Icelandic; in the latter quirky Cases don’t seem to be found in apparent default Case contexts. But if the Case on secondary predicates does not arise as a default, what is it?

3.2 Predicate Case and other long-distance issues

Long-distance Case assignment (together with long-distance ϕ-feature checking) has been rightfully recognized as a problem in generative linguistics. The earlier attempts to account for these facts started from canonical Latin and Greek examples, which normally exhibit Case and ϕ-feature agreement only. However, we saw above that the patterns are more complicated than that. Remember that we need to provide a technical implementation that can cover the following empirical classes:

(29) **TYPOLOGY OF ADJECTIVAL SECONDARY PREDICATE CASE MARKING**

i) Case-agreement (the predicate is marked with the same case as its controller), as in Latin, Greek, Icelandic, Georgian, Slavic, etc.

ii) Dedicated predicative case(s), as seen in Finnish, Hungarian, Slavic, etc.

iii) A combination of the above

iv) Default, or lack of Case (as claimed in Comrie 1997, for some classes of languages)

v) Lexical Case (similar to the lexical Case assigned by a verb to its complement), as seen in Icelandic. Hence such Case marking cannot be considered secondary predicate dedicated Case

A theory that could unify these apparently distinct instantiations would obviously be preferable. However, collapsing Case agreement with dedicated and lexical Case appears to be untenable at first glance. The most straightforward way to account for the latter is a head-complement Case checking procedure. In languages which show secondary predicate dedicated Case, the depictive/resultative head (linker) is responsible for checking the uninterpretable feature of the adjectival secondary predicate. For example, in Finnish the functional projection specified with resul-

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44 The genitive, the nominative, and even the accusative have been given the status of default in Russian. A more detailed presentation of the options can be found in Richardson (2007), chapter 2.

45 Possible default Cases in Finnish are examined in the various papers collected in Holmberg and Nikanne (1993).
tative semantics checks Translative Case, while the functional projection carrying depictive specification values the Essive Case. Examine the examples in (30):

(30) DEDICATED CASE
FINNISH RESULTATIVE – TRANSLATIVE
a) Ravist-i-n mato-n puhtaa-ksi.
Shake-PST.-1SG. carpet-ACC.SG. clean.SG.-TRNSL.
‘I shook the carpet clean.’
b) Maanviljelijä ampu-i ketu-n kuoliaa-ksi.
Farmer.NOM. shoot-PST.3.SG. fox-ACC.SG. dead.SG-TRNSL.
‘The farmer shot the fox dead.’
c) Sointu paisto-i kala-n kuiva-ksi.
Sointu.NOM. fry-PST.3.SG. fish-ACC.SG. dry.SG-TRNSL.
‘Sointu fried the fish dry.’ (until the fish became dry)

FINNISH DEPICTIVE – ESSIVE CASE
d) Miehet pitävät oppilaita ilois-i-na.
Man.PL.NOM. consider-PRS.3.PL. student-PART.PL. happy-PL-ESS.
‘The men consider the students happy.’
e) Mies syö puuro-n kuuma-naa.
Man.SG.NOM. eat-PRS.3.SG. porridge-ACC.SG. hot.SG-ESS.
‘The man eats/is eating the porridge hot.’
f) Miehet syövät puuro-n ilois-i-na.
Man.SG.NOM. eat-PRS.3.PL. porridge-ACC.SG. happy-PL-ESS.
‘The man eats/is eating the porridge happy.’
g) Hän kuol-i vanha-na.
S/he die-PST.3.SG old.SG-ESS.
‘S/he died old.’
h) Toini paisto-i kala-n kuiva-ksi (cf. 30c)
Toini fry-PST.3.SG. fish-ACC.SG. dry.SG-ESS.
‘Toini fried the fish dry.’ (i.e., while the fish was dry)
i) Kiria kirjoitet-t-i-in humalas-sa.
Book.NOM. write-PASS.-PST.-3.SG. drunk.SG-ESS.
‘The book was written drunk.’ (while the writer/author was drunk)
j) Museosa vieraill-t-i-in alastom-i-na.
Musesm-NOM.SG. visit-PASS.-PST.-3.SG. naked-PL-ESS.
‘The museum was visited naked.’ (by people while they were naked)
k) Mies saapui älykkää-nä
Book.NOM. arrived-PASS.-PST.3.SG. intelligent.SG-ESS.
‘The man arrived intelligent.’

46 In Finnish nouns and adjectives show morphological marking for number and Case only. Hence, with adjectives there’s no overt agreement for gender, but there must be agreement in number.
47 The adjective älykkää (‘intelligent’), normally an individual-level predicate, can be coerced in Finnish to a stage-level interpretation. Hence the translation of (30c) would rather be ‘The man arrived looking intelligent.’
FINNISH RESULTATIVE AND DEPICTIVE – TRANSLATIVE AND ESSIVE CASE

1) Toini tul-i vanha-na hajamielise-ksi.
   Toini.NOM. become-PST.3.SG. old.SG-ESS. absent-minded.SG-TRNSL.
   ‘Toini become absent-minded old.’

Finnish grammar contains a functional projection specified with depictive semantics, as well as one that encodes resultativity. These heads check the uninterpretable Case of their complements, the adjectival secondary predicates:

(31) a) DEPICTIVE DEDICATED CASE

\[
\text{\texttt{\textcurlywedge}} \rightarrow \text{essive}
\]

The vocabulary insertion rules in the language will therefore match the essive case with the featural composition of the depictive:

A similar mechanics is assumed to be involved in the checking of the translative Case, but this time that functional head contains features relevant to resultativity (they encode the information that the secondary predicate is a result of the primary predicate):

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48 Resultatives have been claimed to possess a more complex structure than depictives. This issue is briefly touched upon in the following chapter.
Accordingly, the vocabulary insertion rules will map these types of features to the translative Case marking:

\[(34)\quad [\text{RES}] \rightarrow \text{translative}\]

Moving now to option (v), namely the lexical Case marking as seen in Icelandic, the observation that the secondary predicate is treated (morphologically, at least) in the same way as more canonical objects argues for a head-complement Case checking procedure. Nevertheless, this time the Case probe is not the functional projection constructing the secondary predicate but rather the matrix predicate endowed with a lexical Case feature. One relevant example from Icelandic is resumed here in (35):

\[(35)\quad \text{ICELANDIC SECONDARY PREDICATE –LEXICAL CASE MARKING}\]

\begin{verbatim}
Jón vonast til að sér leiðist ekki nöktum/fullum.
Jon.NOM. hopes to to be bored not naked.DAT.SG./drunk.DAT.SG
‘John hopes not to be bored naked/drank.’
\end{verbatim}

In the sentence above, the secondary predicate carries Dative case; this is the morphological marking the internal argument of the verb leiðist would normally carry. Interestingly, this situation only arises in Icelandic with those verbs that check lexical/quirky Case. Given this, the most straightforward assumption to make is that the verb also checks the uninterpretable feature of its secondary predicate complement, as in (36). The features will percolate down to the terminal.
Lexical and dedicated Cases are in a sense the easiest to account for. The real problem is those instances in which Case agreement is required. What is the mechanics of this puzzling long-distance process? Generative grammar has been concerned with these facts, as already mentioned. In GB analyses have been offered which implement a rich apparatus, and specifications which did not appear to be theoretically motivated/necessary elsewhere (see the discussion in Raposo and Uriagereka 1990, for example). As many of the foundational concepts long-distance agreement employed then are not available in minimalism, it would be instructive to also illustrate how minimalism addresses these empirical facts. Two of the most significant implementations are examined below – Chomsky’s classic probe-goal mechanics (2001), and Matushanksy’s (2008, 2010) head-complement checking procedure. It is shown that both accounts are problematic for adjectival secondary predicates, as they make use of a small clause configuration which the previous chapter argued is not the correct structure for such constructions. Nevertheless, the two analyses contain important insights and assumptions that appear to be equally necessary for an integrated account of secondary predicates. Hence, it is argued that if enriched with the mechanics of Multiple Agree (Hiraiwa 2004), a correct implementation can be obtained not only for long-distance agreement in Case, but also for more trivial phi (ϕ)-features.

3.2.1 Chomsky (2001)

Chomsky (2001) investigates the conditions of case valuation in narrow syntax, under a minimalist theory of grammar. The sentences under scrutiny are examples containing passive participials of the type in (37):
PASSIVE PARTICIPIALS IN ENGLISH

There seem to have been caught several fish. (Chomsky 2001: ex. 18)

The interest in these types of examples is driven by the fact that cross-linguistically the participial can exhibit overt phi-feature (and Case) agreement. For example, in Romanian (38), the participial prinşi (‘caught’) is morphologically specified as past/perfect participle, masculine, plural, and it carries a Case specification distinct from the genitive/dative (being probably nominative, and not accusative, although the two forms have fused under the same morphology in Romanian).

PASSIVE PARTICIPIALS IN ROMANIAN – OVERT AGREEMENT

a. Se pare că au fost prinşi mai mulţi peşti. [Expl to have been caught.
PST.PRT.PL.M. more many peşti.]

‘It seems that several fish have been caught.’

b. Mai mulţi peşti par că au fost prinşi. [Expl to have been caught.]

‘More fish seem that they have been caught.’

c. Mai mulţi peşti par a fi fost prinşi. [Expl to have been caught.]

‘More fish seem to have been caught.’

d. Par a fi fost prinşi mai mulţi peşti. [Expl to have been caught.]

‘Seem to have been caught more fish.’

The basic sentential skeleton Chomsky (2001) starts with is given in (39):

(39)

a. C[β T seem ] [Expl to have been [α caught several fish]]

In order to account for the participial agreement, Chomsky’s implementation proceeds as follows. A double agreement process is assumed first: the probes (T or v) agree with Expl (process not examined here in detail) and fish. As a result, T deletes the uninterpretable feature of Expl (and induces raising) and assigns nominative to fish; simultaneously, v deletes the uninterpretable feature of Expl (without raising to [Spec,v], and assigns accusative Case. The next step is that
Prt agrees with the DO *fish*, and in languages like Icelandic, Romance, (etc.), Case agreement is also visible – “Prt is nominative with probe T, and accusative with probe v.” The precise mechanics of the cycle α, which is the main interest for secondary predicates starts with the featural specifications in (40):

\[
\begin{align*}
\alpha &\rightarrow \text{Prt} \left[\text{catch } \text{[DO several fish]}\right] \\
&= \left\{ u\# \begin{array}{c} u\gamma \\ uC \end{array}, \begin{array}{c} # \\ \gamma \\ uC \end{array} \right\}
\end{align*}
\]

As Prt. is adjectival: “its φ-set may consist of (unvalued) number, gender, and Case, but not person”, the φ-sets of Prt. and DO match (DO is φ-complete), inducing Agree. Number and gender features of the Prt. receive values and delete. But CASE is unvalued for both Prt. and DO, so neither can assign a Case value to the other. At the next stage of the cycle (stage β), Case is assigned to the DO: nominative with probe T and accusative with probe v. Left at this stage, the derivation will crash: Prt has its Case feature unvalued. Chomsky’s idea is that the ϕ-features of Prt are still visible at stage β of the cycle, though deleted (T and Prt are not strong phases; the features will disappear at the strong-phase level CP or vP, as the phase is transmitted to the phonological component). Therefore, at stage β of the cycle, the probe T/v matches the still visible goal Prt, valuing its Case features; and the probe matches the goal DO, valuing the Case feature of DO, as well as its own features (since DO is φ-complete). The result is triple matching/agreement, as in (41):

\[
\begin{align*}
\text{(41)} &
\end{align*}
\]

i) (probe, Expl) 
ii) (probe, DO) 
iii) (probe, Prt)

Prt and DO agree with one another: directly for number/gender, indirectly for structural Case (since each agrees with the probe). The main problem with this type of account is that the mismatched case patterns cannot be derived – the higher probe will have to be specified with two distinct sets of features, which will check on the one hand the case of the shared argument, and on the other hand a mismatched case on the secondary predicate. It is not clear how one could specify the probe as well as the mechanics of the derivation in order to obtain these facts. Secondly, given the structure we need to assume for secondary predicates, a direct feature-matching relation between the shared argument and the secondary predicate cannot be established. The scope facts, as well as the (exclusively) strong readings shared DPs bear demonstrate
that the argument cannot be found in a position which is lower than the matrix or the secondary predicate at any stage during the derivation. Another problem this account might have resides in explaining split-agreement patterns, as seen with middles and passives. Some relevant examples are given in (42), (43), and (44):

(42) **ITALIAN MIDDLE** (Chomsky 1981, a.o.)

    (In questo paese) si vive nervosi.
    (In this country) SI live.3.SG. nervous. PL.
    ‘In this country, one lives nervous (pl.).’

(43) **ROMANIAN MIDDLE AND SECONDARY PREDICATE**

    Muzeul nu se vizitează dezbrăcați.
    Museum.the. SG. not SE visit.3 naked. PL.M.SG.
    Lit. ‘The museum does not visit naked (pl.).’
    ‘People cannot visit the museum naked.’

(44) **VENDA PASSIVE AND SECONDARY PREDICATE**

    Nama yo liwa vho neta.
    Meat was eaten 3PL. tired.
    ‘The meat was eaten tired (pl.).’

What one sees in the Italian and the Romanian data is a mismatch between the features on the verbal head (3.Sg. in Italian/ (Romanian)), and those on the adjective (PL). Moreover, there is no overt DP in Italian; the overt DP in Romanian is singular, in this case (similarly to the DP in Venda). There are various possibilities of accounting for the status of implicit arguments: a drastic approach would be to assume that implicit arguments are not present in the syntax. The middle head, instead, is inherently specified with a (defective) set of features: 3 person, number subject to cross-linguistic difference. A less drastic account is to say that implicit arguments are indeed present in the syntax (as in Landau 2010, for a recent discussion). They enter into an agreement relation with the relevant probe; the probe retains the features, and then transmits them to the adjective (hence, an indirect agreement relation between the adjective and the DP). The discussion of the Hindi patterns below will touch on this issue, and will show how it can be preliminarily accounted for. Before introducing the detailed discussion of Hindi, a language in which agreement is visible on both predicates, it is necessary to look another account of predicative case, which is able to avoid some of Chomsky’s problems.
3.2.2 Matushansky (2008, 2010)

As a reminder, a complete account of Case marking on secondary predicates has to include at least two strategies: a) Case feature transmission by the shared argument; b) Case checking by the matrix predicate or the mediating functional projections. In a minimalist theory, the desideratum would be to attempt to reduce these Case checking configurations to the minimum. Hence it would be excellent if the two general instances can be collapsed under one, as less is always better than more. Matushansky’s (2008, 2010) work goes into this direction. This time all Case checking with secondary predicates is taken to be derived in a head-to-complement manner. For Matushansky (2008, 2010), Case agreement is just like Concord; it results from Case assignment to the constituent that contains both items found in an Agree relation (hence in a small clause like configuration). Case features are assigned by a head to its complement – they are the uninterpretable counterparts of the interpretable features composing a specific head. The following assumptions are made (Matushansky 2010, page 2):

i) “Structural Case is assigned by a head to its sister and percolates down” (following Stowell 1981). An NP is allowed to carry more than one Case (see also Merchand 2006, Richards 2007, etc.)

ii) “There are no special Case features. What has been called Case corresponds to the uninterpretable counterparts of interpretable features of the assigning head” (in the tradition initiated by Pesetsky and Torrego 2001, 2004, 2007, and developed by Svenonius 2001, Richardson 20073, Bailyn 2004, etc.)

iii) The resulting bundles of uninterpretable features are spelled out by Vocabulary Insertion Rules, which include impoverishment rules, and “can be both specified as to the context of application, or underspecified with respect to some features” (employing the DM reasoning; see Halle and Marantz 1993, 1994)

The core idea of Matushansky’s (2008, 2010) proposal is that all formal features of a head can be copied into its complement; subsequently they can percolate down to all the branches/leaves. Two facts derive from this reasoning. On the one hand, a terminal can be specified for a number of uninterpretable features (Case spells out a feature bundle\(^{49}\), rather than a single feature). On

---

\(^{49}\) Seeing syntactic Case as (the counterpart of) a feature bundle obviously raises the question of how PF spell-out. Matushansky (2010, page 3) proposes the following set of morphological rules:

i) \textit{The morphosyntax of Case}
the other hand, Case is conceived in purely structural terms, as a property of a domain other than an NP. With respect to the canonical structural Cases (the nominative assigned/valued to the subject, and the accusative assigned/valued to the direct object), this theory is not necessarily distinct from the more standard approaches. \( T^0 \) and \( v^0 \) are the major Case assigners; they transmit their features to their complements upon Merge, as schematized in (46):

\[
(45) \quad \text{CASE DOMAINS}
\]

Syntactic Case can be assigned to constituents larger than the NP; exemplifying with an example that is closer to the structures discussed in this thesis, if the complement of a head is a control infinitive or CP, Case will be assigned to the entire control structure, in Matushansky’s (2010) view. In a second step, the relevant features percolate down to all the leaves; the nodes inside the domain will carry the same case marking, giving the (apparent) impression of agreement in morphological case. Note that long-distance agreement on all the nodes in an infinitival, or CP control constituent appears to be a robust process cross-linguistically. In the Indo-European domain, a well-known example is provided by Latin (as well as Slavic languages, the Romance family, Greek, etc.). As can be seen in (46 a), the secondary predicate embedded inside the infinitival has to carry the same Case (accusative), and number, as the argument te ‘you, sg.’ In (46 b), the shared Case is this time dative:

\[
(46) \quad \text{LATIN}
\]

a) Ego iubeo te esse bonum.
   ‘I order you to be good.’

b) Quieto tibi licet esse.

b) The PF realization of each particular bundle of Case features (the morphological Case) is resolved by language-specific vocabulary insertion rules.
‘You are allowed to stay quiet.’

Due to its applicability to entire domains, Matushansky’s (2010) approach is able to straightforwardly account for instances of Case-stacking/Case doubling or Suffixaufnahme. This is basically the process by which several Case-related suffixes can be stacked into the same NP. Such double marking\(^50\) has been repeatedly observed, especially in Australian languages (Nordlinger 1997), such as Kayardild (Merchand 2006, Mel’čuk 1986, Dench and Evans 1988, Evans 1995) and Lardil (Richards 2007). In sentence (48) from Kayardild it can be noticed that each node in the embedded clause carries the morphological marker \(-ntha\), which is analyzed as the so-called oblique Case in the language. This is on top of the regular Cases each NPs in the sentence would normally receive:

\[
\begin{align*}
\text{(47) KAYARDILD CASE STACKING} & \quad \text{(Merchand 2006, ex. 11)} \\
\text{Ngada mungurru,} & \quad \text{[maku-}ntha \text{ yalawu-jarra-}ntha \\
\text{I know woman-OBL.} & \quad \text{catch- PST.-OBL.} \\
\text{yakuri-naa-}ntha & \quad \text{thabuju-karra-nguni-naa-}ntha. \\
\text{fish-ABL.-OBL.} & \quad \text{brother-GEN.-INSTR.-M.ABL.-OBL.} \\
\text{mijil-nguni-naa-}ntha. & \end{align*}
\]

\text{‘I know that the woman caught the fish with brother’s nest.’}

The same reasoning is applied to explaining the Case behaviour on secondary predicates. Although Matushansky (2010) exemplifies the mechanics with a nominal secondary predicate, the same assumptions extend to the adjectival contexts. The structure assumed for secondary predicates (as well as small clauses) follows Bowers (1993), as well as the standard analysis in Russian generative linguistics (Bailyn and Rubin 1991, Bailyn and Citko 1999, Pereltsvaig 2001, etc.) in postulating that the argument-secondary predicate relation is mediated by a Pred\(^0\) head (whose function is to convert a semantically saturated entity into an unsaturated one, according to Bowers 1993).

\[
\begin{align*}
\text{(48) SECONDARY PREDICATE IN RUSSIAN – INSTRUMENTAL CASE} & \\
\text{Ja sčitaju Ivana umnym/*umnogo.} & \\
\text{I-NOM. consider Ivan-ACC.M.SG. intelligent.INSTR./ intelligent.ACC.} & \\
\text{‘I consider Ivan intelligent.’}
\end{align*}
\]

\(^50\) See also Mel’čuk (1986) for examples from Old Georgian, Kracht (1995) for an overall picture of Causian Suffixaufnahme and Case attraction in Armenian, Youn (1990) for Korean, Kornfilt (1997) for some data from Turkish, Matras (1997) who discusses the phenomenon in Romany, Plank (1995) for more data from some Middle East languages.
Secondary predicates selected by *consider*-type predicates require the instrumental Case; no Case agreement option (accusative on the secondary predicate) seems to be possible. Pred° assigns instrumental Case on the predicate.

(49)  
```
       VP
          |  
        V   PredP
           |     |  
       consider    DP    Pred°
         |     |  
   the student    Pred°'  AP
   [INSTR.]         intelligent
```

Matushansky (2010) also addresses the problem of agreeing Cases; but she examines copular sentences only. Let’s look at the pair of sentences in (51):

(50)  **COPULAR CONSTRUCTIONS IN RUSSIAN**  
(Matushansky 2010: ex. 11 & 12)  
Context: And how did they earn their living?

a)  Iusus byl *plotnik/plotnikom, a Magomet Iusus.NOM. was carpenter. NOM./carpenter. INSTR. and Mahomed byl *kupec/kupcom.
    was merchant. NOM./merchant. INSTR.
    ‘Iusus was a carpenter and Mohamed was a merchant.’

b)  **Context: And how do they earn their living?**

    Magdalina prostitutka, a Iusus plotnik/*plotnikom.
    Magdalena prostitute and Jesus carpenter. NOM./ carpenter. INSTR.
    ‘Magdalena is a prostitute and Jesus is a carpenter.’

In order to understand the contrast, some extremely brief qualifications about (Russian) copulative clauses are necessary. These constructions are normally split into two major types\(^51\): the equative/classificatory (which identifies the referent in a precise way – *John is the teacher*), and the so-called predicative type (attributing a property to an individual – *John is a teacher*). In (51a), the Case of the nominal secondary predicate can only be the instrumental. In (51 b), although the predicate. The difference in case marking cannot be attributed to a distinction along the lines *equative vs. predicative*, as the context forces a predicative reading only in both sentences. As the contribution of tense doesn’t seem to be relevant either (it’s not clear why past

---

\(^51\) For more detailed taxonomies of nominal copular structures, see Higgins (1979), Rapoport (1987), Heycock (1994), Heggie 1988 (a,b), Mikkelsen (2005), etc.
tense would force the instrumental; moreover it’s simply not true that present tense copular constructions can take nominative only), the explanation has to be sought somewhere else. In order to preserve systematicity, Matushansky (2010) rejects the proposal that there might be two distinct Pred heads, one c-selected by T and which would not check any Case, and the other c-selected by V, presumably assigning instrumental Case (Bailyn 2001, 2002). She follows Bailyn and Rubin (1991) instead in assuming that in present tense copula-less environments, the small clause merges as a complement of T directly. Crucially, the small clause is not selected by T, and Pred0 assigns Case to its complement. Hence the derivation of sentences like (51) and (52) must be taken to involve two sets of “Case features” – those checked by T0 ([nom]), and those checked by Pred ([pred]):

(51) RUSSIAN COPULA-LESS PREDICATIVE SENTENCE
   a) Isus plotnik/*plotnikom.
      Jesus carpenter. NOM./ carpenter. INSTR.
      ‘Jesus is a carpenter.’
   b) [TP]
      [NOM]
      [PRED]
      T0
      PredP
      DP
      [Pred']
      Pred0
      DP
      Jesus
      a carpenter

Given Matushansky’s domain-sensitive Case implementation, it follows that the predicative DP has both [NOM] from T0 and [PRED] from Pred0, while the subject is assigned [NOM] only. The contrast nominative/instrumental is explained by assuming that the latter is only possible when an overt verb is present in the structure. This is illustrated with the verb believe in Matushansky’s paper, and it probably extends to be in a straightforward manner:
The bundles of features \([\text{EVENT}]\) are a component of a higher \(v^0\) head obligatorily associated with a lexical verb in order to introduce its eventuality argument. In Russian the vocabulary insertion rules are as follows:

\[
\text{(53) Vocabulary Insertion Rules (a fragment)}
\]

\[
[pred, \text{event}] \rightarrow \text{INSTRUMENTAL}
\]
\[
[\text{acc}] \rightarrow \text{ACCUSATIVE}
\]
\[
[\text{nom}] \rightarrow \text{NOMINATIVE}
\]

(Matushansky 2010: 15)

Hence what is spelled-out as the instrumental Case is in fact the combination of feature bundles assigned by both Pred\(^0\) and a c-commanding verb. As small clauses do not fulfill the two conditions for instrumental Case assignment simultaneously, their subject is not marked instrumental, Matushansky (2010) argues. As such the subject of the small clause in (53 c) carries overt accusative, and the “presence of [acc.] or [nom.] does not affect case marking of the predicate in (53), and the presence of [nom] or [event] has no effect on the case marking of the small clause subject in (53)” (Matushansky 2010, p.5).

Although the head-complement Case assignment implementation is very useful in explaining the morphology of secondary predicates, there are some obvious problems with Matushansky’s analysis. First of all, it can’t simply be correct that the Case assigned to a node perco-
lates down to *all* the leaves in a non-discriminatory manner. Secondly, it is simply not clear how this implementation gives the correct results when adjunct secondary predicates are examined. We saw above that in Russian such predicates show a Case alternation: agreement vs. instrumental. The relevant example is repeated here in (55):

(54) **RUSSIAN ADJUNCT SECONDARY PREDICATES** (Richardson 2007)

Ivan přišel domoj iz bol’nicy
Ivan-NOM. arrived home from hospital
zdorovyy/zdorovym
healthy-NOM.M.SG./healthy-INSTR.(M.SG.)
‘Ivan arrived home from the hospital healthy (/cured - INSTR.)’

**INSTRUMENTAL CASE MARKING ON THE ADJECTIVE**

i) The healthy state is a change of state: he went to the hospital unwell and returned healthy (cured)

ii) The health state is perceived as complete

iii) The subject came home from the hospital healthy, but he is not necessarily healthy at the time of this utterance, i.e. the healthy state holds true at a particular point in time.

**CASE AGREEMENT ON THE ADJECTIVE**

i) No change of state implied: the adjective simply describes this state.

ii) No interpretation that the antecedent’s healthy state is complete, e.g., he might be feeling a little bit dizzy

iii) The antecedent could still be healthy at the moment of the utterance, i.e. the healthy state does not hold true at a particular point in time only.

The mechanics of Case assignment, coupled with the lexical insertion rules in (54) predicts that the instrumental only should be spelled-out in these contexts. As both these sentences contain a lexical verb, the $v^0$ head specified with [EVENT] features must be present and assign the relevant Case features to its complement. Matushansky (2010) briefly dismisses this problem in a footnote, by denying a secondary predicate status to the Case agreeing forms. These are treated instead as split NPs. But, although the borderline between displaced attributives and secondary predicates is very subtle one, there are several pieces of evidence indicating that the nominative and the accusative agreeing adjectives are indeed secondary predicates. In fact, with the exception of Pereltsvaig (2001) and Matushanksy (2010) the majority of the accounts treat them as true secondary predicates. Their non-attributive status is proven not only by the existence of an *overlap* interpretation they receive, and which is absent with split NP, but also by their capacity to be coindexed with a pronoun shared argument. In Russian, as well as in many other languages, adjectives cannot modify pronouns directly.
Hence in order to maintain a uniform head-complement Case assigning/checking mechanism, one has to assume there is more than one Pred\(^0\) head, with a distinct featural composition. They will check either the instrumental or some other case. But this misses an important generalization; the ‘some other Case’ is cross-linguistically Case agreement (that is, covariance in Case features with the shared argument). In order to capture these facts, a more comprehensive mechanism is necessary. As will be shown shortly, there are important interpretive distinctions in the class of overlap relations (logically, there is more than one way an overlap relation can hold, and human languages appear to make use of this). The assumption of this thesis is that Case alternations in Russian are sensitive to this fact; in other languages the distinctions are either by specific morphology on the mediator (secondary predicate introducer), or by a combination of both. The generalization argued for is thus as in (56):

\[
\begin{align*}
(55) \quad \text{SECONDARY PREDICATE CASE CHECKING} \\
\text{i) Case of secondary predicate is checked in a head-complement configuration by the secondary predicate introducer} \\
\text{ii) If the secondary predicate introducer does not contain the relevant features, copy the Case feature of the shared argument/independently available in the domain}
\end{align*}
\]

The next section presents the proposal in detail. Its core contribution resides in specifying the featural make-up of the functional projections that introduce secondary predicates, and in motivating the dual strategy involved in Predicate Case checking.

### 3.3 Predicate Case features

The subtle interpretational distinctions seen in (55) have been a topic of inquiry in the literature on Slavic, as they are seen in other languages from the same family (see example 11 above from Lithuanian, the discussion in Bailyn 2001 on Polish data, and the pan-Slavic picture in Richardson 2007). There appears to be a consensus in the literature that the two Case options illustrate a contrast between individual-level and stage-level adjectives (Timberlake 1988 contains a good overview of the approaches following this line). Remember that individual-level predicates express inherent, immutable characteristics (tall, good, intelligent, etc.), while stage-level ones encode more transitory properties (sick, drunk, happy, etc.). If we examine again the semantic split Case agreement/Instrumental in (55), we indeed get the impression that the latter rather encodes a bounded property, corresponding rather to a stage-level interpretation. The nominative is more like individual-level in that it does not seem to impose boundedness. Hence, if we wanted to
present a fragment of vocabulary insertion rules of Russian secondary predicates, following this
dichotomy, we could propose (57):

(56) VOCABULARY INSERTION RULES (A FRAGMENT)
[individual-level] → COPY THE CASE FEATURES OF THE ARGUMENT
[stage-level] → INSTRUMENTAL

Intuitive as this formalization might be, it nevertheless seems quite problematic. Given that true
individual-level secondary predicates are normally odd, if not completely unacceptable for native
speakers, with non-stative matrix predicates (as seen in 58, 59, and 60\(^52\)), one wouldn’t expect
such semantic contrast to be active in these contexts.

(57) /* The man entered the house intelligent.
(58) /* The woman ate tall. (the woman was tall while eating)
(59) RUSSIAN
   a) *Zhenschina ela vysokaja\(^53\) / vysokoj.
      Woman-Nom. ate tall-NOM-SG.F./tall-INSTR.SG.F.
      ‘The woman ate tall.’
   b) *Ivan prišel umnyj/umnym. (Richardson 2007: ex.37, p.119)
      Ivan-Nom. arrived intelligent-NOM.M.SG./intelligent-INSTR.M.SG.
      INTENDED: ‘Ivan arrived intelligent.’

Some matrix predicates, due to their inherent lexical aspectual make-up, might and do normally
accept individual-level secondary predicates. This class includes pure statives (like consider) and
achievements. If the analysis provided in this section and in the next chapter is on the right track,
it follows that pure statives will accept instrumental-Case marked secondary predicates only.
This appears to be correct in Russian; in sentence (60) Case agreement (accusative) is impossible.

\(^{52}\) One has to keep in mind that the individual/ stage-level specification of a predicate is not necessarily immutable.
Various coercion procedures are possible by which individual-level predicates can turn into stage-level or vice-
versa. As we saw above in the examples from Finnish (26k), a typical individual-level predicate like intelligent can
be coerced into a stage-level property (meaning something like look intelligent/appear intelligent). Similarly, in
many languages the sentences in (59) is perfectly acceptable if tall is either interpreted as a stage-level predicate
under the reading proud, or as a typical individual-level predicate in a (fairy-tale) context in which a woman has the
property of becoming tall when eating, and short when not eating. Such coercion possibilities vary from language to
language, probably based on the specific semantic feature composition of adjectives. See McNally (1994) for more
discussion about the pragmatics of coercion.

\(^{53}\) The only way for the sentence in (60) to be grammatical with Case agreement on the secondary predicate is to
have the adjective function as part of a split NP. Note that the prosody and the interpretation would be different. The
split reading requires a long pause between the main and the secondary predicate (marked here with the comma):

i) Zhenschina ela, vysokaja.
   Woman.NOM. ate tall.NOM.SG.F.
   ‘The woman ate, the tall one.’ (and not the short one).
An achievement predicate like *return*, on the other hand, should tolerate an individual-level predicate as it fulfills the matching requirements. For one, it’s a temporally reduced predicate (does not have internal complex duration and stages), and secondly, it can encompass the contrast between the coming into existence of a property and its non-existence. It does not have transient stages, in other words, but rather holds or not, just like individual-level predicates. As predicted, an individual-level predicate is well-formed with a predicate like *return* in both case agreement (nominative) and instrumental Cases:

(61) **Russian**

Context: He wasn’t a very bright student but then he went to Oxford,

I vernulsja ottuda umnym / umnyj.

And returned from there intelligent-INSTR./ intelligent-NOM.

‘And returned from there intelligent/smart.’

**Instrumental Case marking on the Adjective**

i) The state of intelligence is a change of state: he went to Oxford when he was ignorant/stupid and returned intelligent

ii) The implication that the subject turned into an intelligent person while at Oxford

iii) The subject returned from Oxford intelligent, but he is not necessarily intelligent at the time of this utterance, i.e. the intelligent state holds true at a particular point in time.

**Case Agreement on the Adjective**

i) The subject could still be healthy at the moment of the utterance, i.e. the intelligence state does not hold true at a particular point in time only.

ii) A reading in which the subject did not necessarily become intelligent (turned from stupid to intelligent) at Oxford only, but also possibly on the way back from Oxford to destination

Going back to the discussion in the preceding chapter, Russian numerals provide yet another piece of evidence regarding the requirement of strong readings of shared arguments. It is well-known that Slavic languages (with the exception of Macedonian and Bulgarian) do not have definite/indefinite determiners. The distinction is preserved nevertheless in the adjectival domain in languages like Serbian/Croatian, or in the numeral class. Russian has two series of numerals – one that allows strong/partitive readings only, and requires the marker – *er* as well as the genitive on the DP, and the other which does not have supplementary morphology and always agrees in Case with the noun it modifies. The latter series cannot have a partitive reading and is not acceptable in secondary predicate contexts.
These observations unambiguously demonstrate that what is at stake here is not the distinction *individual/stage level*. An account which potentially avoids this problem is Richardson’s (2007). The contrast instrumental/Case agreement is attributed in his book to a grammatical aspect differentiation. Richardson (2007) uses Klein’s (1994) formalization of grammatical aspect as the relationship between Topic Time (the span of time to which the speaker’s claim is restricted) and Situation Time (the actual time of the eventuality). Perfective aspect marking on a verb indicates that the eventuality is contained within the topic time, while the imperfective does not have such implication. For Richardson, instrumental Case-marked secondary predicates are bounded in time, and refer to a state that holds during the Topic Time, hence making “no reference as to whether that state held before or after that time.” (Richardson 2007, page 126). This observation builds on another intuition the traditional literature expresses with respect to the Case marking contrasts. For example, Shevelov (1963) describes the instrumental Case of Ukrainian secondary predicates as denoting a ‘peculiarity ascribed in time’ (Shevelov 1963: page 126). For Richardson (2007) it follows that if a state holds during the Topic Time then it is bounded in time. The semantics of the instrumental is precisely this. The Case agreement patterns, on the other hand, signal that a state extends beyond the Topic Time. The diagrams below further illustrate the contrast:

(62)  

```
   ------------------------[------------------------] TOPIC TIME  ------
          ↑
Eventuality occurs within the Topic Time  (perfective aspect, instrumental Case)
```

(63)  

```
   ------------------------[------------------------] TOPIC TIME  ------
          ↔
Eventuality holds throughout and potentially extends beyond the Topic Time  (imperfective aspect, Case agreement)
```

The schematization in (62) is intended to capture either a *totality* reading of the bounded eventuality (which is characteristic to perfective aspects), as well as a change of state, which would be salient if a state only holds for a subinterval of the Topic Time, when there are subintervals during which it did not hold. To see why this implication is salient, consider the example in (64) from Chvany (1975), which contains a secondary predicate marked with instrumental Case:
The normal interpretation of this sentence is that the dog has become silver as a result of its immersion in the water. If a nominative secondary predicate were to be used instead of the instrumental one, there won’t necessarily be a change-of-state implied. Connecting the instrumental marking to boundedness within the Topic Time does therefore give the intuition that we are dealing with temporally restricted properties.

Although Richardson’s (2007) formalization of the distinction in Case marking is able to account for the classic intuitions regarding this type of morphological dichotomy, there are some problems which suggest that the contrast should not necessarily be tied to grammatical aspect in terms of boundedness. One issue noted by Richardson (2007) itself is the possibility of instrumental Case marking with matrix predicates in the present tense. If the instrumental indeed encodes perfectivity it should not be permitted in the present tense. Perfective aspects, if defined in terms of boundedness, are viewpoints that obligatorily include initial and final point of an eventuality (Smith 1997, and a wealth of literature). The present tense, on the other hand, must exclude the endpoint. In Russian, nevertheless, true secondary predicates with instrumental Case are possible and well-formed in the present tense. See the example below, with the glosses provided by Richardson (2007: ex. 75, page 132):

\[
\begin{align*}
\text{(65) & Instrumental Case and Present Tense} \\
\text{My} & \quad \text{tancuem} \quad \text{p’janye/p’janymi.} \\
\text{We-NOM.} & \quad \text{dance-PRES.} \quad \text{drunk-NOM.M.SG/ drunk-INST.M.SG.)} \\
& \quad \text{‘We are dancing drunk.’ (Nomina tive)} \\
& \quad \text{‘We dance drunk.’ (Instrumental)} \\
\end{align*}
\]

Richardson claims that the instrumental-Case marked secondary predicate only obtains a generic reading in such contexts, and this is not problematic. A habitual interpretation would be easy to explain by making reference to the change of state implicature entailment earlier. What the sentence says therefore is that whenever the change of state (from sober to drunk) occurs, then the dancing occurs. However, the native speakers consulted claimed that the instrumental does not necessarily have a habitual interpretation in sentences like (65). What it basically conveys is that the characteristic of being drunk cannot extend beyond the eventuality of dancing. When the secondary predicate is used with Case agreement, this type of extended overlap is possible. But if
the instrumental-Case depictives can take other readings beyond the habitual ones, an explanation along Richardson’s lines is obviously problematic. Moreover looking at the general aspectual marking in Russian, postulating that habituals are related to perfectivity is at odds with the observation that in the Slavic verbal domain (as well as cross-linguistically) these types of interpretations rather require/impose the presence of imperfective aspect morphology.

A second class of problems is related to the absence of Case agreement with secondary predicates embedded under ‘consider’, and other stative matrix predicates like 

\textit{hate, like, etc.} We have seen cross-linguistic evidence that such secondary predicates also form complex predicate structures, and can be analyzed as structurally similar to more canonical depictives. In Russian in these contexts the instrumental Case only is allowed (as illustrated above in 52 and 60). Another fact we noticed is that individual-level predicates are allowed/even required in this context. If the instrumental is to be explained following Richardson (2007), we are obviously faced with an important problem. Individual-level predicates make reference to inherent, immutable, characteristics and \textit{cannot} express bounded properties, if boundedness is linked to the perfective grammatical aspect\textsuperscript{55, 56}. Given this, it would be impossible to provide a unitary analysis for all classes of secondary predicates, which is undesirable given the strong arguments that they can be collapsed under the same class. The third problem is related to the lexical aspect composition of the predicates we’re examining here. Adjectives are \textit{states}, and the contrast perfective/imperfective is more complex in their case. This complexity remains unexplained under the strict analysis in Richardson.

\textsuperscript{55} The example in (59) containing an individual-level predicate in a potential adjunct configuration with an achievement is not problematic. The adjective \textit{intelligent} is interpreted there as encoding a change of state. This is possible with individual level predicates (Kratzer 1995, etc.)

\textsuperscript{56} If an individual-level predicate is merged with the copula \textit{be} in the past tense, it gives rise to so-called ‘life-time’ effects (Musan 1997, Mittwoch 2008). The adjective \textit{umnym} ‘intelligent’ is found in the instrumental Case in the sentence below; this fragment is only appropriate if Ivan is dead.

\begin{verbatim}
i) Ivan byl umnym.
Ivan was smart-INS ‘Ivan was smart.’
\end{verbatim}

When constructed with matrix predicates like \textit{consider} (or with other statives predicates), individual-level adjectives in instrumental don’t give rise to ‘lifetime effects’ or to ‘change-of-state’ readings. Notice that this cannot be attributed to the lexical aspectual nature of the predicate \textit{consider}, which normally behaves like other statives (and the copula \textit{be}).
The proposal made in this thesis is that the Case marking contrast is to be understood as encoding mainly the distinction between strict overlap vs. what will be called extended/extrapolated overlap. By strict overlap is meant here that situation in which the two predicates hold at the same time; whether the secondary predicates holds before or after the duration span of the matrix predicate is irrelevant/unknown. But this simultaneity requirement does not imply boundedness; the adjective can be unbounded, as the only fact that matters is whether its eventuality overlaps at some point with another eventuality. Extended/extrapolated overlap requires simultaneity, but also specifies that the adjectival state held or can hold beyond the span of the matrix predicate.

For Richardson (2007), on the other hand, due to their bounded character, the instrumental secondary predicates are taken to spell-out the manifestation of the perfective aspect in the adjectival class. The Case-agreement contexts are, on the other hand, imperfective (unbounded). This analysis has the merit of aligning secondary predicates to the general aspectual make-up salient in the Slavic verbal domain, namely the split perfective vs. imperfective. But, taken at face value it might turn out to be problematic, too; adjectives are not generally capable of carrying grammatical aspect morphology and specifications directly (see also Baker 2003, or Bhat 1994). Moreover, it appears that when used as secondary predicates, they are temporally and aspectually dependent on the matrix predicates. The aspectual dependency is unambiguously salient with respect to lexical aspect (Aktionsart). As an illustration, pure stative matrix predicates normally tolerate individual-level secondary predicates, as seen below with consider:

(65b)  I considered the students intelligent/happy/tired⁵⁷.

The proposal in this thesis is that more basic principle of event composition and organization is found behind the intuitive grammatical aspect contrast. Let’s examine the depictive head in more detail.

---

⁵⁷ (Non-linguists) Native English speakers consulted systematically reject sentences in which the matrix predicate consider embeds a stage-level predicate like tired/happy/sick/ etc. This situation appears to hold cross-linguistically; when presented with sentences containing mismatched aspectual specifications native speakers would mention that they have a very hard time constructing them or that they can’t say them. One way to improve the status of these constructions is to introduce overt gradation. As such, a sentence like I considered the students too tired becomes perfectly acceptable. These effects are presented in the last chapter, but a comprehensive explanation must be left for future work.
3.3.1 Depictives

Geuder (2002) is one of the first analyses in which a precise formalization is proposed for encoding the relations depictives exhibit. The intuition behind the entry in (66) is that what characterizes this secondary predicate is the introduction of an overlap relation. Hence a depictive describes a state that holds during an event and involves an overlap relation ($\sigma$) between the event and the state:

\[(66) \quad \text{Geuder’s semantics for depictives}
\]

We had eaten tired.
\[
\exists t \{ t < t_0 \& \lambda x [\exists e(\text{eat}(e)(x) \& \exists s [e_o s \& \text{tired} (s) (x)]) \& t = \text{AFTER} (e)] (\text{we}) \}
\]

The same implementation is found in Pylkkänen (2008), as seen in the entry in (67):

\[(67) \quad \text{Pylkkänen’s (2008) entry for Dep} \quad \text{(We have eaten tired)}
\]

\[
a. \quad \lambda f_{<e,<_S,T>}, \lambda x. \lambda e. (\exists s) f(s, x) \& e_0 s \\
b. \quad \text{DEP} \quad \lambda x. \lambda e. (\exists s) \text{tired}(s) \& \text{in} (x, s) \& e_0 s
\]

Although both Geuder (2002) and Pylkkänen’s (2008) are able to encode the intuitive meaning of these constructions, namely that the eventuality of the secondary predicate holds during the eventuality of the main predicate, human languages show that this overlap relation can be specified in more complex ways. By definition, overlap relations in human language are grammaticalized as holding over bounded eventualities (those eventualities that can either be identified under their sub-stages or restricted in time/space under various other conditions). Besides boundedness, an overlap relation can hold in logically distinct manners. Using $E_1$ and $E_2$ as diacritics for eventuality 1 and eventuality 2, one can obtain at least the representations described below. In (68) the overlap relation specifies that the two eventualities hold during the same chunk of time/space. Prior or consequent stages (represented with $<$ and $>$) are irrelevant or inaccessible (hence, the hashed portions). Applied to a specific example, what this strict overlap relation would give is the entailment (implicature?) that the eventuality of being tired only holds during the eventuality of eating; it is unknown, or impossible to decide whether we were tired before starting to eat, or after we were done eating.

\[(68) \quad \text{The overlap relation specifies that the two eventualities hold during the same chunk of time/space. Prior or consequent stages (represented with $<$ and $>$) are irrelevant or inaccessible (hence, the hashed portions). Applied to a specific example, what this strict overlap relation would give is the entailment (implicature?) that the eventuality of being tired only holds during the eventuality of eating; it is unknown, or impossible to decide whether we were tired before starting to eat, or after we were done eating.} \]
We have eaten tired. [E₁ = eat; E₂ = tired]

Another possibility is that E₁ and E₂ overlap with interruptions, and again prior and consequent moments beyond the limits of the overlap are ignored. This is schematically shown in (69), where ‘~~~~~~’ indicate interruptions, or stages in which E₂ does not necessarily hold. What would a sentence encoding such a relation mean? In a potential English discourse in (69), the reading obtained here would be that we were tired when we started eating, but then some moments after we were not tired anymore; after we ate some more bites, we became tired again, etc. Crucially, it is not known whether we were tired before the eventuality of eating started to hold, or after it ceased.

Although this type of reading is plausible, it doesn’t seem to be easily available in English or the other languages I have examined. More cross-linguistic investigation is necessary before trying to account for its apparent absence.

A third option is to obtain the overlap relation at specific time spans of the main eventuality E₁, either the initial stage or the final stage. This is shown in (70) and (71). In Figure (4), corresponding to a potential reading in the English sentence in (70), overlap with the initial stages of the main eventuality is represented. This semantic output is called here inceptive.
Again, in spite of its possible absence in English, the reading is available cross-linguistically.

Examine the sentence in (71) from Romanian:

(71) ROMANIAN INCEPTIVE

Vulpe-a l-a mâncat pe pește
Fox-the.F.SG. CL.3.SG.M.-have.3.sg. eaten SPECF. fish.M.SG.

de viu.
INCEP. alive.M.SG.
LITERAL: ≈ ‘The fox ate the fish from alive.’

Native speakers of Romanian do not interpret the sentence in (71) as encoding *strict overlap*. It cannot be the case that the property of being alive holds during all the stages of the eventuality of eating if the morphology in (72) is used. The semantics of strict overlap is possible in the language, but the morphological realization is crucially distinct. The marker *de* must be absent:

(72) ROMANIAN - STRICT OVERLAP

Vulpe-a l-a mâncat pe pește
Fox-the.F.SG. CL.3.SG.M.-have.3.sg. eaten SPECF. fish.M.SG.

viu.
alive.M.SG.
‘The fox ate the fish alive.’

Sentence (72) can be taken to mean that the aliveness of the fish was simultaneous with the action of eating (especially, if the fox basically swallowed the fish in a very fast manner). What it cannot mean is precisely what we see in (70).

Another implementation of the relation would be to have the overlap holding during the final stages of the primary eventuality only. This is schematized in (73), and Figure 4.

(73) We have eaten tired. [E₁ = eat; E₂ = tired]

*Hypothetical Implicature: we were not tired during all the stages of the eventuality of eating; we were tired during the final stages of the eventuality of eating only* (i.e. we started eating when we were rested, but as the eating proceeded we grew tired, such that at the final stage of eating we were not rested anymore)
Yet another important specification refers to whether the (second) eventuality holds beyond the strict overlap span. For example, in a sentence like John arrived drunk, it could potentially be the case that the eventuality of John being drunk holds not only during his eventuality of arriving, but also prior to that, or even continues after his arrival, or both. This specification is dubbed here terminative overlap. Again, this interpretation is not easily available in English. Richardson (2007) cites the following example containing an instrumental Case-marked adjective in Russian, mentioning that it triggers a terminative overlap implication.

(74) **RUSSIAN**

(Richardson 2007: ex. 62, page 125)

<table>
<thead>
<tr>
<th>Ira-NOM.</th>
<th>s’jela</th>
<th>poslednij</th>
<th>kusoček</th>
<th>jabloka</th>
</tr>
</thead>
<tbody>
<tr>
<td>drunk-INSTR.</td>
<td>≠janoj.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

‘Ira ate the last piece of apple drunk.’

a) The drunken state is a change of state that occurred during the apple eating eventuality, i.e. Ira started eating the apple sober, but as she was eating she began to swig away on a bottle of vodka, and by the time she took the last bite of the apple, she had become drunk.

b) The drunken state is perceived as a ‘totality’: Ira could not become any drunker.

c) Ira ate the apple when she was drunk, but she is no longer drunk at the moment of this utterance.

However, it is not clear whether this is a true terminative overlap or a strict overlap. The fact that the existence of the last stage of the primary eventuality is specified overtly (last piece of apple) rather implies the latter specification. A true terminative interpretation would convey that Ira was drunk while eating the last bite of the last piece of apple, and this is not what the sentence above means. More sophisticated cross-linguistic investigation is therefore necessarily in order to detect whether this contrast is indeed seen in human language.

Interesting context of non-strict overlap relations are those in which there is an explicit indication that the state of the secondary predicate overlaps with that of the matrix predicate, but it also holds before (pre-overlap). This is illustrated in (75):
We have eaten tired. \[E_1 = \text{eat}; E_2 = \text{tired}\]

Hypothetical Implicature: we were tired during all the stages of the eventuality of eating; but we were also tired before we started eating.

A relevant example comes from Warlpiri. In this language, depictives can take overt markers which indicate whether the overlap is strict or not. In the sentence below we can see an adjective followed by the particle *juku* whose semantics is described by Simpson (2005) as below:

(76) **Warlpiri non-strict overlap**
[juku] = “X was in the state S at time T, and X was in state S before time T”
(Simpson 2005, page 87)

Purra-mi ka-rnalu warlu-ngka manu (ex. 29a)
Cook-NPST. PRES.-111.SBJ. fire-LOC. and
Ka-rnalu wanka nga-rni *yarnum-juku-rlu-ju.
PRES.-111.SBJ. raw eat-NPST. hungry-JUKU-ERG-TOP.

‘We cook it [bush banana] in the fire and we eat it raw when hungry.’

The second secondary predicate (the first one is *wanka* ‘raw’) in this sentence implies that we were hungry when we ate, and crucially we were also hungry before we started eating. In order to express this specification, the marker *juku* is necessary. This marker is different from the strict-overlap clitic, which is spelled-out as *lku/lki*:

(77) **Warlpiri strict overlap**
[-*lku/lki*: X is in state S at time T; X wasn’t in state S before time T].

*Yirnm-iki* kaji-ka-npa parnti nya-nyi nganayi-ji
Ripe-LKI if-PRS-2.SBJ. smell.NPST. whatsname-SBJ.
*Yipintiri-ji*. berry-TOP.

(Simpson 2005: ex. 61a, page 102)

‘You can smell it when it’s ripe that whatsname, the *yipintiri* name.’

This sentence implies in Warlpiri that the state of the berries being ripe holds during the eventuality of smelling, and not before.
Let’s examine another possible non-strict overlap: the state of the adjective holds during the stages of the main eventuality, but it also extends beyond the final stages of the verbal predicate (*post-overlap*). This reading would be something along the lines in (78):

(78) We have eaten tired.  
\[E_1 = \text{eat}; E_2 = \text{tired}\]

*Hypothetical Implicature: we were tired while we ate, and we continued being tired after we finished eating.*

![Figure 7: Overlap and post-overlap](image)

No relevant example could be found in the languages examined here; however it seems quite implausible that this interpretation is absent in human language. More typological research is thus necessary.

The last logical implementation is the one in which the state of the secondary predicate holds during the main eventuality but also before and after (*non-restricted eventuality*):

(79) We have eaten tired.  
\[E_1 = \text{eat}; E_2 = \text{tired}\]

*Hypothetical Implicature: we were tired while we ate, but we were also tired before we started eating and we continued being tired after we finished eating.*

![Figure 8: Non-restricted overlap](image)

This reading is what one can find in Russian when the adjective takes on Case agreement. Recall the contrast we started with, repeated here in (80):

(80) **RUSSIAN ADJUNCT SECONDARY PREDICATES**  
(Richardson 2007)

*Ivan prišel domoj iz bol’nicy zdorovyj/zdorovym*  
*Ivan-NOM. arrived home from hospital healthy-NOM./healthy-INSTR.*

‘Ivan arrived home from the hospital healthy (/cured - INSTR.)’

**Instrumental case marking on the adjective**

i) The healthy state is a change of state: he went to the hospital unwell and returned healthy (cured)

ii) The health state is perceived as complete
iii) The subject came home from the hospital healthy, but he is not necessarily healthy at the time of this utterance, i.e. the healthy state holds true at a particular point in time.

**CASE AGREEMENT ON THE ADJECTIVE**

i) No change of state implied: the adjective simply describes this state.

ii) No interpretation that the antecedent’s healthy state is complete, e.g., he might be feeling a little bit dizzy

iii) The antecedent could still be healthy at the moment of the utterance, i.e. the healthy state does not hold true at a particular point in time only.

In conclusion, the distinction strict overlap vs. non-strict overlap is active in human language and encoded morphologically along two important dimensions: *case marking, overt morphology of the secondary predicate introducer*. In the Case marking category, one can include languages like Russian or Finnish. In Russian, the instrumental spell-outs strict overlap, while case agreement is specified as non-strict overlap. In Finnish, the essive case encodes strict overlap, while the translative is possible only with results. Various non-strict overlap relations might require yet other Case markings; for example, an inceptive reading might need the so-called illative Case, but more research is needed in order to clarify the actual semantics of this Case. In a language like Icelandic, on the other hand, Case agreement or lexical Case are the only options (i.e. the split *strict overlap/non-strict overlap*) is not active morphologically. In Warlpiri Case agreement is similarly the only option, but the language is able to distinguish among various strict or non-strict overlap relations by spelling out the featural composition of the match maker. Warlpiri is a mixed-type language, in which both the head and the dependent might be morphologically marked for a specific combination of features/feature.

(81) **RUSSIAN VOCABULARY INSERTION RULES**

[strict overlap] → instrumental

[non-strict overlap] → case agreement

(82) **FINNISH VOCABULARY INSERTION RULES**

[strict overlap] → essive

[result] → translative

(83) **ICELANDIC VOCABULARY INSERTION RULES**

[strict overlap] → Case agreement

[result] → Case agreement
This classification obviously raises a question about the nature of the long-distance agreement. The following section addresses this issue, and shows that an analysis in terms of Multiple Agree is the best equipped to explain the facts.

3.4 Long-distance agreement: Multiple Agree

The Case agreement facts do not only illuminate the semantic distinction *strict overlap* vs. *extended overlap*. Coupled with the obligatory ϕ-feature agreement visible (at least) on the secondary predicate in many languages they provide a non-trivial window into the inner workings of one of the fundamental mechanisms in narrow syntax, the process of agreement. In minimalism (Chomsky 2000, 2001, 2004a, 2005, 2007, 2008), Agreement is characterized by the following three major properties: (a) matching of features, (b) a specific syntactic relation/configuration, (c) locality. Secondary predicate feature matching domains, on the other hand, are a traditional area of long-distance agreement phenomena. This obviously creates a tension between condition (c) above and the data that has to be accounted for. The difficulty of an analysis is even more stringent given the structure proposed in this thesis for secondary predicates. Remember that one the important conclusion we arrived at is that the shared argument is introduced by a functional projection (*Situation*) merged above the primary and the secondary predicate, as in (85).

(84) **Warlpiri Vocabulary insertion rules**

- [strict overlap] → Case agreement
- [non-strict overlap] → Case agreement
- [result] → translative
- [pre-overlap] → juku/jiki
- [strict overlap] → lku/lki

(85) \[ \ldots \]

\[ V_{\text{complex pred.}} \quad \text{Situation} \]

\[ Arg_{\text{Shared}} \quad \text{Situation} \]

\[ 0 \quad \text{Situation} \]

\[ Pred_1 \quad Pred_2 \]

\[ Pred_1 \quad \text{DEP/RES} \quad Pred_2 \]
But this implementation obviously deepens the problem of *locality*, among other difficulties. The shared argument and the secondary predicate (Pred₂) are not found in a local relationship at *any* stage of the derivation. However, the Case and φ-feature agreement morphology on the latter are pervasive cross-linguistically. Repeating some of the data presented above in (20-32), in Finnish (30a, inserted here as 86), the secondary predicate must agree in number features with the shared argument (as the gender features are inactive in the language). In (86) the shared argument (*ketun* ‘the fox’) has interpretable number features specified as [+singular], and native speakers reject strongly if the secondary predicate is marked [+ plural].

(86) FINNISH SECONDARY PREDICATE φ-FEATURE AGREEMENT
Maanviljelijä ampun ketu-n kuolaa-ksi/*kuolai-ksi.
Farmer.NOM. shoot-PST.3.SG. fox-ACC.SG. dead.SG-TRNSL./dead.PL-TRNSL.
‘The farmer shot the fox dead.’

Icelandic, and Russian do show overt morphological agreement for number and gender features (beside the potential agreement in Case). The adjective in (87), repeated from (20a) above, has to be marked [+ plural, + masculine, Nom.] when tracking back the subject. Hence this context cannot mean that the bishop was drunk when meeting the priests; only the priests could have been drunk).

(87) ICELANDIC DEPICTIVE φ-FEATURE (AND CASE) AGREEMENT
Prestarnir hittu biskuppin
Priests.the.NOM.M.PL. met bishop.the.ACC.M.SG. drunk.NOM.M.PL.
‘The priests have met the bishop drunk.’ (the priests were drunk when they met the bishop).

Same goes for Russian. In (88) the depictive has to be marked [+masculine, +singular].

(88) RUSSIAN DEPICTIVE φ-FEATURE AGREEMENT
Ivan vernulsja ottuda umnym/umnyj.
Ivan returned from.there intelligent-INSTR.M.SG./intelligent-NOM.M.SG.
‘Ivan returned from there intelligent/smart.’

What we would want our theory to derive in a non-stipulational manner is the matching of features in a configuration in which the potential probe (the head which contains uninterpretable features, i.e. the secondary predicate) and the goal (the shared argument, i.e. the element that is specified the corresponding interpretable features) are not in a *local* relationship. As we can see in (89) at least the primary predicate and the *situation* head are positioned between the two.
The two accounts (Chomsky’s and Matushanksy’s) examined above won’t be relevant to this structure, as they both make use of a small-clause analysis in which the local relation between the shared argument and the secondary predicate is given by the lower Merge of the DP.

There are analyses which deny the small clause status of secondary predicates (Williams 1994, and Neeleman and van de Koot 2002, among others). Such accounts make use of a process of feature percolation: the \([u\phi]\) of the secondary predicate are transmitted up to the matrix predicate where they are valued together with the \([u\phi]\) set of the matrix verb (as part of a process of complex predicate formation).

(90) .....
Upward percolation is a mechanism that can capture the core facts of agreement with secondary predicates in the absence of a small clause structure. The only theory-internal shortcoming is its direction. In recent minimalist implementations (Chomsky 2000, 2001, 2004a, 2008, Boeckx 2004, Béjar 2003, Béjar and Rezac 2009, etc.) the theory of AGREE proposed eliminates Spec-Head agreement, postulating that the matching of features is uniform across agreement domains, happening in a top-down manner, given by the c-command relation.

(91) AGREE (Chomsky 2000, 2001)

\[
P_{u\phi} > G_{u\text{Case}, \phi}
\]

Agree (P, G), where P is a probe and G is a matching goal, “>” is a c-command relation and \(u\phi\) of P and \(u\text{Case}\) of G are valued.

The mechanism in (91) is intended to explain typical agreement configurations in which the probe (T, or \(v\)) is endowed with its own Case feature which it can transmit to the argument as a result of feature matching. Adjectives, as we can see, do not possess inherent Case features; they don’t check the Case of their ‘subjects’ (although they might assign inherent Case to their complements). Given this, can subject-adjective agreement in secondary predicates be collapsed with the other typical instances of agreement?

The answer entertained in this thesis is that the Case and feature agreement in secondary predicates can be modeled via an Agree relation of the type proposed in Chomsky’s minimalist work, and does not need the introduction of a special Spec-Head relation. The gist of the proposal is that the uninterpretable features of the adjective are checked via a process of Multiple Agree, of the type proposed in Hiraiwa (2004). The locus and initiator of the matching relation is the head \(v\text{\_COMPLEX\_PRED. (}v\text{\_RESTR.)}\) which is specified with an uninterpretable [+ complex predicate] feature. In order for this feature to be valued, the \(v\text{\_RESTR.}\) has to enter into a matching relation with more than one object containing an interpretable [+pred] feature. In simpler terms, \(v\text{\_RESTR.}\) needs at least two predicates in its domain (the phase). Crucially, these predicates carry uninterpretable \(u\phi\) and \(u\text{Case}\) features; by entering into a [+complex predicate] feature checking, \(v\text{\_RESTR.}\) basically values these features (and obviously any other features that are part of predication, and whose

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58 Repeating from the previous chapter, c-command is defined as follows: \(\alpha\) c-commands \(\beta\) iff: (i) \(\alpha\) is distinct from \(\beta\); (ii) \(\alpha\) does not dominate \(\beta\) and \(\beta\) does not dominate \(\alpha\); (iii) every node that dominates \(\alpha\) also dominates \(\beta\).
nature is not further analyzed here). The obvious question is therefore: how does \( v_{\text{complex pred.-}} \) transmit \([u\phi]\) and \([u\text{Case}]\) to the two predicates, when it does not contain \([i\phi]\) itself? The answer: in order for the \([\text{complex predicate}]\) feature to be activated, \( v_{\text{complex pred.-}} \) enters first into an Agree relation with the shared argument, valuing the Case of the latter, and obtaining the relevant interpretable \([\phi]\) features.

The ingredients of the analysis are as follows. The operation of \textsc{Multiple Agree} is formulated as in Hiraiwa (2004).

(92) \textsc{Multiple Agree (multiple feature checking) with a single probe is a single simultaneous syntactic operation; \textsc{agree} applies to all the matched goals at the same derivational point derivationally simultaneously.} (Hiraiwa 2004, page 38)

(93) \textsc{Multiple Agree (P, }\forall G) \text{ \textsc{agree} is a derivationally simultaneous operation \textsc{agree} (P, }\forall G) \\

\[ P \quad G_1 \quad \ldots \quad G_n \]

According to this procedure, the probe \( P \) searches for and locates multiple goals in a type of parallel computation; more specifically, \( P \) matches \( G_1 \) and \( G_n \) \textit{at the same time}. Hiraiwa (2004) proposes that this simultaneous feature checking operation is a result of the principle of Simultaneity:

(94) \textsc{The Principle of Simultaneity} \hfill (Hiraiwa 2004, 2.9) \\
Apply operations simultaneously at a probe level.

Hiraiwa (2004) does not discuss non-finite agreement (secondary predicates, participles, etc.) in great detail. At some point in chapter 2, he seems to imply that the uninterpretable features of the embedded non-finite predicate are checked via an \textsc{agree} relation the latter can establish with the shared argument as part of the \textsc{Multiple Agree} procedure. Note that in order for this type of relation to happen, a view of syntactic derivation and structure building is needed that allows great flexibility: the constituents are not made opaque/inaccessible by the addition of new material at the phase level.

The account proposed here avoids making this assumption. The interpretable features of the shared DP are transmitted to the secondary predicate as part of the initial stage of the \([\text{complex predicate}]\) feature checking procedure. As the checking procedure can take place at a dis-
tance, the secondary predicate does not have to overtly raise to the matrix predicate or to \([v_{\text{Coplex Pred.}}}]\), according to the Principle of Complex Predicate Formation (95). This long-distance agreement process is the core of the traditional restructuring phenomena.

\[(95)\text{PRINCIPLE OF COMPLEX PREDICATE FORMATION}\]

\[\text{[uPredicate] features of more than one predicate in the same phase}\text{ are checked derivationally simultaneously by a probe who has preliminary established an AGREE relation with a goal containing the relevant interpretable [φ] features.}\]

\[(96)\text{P} \uparrow \text{G}_1 \uparrow \ldots \uparrow \text{Pred}_1 \uparrow \ldots \text{Pred}_n \downarrow\]

Given this procedure, the expectation would be to see overt agreement features on the primary predicate. This is born out cross-linguistically; examples from Hindi Long-Distance Agreement are discussed in detail below, in the last major section of this chapter. But before doing so, one note is necessary about PRO.

Another stratagem to save sequential multiple agree by local valuation is to assume that the adjective enters into a relation with a null pronominal like element which is bound by the shared argument merged inside the domain of the matrix predicate. Examining the typology of null pronominal elements, the only category that can be used in these contexts is PRO. The absence of small clause structure denies the presence of PRO in adjunct cases. But this is not the only problem. Even if PRO could occupy a specifier projection inside the small clause, it is not clear how its traditional properties would be reconciled with the richness of agreement patterns one finds in the domain of secondary predication.

Let’s see what a PRO account would predict. Classical GB thinking takes PRO to be in complementary distribution with overt pronouns and pro. These patterns arise from a theoreticization of Case properties, along three possible lines (see also Bouchard 1982, Cechetto and Oniga 2005, and Hornstein and Boeckx 2010, for more discussion). One of them says that as opposed to pronouns, and pro which need Case, PRO is caseless (Bouchard 1982). Another possibility is that PRO is possible only in ungoverned positions, but this type of account is only valid

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59 This avoids the collapsing Concord/attribute adjective agreement under the same process. Concord happens DP-internally, and DPs are independent phases.
if government is a relevant notion in the system. Since minimalism attempts to provide explanations which are not tied to stipulative concepts, there’s no need for sophisticated theories of government. The last account takes PRO to carry case, which is of a special type – the null Case which can only be checked by less structured and featurally composed inflectional heads, like the infinitivals.

But the null Case account is seriously challenged by secondary predicates. For example, in languages like Icelandic, secondary predicates in embedded infinitivals can show either Case agreement patterns or the same type of Case the verb assigns to the subject of its finite clause (that is nominative, or quirky Case, see examples in 21). In Russian, and other Slavic languages, as shown above (see 54 as a representative example), secondary predicates alternate between case match and dedicated case. If it is indeed true that case agreement/sameness is mediated by PRO, then it’s not clear how PRO can carry null case. Or to put this in Baltin’s terms (1995) there is “evidence in Icelandic that PRO may be not only Case marked, but in fact marked with one of the standard Cases rather than a special ‘null Case’”. (Baltin 1995: 242). Unless one assumes that PRO can have both a null Case and a lexically specified type of case, it is not clear how the data would be accounted for. One speculation (which Ceccheto and Oniga 2005 attribute to a reviewer) would be to say that due to their nature, adjectives require a case value that can be overtly realized (hence PRO, even if present, would be irrelevant in the checking process). But if the shared argument and the adjective can agree directly by some mechanism of long distance feature valuation, then PRO should be disposed of. Note that secondary predicates do not count as strong phases, hence they can be probed by a category in the matrix clause.

Another possibility that could save the presence of PRO (as Ceccheto and Oniga also observe) would be to take more seriously the idea that this empty category is case resistant. Further stipulating that PRO is only possible in those positions in which case cannot be checked (hence specifiers of infinitival inflection heads, or non-finite secondary predicates), one could hypothesize that PRO can inherit case from its controller. PRO would be similar to reflexives, which can inherit substantive features like gender, number, person, etc. But a crucial distinction between the two classes is that reflexives cannot inherit case. A theory could be built according to which what makes the distinction between anaphors and PRO is that the former can inherit a subset of features from their controllers, while the latter has to inherit the complete feature set. Ceccheto
and Oniga (2005) think that this kind of assumption might be worth exploring, but do not actually take any steps towards formulating it.

Assuming we want to make the theory work, a question would be then why the two categories diverge along these lines. The possible answer could pick on the lexical vs. phonetically empty character of these classes. But even so, how is one going to explain the Russian, Finnish, Icelandic (etc.) examples in which PRO and its controller do not appear to share case? Hypothesizing that the idea of case on secondary predicates being default might work for Finnish (although one still has to explain why more substantive features like number are shared), one still can’t explain the Russian and Icelandic patterns. Another hypothesis that comes to mind is also problematic - namely to assume that PRO always inherits Case from its antecedent, but secondary predicates are such that they might be assigned a more lexical type of case. This type of theory allows NP/DPs to carry two distinct cases at the same type. This requirement is not problematic in itself – case stacking is seen cross-linguistically (for example Korean, etc.). But this would be problematic for Russian secondary predicates (also Finnish, and see the discussion of Warlpiri for remarks along the same line in Himmelmann and Schultze-Berndt 2005), which will have to be assumed to carry both matched Case and dedicated case (the instrumental). As we have seen several times, there are interpretational differences between the two types of cases – the instrumental on the secondary predicate signals a change of state and completeness, while case agreement does not have the implication of change of state, and strict overlap. A secondary predicate would end up being interpreted as referring both to a strict and extended overlap, leading to severe violations at LF, and to the expectation that secondary predicates with instrumental are deviant. But as such sentences are semantically well-formed, the account is problematic. Adding to this is the observation that cross-linguistically it is not a trivial task to establish the conditions under which PRO has to share case, and the contexts in which it cannot share Case. Hence constructing an analysis of secondary predicates which does not make use of PRO feature mediation is less stipulative, and accounts for the data in a straightforward manner. Lastly, the idea that secondary predicates enter into a syntactic complex predication relation with the main predicate, as implemented here, might appear stipulatory. But evidence from languages like Hindi, addressed in the next section indicates that it is on the right track, and moreover necessary to explain the full range of relations secondary predicates enter into cross-linguistically.
3.5 Hindi long-distance agreement (LDA)

In special types of multiple-predicate configurations, Hindi-Urdu\(^{60}\) exhibits an interesting morphological process in which the main predicate can agree with the internal argument of the subordinate predicate\(^{61}\). The latter, usually spelled-out as an infinitival or participial, also carries the agreement morphology, back-tracking the same internal object. An example is given in (97) below, where the main predicate want agrees in feminine gender with the feminine internal object of the embedded infinitival, hence the name Long Distance Agreement (LDA). The main predicate does not agree with its ergative subject Vivek, which is masculine:

(97) **HINDI LONG-DISTANCE AGREEMENT** (Boeckx 2004, ex. 5)

[Vivek-ne [kitaab parh-nii] chaah-ii]

‘Vivek wanted to read the book.’

Secondary predicates also exhibit this pattern. The sentence in (98) illustrates the eat raw type, while in (99) an example containing consider is provided. In both sentences, the main predicate must signal agreement with the shared argument, with which the secondary predicate also agrees. Note that, similar to example (97), the subject Vivek (a masculine proper name) does not enter into an agreement relation with the main predicate.

(98) **HINDI LONG-DISTANCE AGREEMENT: SECONDARY PREDICATES**\(^{62}\)

[Vivek-ne machli kach-i kaa-i.]
Vivek.M.-ERG fish.F. raw-F. eat-PFV.F.

‘Vivek ate the fish raw.’

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\(^{60}\) Hindi is an Indo-European language spoken in India, and the neighboring areas. Structurally, it is very similar to Urdu, spoken in Pakistan. Because of the very prominent resemblance which sometimes makes a distinction between the two very difficult, linguists classify them as Hindi-Urdu.

\(^{61}\) Examples containing secondary predicates in Hindi are obtained from native speakers. The majority of the sentences containing infinitival LDA, as well as other relevant data are from Mahajan (1989), Butt (1995), Boeckx (2004), and Bhatt (2005), and double-checked with consultants. The source of these latter examples is clearly indicated in parentheses.

\(^{62}\) As elsewhere, secondary predicates should not be confused with contexts in which the adjective has an attributive function. In Hindi attributive adjectives are distinguished from secondary predicates by word order (attributive adjectives precede the modifying nominal, while predicative ones follow it):

i) Vivek-ne kach-i machl-i kaa-i.
Vivek.ERG. raw-F. fish-F. eat-PFV.F.
‘Vivek ate the raw fish.’

ii) Vivek-ne choot-i bil-i sooch-i.
Vivek-ne small-F. cat-F. think-PFV.F.
‘Vivek considered the small cat.’ (ex., for a cat show)

Contrast these sentences with the examples in (98), and (99), where the adjectival secondary predicate precedes the main verb.
LDA is a process which in Hindi is noticed only with perfectives, which are special in that they trigger a switch in the language from a Nominative-Accusative pattern to an Ergative-Absolutive alignment. In transitive clauses with perfective participials, the agent is overtly marked with an ergative Case (as seen in 98, 99), while the internal argument cannot have any overt Case inflection (surfacing in the Absolutive Case, which is distinct from the Accusative, the latter being specified with overt morphology). A very important rule active in the Hindi-Urdu domain further blocks overtly Case marked DPs from entering into an agreement relation with predicates. This process contributes to an understanding of complex predication relations, as well as to understanding the nature of secondary predicates because when LDA is established overt agreement with the shared argument is obligatory on both predicates (the matrix and the secondary predicate).

LDA therefore requires special conditions, all of them crucial to an understanding of the nature and structure of such configuration. It will be shown in this section that the restructuring analysis involving a Multiple Agree process triggered by a complex predicate functional head accounts for the data in a straightforward manner, and is superior to alternative accounts which have investigated the process under its infinitival or participial embedded predicate realization. The analysis proposed here is able to account for these environments, but it also covers secondary predicates, which are a LDA context previously unaddressed in the literature. The structure of this subsection is as follows. Part 3.5.1 introduces the basics of agreement in Hindi. Then, section 3.5.2 discusses the contexts in which LDA is required, while in 3.5.3 environments in which the process is blocked are presented in detail. The following four sections address four distinct competing analyses of the Hindi LDA, as follows: section 3.5.4 examines Mahajan (1989), section 3.5.6 Butt (1995), section 3.5.7 Boeckx (2004), and finally section 3.5.8 is dedicated to Bhatt (2005). Individual discussions also contain the problems of the respective accounts, while the last section demonstrates that all the shortcomings can be successfully accommodated under the proposal of this thesis.
3.5.1 Agreement in Hindi

An important characteristic of Hindi morpho-syntactic structure is that in some instances main verbs are spelled out in their participial forms, with the non-obligatory presence of an auxiliary. Although participles vary in what types of features they overtly carry, one important rule is respected across the board, in that obligatory agreement is established along an argumental hierarchy, which has the subject as the structurally most prominent argument, followed by the internal argument. If the subject is not overtly case marked, participles and auxiliaries will establish agreement with it; if the structurally most salient argument is overtly case marked (with what is traditionally described as a case clitic), then the internal argument will drive agreement. According to the traditional descriptions, subjects which are not overtly case marked are assumed to bear nominative Case; the overt clitic seen with a subject is analyzed as the so-called “ergative Case”, and surfaces only with perfective participials. This is illustrated in the examples (100) and (101) below taken from Bhatt (2005):

(100) NOMINATIVE SUBJECT, ACCUSATIVE OBJECT, BOTH NON-OVERTLY CASE MARKED
Rahul kītaab parḥ-taa thaa.
Rahul.M. book.F. read-HAB.M.SG. be.PST.M.SG.
‘Rahul used to read (a/the) book.’ (Bhatt 2005, ex.2a)

(101) ERGATIVE SUBJECT, ACCUSATIVE OBJECT, ONLY OBJECT IS NON-OVERTLY CASE-MARKED
Rahul-ne kītaab parḥ-ii thii.
‘Rahul had read the book.’

63 As noted in Bhatt (2005), Butt (1995), Comrie (1984), a.o., participles and the past tense auxiliary normally agree in gender and number, while the present auxiliary shows number and person agreement marker (similarly to the subjunctive). The future is the only form that agrees in person, gender, and number.

64 This nature of this restriction is not clearly understood; the process seems to be a characteristic of (dialectal variants of) Hindi-Urdu. As noticed by several researchers it does not hold in all ergative Indo-Aryan languages, and should rather be described as a tendency, and not a universal. For example, Verma and Sharma (1979) show that predicates do require overt agreement with ergative subjects in Nepali, as in example (i):

(i) OVERT AGREEMENT WITH ERGATIVE SUBJECTS IN NEPALI (Verma and Sharma 1979: 47)
Maile gaiko aaitvaar dhairai raksi: kha:ē
LERG. gone Sunday a lot alcohol eat-PST.1.SG.
‘I drank a lot last Sunday.’

Similarly, Subbarao (2001) has provided examples from Gujarati, in which an internal argument bearing overt case marking also triggers agreement with the main predicate:

(ii) OVERT AGREEMENT WITH ACCUSATIVE CASE MARKED OBJECTS IN GUJARATI (Subbarao 2001)
mEN a pustek-ne waNcyuN
LERG. this book.N.-ACC. read.N
‘I read this book.’
If both the subject and the internal object are overtly case marked, the inflection seen on the verb (and the auxiliary, if any) is a default one, as illustrated in (102):

(102)  ERGATIVE SUBJECT, OVERTLY CASE MARKED DIRECT OBJECT, DEFAULT AGREEMENT
Rahul-ne kitaab-ko paṛh-aa thaa.
‘Rahul has read the book.’
(Bhatt 2005: ex. 3)

Along with the prohibition on agreement with overtly case marked arguments, Hindi exhibits another interesting covariance phenomenon, whose nature and conditions are crucial for the discussion and the analysis proposed in this thesis. In some well-defined instances, the main predicate establishes agreement with an argument that is not its own. Usually this argument is introduced in the domain of an embedded non-finite predicate. As said above, the process is known under the label Long Distance Agreement (LDA), and its detailed description is given in the following subsection.

3.5.2 Long distance agreement (LDA): Agreement at a distance

A typical illustration of LDA is repeated here as (103). As the glossing indicates, the main predicate agrees with the argument kitaab, which is not its own argument. There is consensus in the literature that LDA occurs only if the matrix predicate cannot agree with an argument introduced in its own domain. This is the precise situation we see in (103), where the matrix subject bears overt ergative case which prevents it from entering into an agreement relation with the matrix predicate, according to the rules of Hindi-Urdu.

(103) HINDI LONG-DISTANCE AGREEMENT  (Boeckx 2004, ex. 5)
Vivek-ne kitaab [paṛh-nii] chaah-ii]
‘Vivek wanted to read the book.’

One supplementary property LDA exhibits is that when agreement with the embedded argument is established, the non-finite embedded predicate also has to bear parasitic agreement. This is also seen in (103), where the infinitival aspectual morphology on the base paṛh ‘read’ has to bear feminine (singular) inflection. This parasitic agreement property, together with three other characteristics discussed below, are a solid indication that LDA affects construals obtained via the process of restructuring, or syntactic complex predication formation. What is particularly important for the purposes of the current thesis is that LDA is also seen, in fact required, with secondary predicates. Each of the four major characteristics will be also illustrated with secondary predicates, starting with the parasitic agreement.
3.5.2.1 Parasitic agreement on the embedded predicate

Although matrix predicates show overt agreement with the subject (unless the latter bears overt case marking), embedded non-finite predicates do not normally agree with their objects. A canonical exemplification is given in (104) below:

(104) Shahrukh [ṭehnii kaat-naa] chaah-taa thaa.
     Sharukh.M. branch.F. cut-INF.M. want-PFV.M.SG. be.PST.M.SG.
     ‘Shahrukh wants to cut the branch.’

If the matrix predicate cannot enter into an agreement relation with the subject, and contains an embedded predicate of the right sort (specific types of non-finites which mirror typical restructuring environments cross-linguistically, as discussed below), then the matrix predicate will agree with the argument of the embedded predicate; this long distance agreement operation will trigger obligatory covariance relation between the embedded predicate and its object:

Shahrukh-ne [ṭehnii kaat-nii] chaah-ii thii.
Shahrukh.M.-ERG. branch.F cut-INF.F. want-PFV.M.SG. be.PST.M.SG.
‘Shahrukh had wanted to cut the branch.’

(106) SECONDARY PREDICATES: LONG DISTANCE MULTIPLE AGREEMENT
Vivek-ne bili choot-i sooch-i.
Vivek.M.-ERG cat.F. small-F. think-PFV.F.
‘Vivek considered the cat small.’

In order for the embedded predicate to agree with its object, there has to be long distance agreement between the matrix predicate and the embedded object. That is, an example like (107), exhibiting infinitival agreement but not LDA, is ungrammatical; also, example (108) which contains overt agreement on the adjectival secondary predicate, with mismatching agreement on the matrix predicate is similarly ungrammatical:

(107) INFINITIVAL AGREEMENT WITHOUT LDA (Bhatt 2005: ex.6b)
*Shahrukh-ne [ṭehnii kaat-nii] chaah-aa thaa
Shahrukh.M.-ERG. branch.F. cut-INF.F. want-PFV.M.SG. be.PST.M.SG.
INTENDED: ‘Shahrukh wanted to cut the branch.’

(108) SECONDARY PREDICATE AGREEMENT WITHOUT LDA
*Vivek-ne bili choot-i sooch-aa.
Vivek.M.-ERG. cat.F. small-F. think-PFV.M.SG./D.SG.
INTENDED: ‘Vivek considered the cat small.’
The multiple long distance agreement involves both predicates and the argument of the embedded predicate. Therefore, a context in which the embedded predicate does not agree with its argument, although the latter agrees with the matrix predicate, is also ungrammatical. Sentences (109) and (110) illustrate this observation with embedded infinitivals, and with secondary predicates:

(109) LDA WITHOUT INFINITIVAL AGREEMENT

*Shahrukh-ne [tehnii kaat-naa] chaah-ii thii.
Shahrukh.M.-ERG. branch.F. cut-INF.M. want-PFV.F.SG. be.PST.F.SG.
INTENDED: ‘Shahrukh wanted to cut the branch.’ (Bhatt 2005: ex. 6c)

(110) LDA WITHOUT SECONDARY PREDICATE AGREEMENT

a. *Vivek-ne bili choot-aa sooch-ii.
Vivek.M.-ERG. cat.F. small-M. think-PFV.F.SG.
INTENDED: ‘Vivek considered the cat small.’

b. *Vivek-ne machli kach-aa kaa-i.
Vivek.M.-ERG. fish.F. raw-M. eat-PFV.F.
INTENDED: ‘Vivek ate the fish raw.’

The observation that the embedded predicate agreement is parasitic on LDA, as well as the requirement that embedded predicate agreement obligatorily take place when long distance agreement is established are a prima facie indication that contexts where this process occurs can be described as “complex predicate” configurations. Obligatory agreement on both predicative elements might indicate that the two predicates are treated as being two pieces of a higher predicative unit, in a mono-clausal structure. Knowing that cross-linguistically it is not rare to find instances of “restructuring”, i.e. instances in which embedded (non-finite) predicates are treated as subcomponents of the main clause/predicate (as opposed to projecting an independent clausal configuration), it is worthwhile to test whether the Hindi LDA does pass any of the canonical “restructuring” tests established in the literature. Section 3.5.2.2 demonstrates that Hindi LDA passes at least one restructuring diagnostic in that it is only possible with classes of predicates which have been noticed to require restructuring in other languages (Cinque 1999, Wurmbrand 2001, Aissen and Perlmutter 1976/1983, Rizzi 1978, etc.).

3.5.2.2 LDA as a reflex of restructuring

As already mentioned, pioneering research on restructuring, as seen in Rizzi (1976), or Aissen and Perlmutter (1976/1983) has revealed that human languages exhibit various constructions in which some processes, normally characterized as clause-bounded, can interfere with embedded
predicative domains. The intuitive label of ‘restructuring’ was therefore taken to refer to those situations in which an embedded predicate does not appear to project its own clausal structure (finite or non-finite), but rather to behave as a “member” of the main predicate, or of a monoclusal projection. Languages take on diverse strategies in order to indicate the presence of a restructuring process. Two famous restructuring tests are clitic climbing in Romance and Long Distance Scrambling in Germanic.

Returning to some of the examples already presented, it has been noted that a verb like want in Romance requires a direct object clitic of its embedded predicate to appear in a position in the domain of the matrix predicate. Examine again example (111) from Italian, which contains the matrix predicate want, which is a restructuring predicate, and in which the clitic lo is spelled out in a position preceding the matrix predicate instead of its base position, following the embedded predicate leggere.

(111) ITALIAN RESTRUCTURING
Gianni \( \text{lo} \) ha voluto [leggere \( t_i \)]
Gianni it.CL. has wanted read.INF. \( t_{CL} \).
‘Gianni has wanted to read it.’

The sentence in (111) can be contrasted with sentence (112) in which the matrix predicate is deciso (‘decide’), a non-restructuring verb which does not allow clitic climbing (112 a). If the sentence contains a clitic, this element will be possible only in its base position following the embedded infinitive (112 b).

(112) ITALIAN INFINITIVES WITH DECIDERE: NO CLITIC CLIMBING
a. *Gianni \( \text{lo} \) ha deciso [leggere \( t_i \)]
Gianni it.CL. has decided read.INF. \( t_{CL} \).
‘Gianni has decided to read it.’

b. Gianni ha deciso legger-lo.
Gianni has decided read.INF.- it.CL.
‘Gianni has decided to read it.’

The clitic climbing test cannot be applied in Hindi-Urdu, because this language does not contain phonologically dependent elements of the type seen in Romance. But it will be seen below that there is indication that the internal objects of embedded infinitivals/participials do appear in a high position in the domain of the matrix predicate.

Another test which indicates restructuring is long distance scrambling, as identified in German. It is known that in this language scrambling across a sentential boundary is generally possible for
focus-related reasons. Yet, the other context in which this process is required is with restructuring predicates like versugen (‘try’) (see also Wurmbrand 2001):

(113)    RESTRUCTURING IN GERMAN: LONG DISTANCE SCRAMBLING

\[
\text{Dass Hans [den \ Traktor], versucht hat [i zu reparieren].} \\
\text{That Hans the.Acc. tractor tried has to repair} \\
\text{‘That John (has) tried to repair the tractor.’} \\
\text{(Wurmbrand 2001:41)}
\]

A predicate like planen (plan) does not permit long distance scrambling, as illustrated in (114):

(114)    GERMAN: NO LONG DISTANCE SCRAMBLING WITHOUT RESTRUCTURING

\[
*/% \text{ dass } \text{ Hans [den \ Traktor], geplant hat [i zu reparieren]} \text{\ that } \text{Hans the.Acc. tractor planned had to repair} \\
\text{‘that John has planned to repair the tractor.’}
\]

Wurmbrand (2001) has proposed an explanation for the German long distance scrambling in restructuring which takes restructuring predicates to be bare verbal heads which do not project the embedded infinitival subject. Moreover, such predicates are assumed to not contain an accusative case licensing projection inside the embedded predicate domain. As already said, this forces the complement of the infinitive in (113) to undergo “long distance scrambling” into the domain of the main predicate where it can have its case checked\(^{65}\). Although this test cannot be applied to Hindi-Urdu in its basic form, there is again evidence that in restructuring environments the internal argument of the embedded predicate occupies a position in the domain of the main predicate at some stage(s) of the derivation. Nevertheless, raising is not due to Case reasons, as in German. Bhatt (2005) has convincingly argued that Wurmbrand’s (2001) analysis of restructuring as involving embedded predicates which cannot license accusative case on their object does not hold cross-linguistically. For example, in Hindi-Urdu, a main predicate like let which requires LDA, and which has been also claimed by Butt (1995) to construct “complex predication”\(^{66}\) can be passivized, but the object of the embedded predicate must maintain its Accusative Case\(^ {67}\):

---

\(^{65}\) As discussed in Chapter 2, Wurmbrand’s (2001) main piece of evidence that the Case of the embedded argument is licensed in the domain of the matrix predicates comes from long-distance passives. The nominative Case on the argument the tractor is explained by assuming that once the main predicate is passivized, the Accusative Case licensing condition is lost, and the embedded argument has to bear Nominative Case.

1. dass der Traktor zu reparieren versucht wurde. 
   that the.NOM. tractor to repair tried was 
   ‘that they tried to repair the tractor.’

\(^{66}\) Butt (1995) uses the term “complex predication” as an equivalent to “restructuring”.

\(^{67}\) Hindi also represents a famous exception to Burzio’s generalization (Mahajan 1995, Bhatt 2005, a.o.). Passive morphology does not prevent internal arguments from maintaining Accusative Case. Bhatt (2005) has convincingly
Although Hindi-Urdu does not pass some restructuring tests which have been formulated for other languages, it nevertheless shares lexical properties of typical “clause union” processes. As noticed several times in the literature, LDA is only possible if triggered by a restricted class of predicates, which mark restructuring cross-linguistically. This group contains verbs like chaah (‘want’, a prototypical restructuring predicate, as seen in a variety of languages68), the permissive di- (‘let’, ‘give’), aa (‘know how’). The examples below all come from Bhatt (2005, 34):

(115) **Restructuring, Passivization, and Accusative Objects in Hindi** (Bhatt 2005:43)

Sita-ko mujhe/*mÊ piit-ne] di-yaa ga-yaa.
Sita-DAT. me.Acc./L.Nom. hit-INF.OBL. give-PFV.M.SG. PASS-PFV.M.SG
‘Sita was allowed to hit me.’ (= ‘Someone let Sita hit me’)

argued that Hindi is not retaining Case for independent reasons – that is, the Accusative on the passive subject is not an instance of lexical/inherent Case.

1. Sita-ko Ram-dwaaraa ḍãːṭ-aa ga-yaa. (Bhatt 2005, ex.42)
   Sita.Acc. Ram-by scold-PFV.M.SG. PASS.-PFV.M.SG.
   ‘Sita was scolded by Ram.’

68 Among which Dutch, German, various dialects of Romance, etc.

69 LDA is also possible when the embedded predicative form acts more like a nominal – hence the glossing gerundive in the literature. This form does not carry overt phi-feature agreement, and as example (22). The problem of infinitival case marking, as well as the dual verbal-nominal nature of such forms in Hindi are discussed section 2.4.1.2.4 below.
Another context in which LDA is required is when the matrix contains modal verbs, which have been shown to involve restructuring in many other languages (among which German). An example is provided in (119):

(119) **MODAL MATRIX PREDICATE AND LDA**

Ram-ko *davaaii* khaaa le-*nii/*le-**naa** chaahiye
Ram-DAT. medicine.F.SG. eat take-INF.F.SG./INF.M.SG. should
*thii/*thaa.
be.PST.F.SG./be.PST.M.SG.
‘Ram should have eaten the medicine.’

It is no surprise that in the Hindi literature LDA is taken to be one of the most important diagnostics for restructuring. Secondary predicates, on the other hand, have been rather neglected in this discussion. But the observation that they do require LDA indicates that they are a subclass of complex predicates. This hypothesis can be further verified by examining other restructuring diagnostics which can apply to secondary predicates, as well as to other non-finite restructuring constructions. One of these tests is the negative polarity test (as used by Bhatt 2005, or Mahajan 1990b), introduced and explained below.

### 3.5.2.3 Hindi restructuring and NPIs

Hindi restructuring contexts are characterized by the fact that negation in the embedded predicate can take scope over the matrix predicate (Mahajan 1989, Bhatt 20005), phenomenon which is not possible in other embedding contexts (as negation is normally clause-bound). The sentence in (120) contains an NPI found in the matrix subject position which is licensed by negation in the domain of the embedded infinitival. Note the multiple agreement established with the main and the embedded predicate (LDA).

(120) **HINDI RESTRUCTURING AND NPIs**

*ek-bhii* larke-ne [Sita-kii *kitaab* nahī: *path-nii*
one-PSI. boy-ERG. Sita-GEN.F. book.F. NEG. read-INF.F.
*chaah-ii.*
want-PFV.F.SG.
‘Not even a single boy wanted to read Sita’s book.’ (Bhatt 2005: 37 a)

Crucially, the cross-domain force of negation is also seen with secondary predicates. In sentence (121 a), the *consider*-type is illustrated, while in (123 b) the regular *eat-*raw context is provided. The negation head *nahī.* is positioned in the domain of the secondary predicate:
That the capacity of the embedded negation to license NPIs in the matrix verb domain is characteristic of restructuring is shown by the sentence in (122 a), which contains an infinitival introduced by the matrix predicate kah ‘say’, and which is ungrammatical when the negation marker is found in the embedded domain. In order for the sentence to become grammatical, the negation head has to appear close to the matrix predicate (122 b):

(122) Hindi non-restructuring: no matrix NPI licenced by embedded negation

a. *ek-bhii larkené Sita-se [kiitab nahí: pařhe-ne]-ko
   one-PSI. boy-ERG. Sita-INST. book.F. NEG. go-INF.OBL.-DAT
   kah-aa.
   say-PFV.
   ‘Not even a single boy told told Sita to read the book.’

b. ek-bhii larkené Sita-se [kiitab pařhe-ne]-ko nahí:
   one-PSI. boy-ERG. Sita-INST. book.F. go-INF.OBL.-DAT NEG.
   kah-aa.
   say-PFV.
   ‘Not even a single boy considered that the book is small.’

If adjectives are used as predicates in a finite embedded clause, the negation test used above does not hold either. This unambiguously indicates that restructuring adjectives have a specific/reduced nature, and that the postulation of a uniform structure for the whole syntactic-morphological class of “adjectives” is not warranted.

(123) Hindi adjectives in finite contexts: no restructuring

a. *ek-bhii larkené [kiitab nahí: choot-ii hai]
   one-PSI. boy-ERG. book.F. NEG. small-F.SG. PRES.3.SG
   sooch-aa.
   think-PFV.
   ‘Not even a single boy considered that the book is small.’

b. ek-bhii larkené [kiitab choot-ii hai] nahí:
   one-PSI. boy-ERG. book.F. small-F.SG. PRES.3.SG NEG.
   sooch-aa.
   think-PFV.
   ‘Not even a single boy considered that the book is small.’
The difference between the sentences in (123) and that in (122a) is that the former contains a finite embedded clause, and negation is found inside it. Also, the difference between the sentences in (123) and canonical restructuring examples resides in the specific morphological make-up of the infinitive in (122). As cross-clausal phenomena have been shown to involve finite subordinate clauses (as shown recently for Tsez in Polisnky and Potsdam 2001), it is necessary to establish the limits of this process in Hindi. Section 3.5.2.4 recapitulates the contexts in which LDA is not possible in Hindi. The structural conditions of these environments provide further support to the secondary predicate restructuring analysis proposed in this thesis.

3.5.2.4 Where LDA is not possible in Hindi

As already mentioned, LDA is not possible across finite domains. To the adjectival example provided above, a finite embedded verb context can be added:

(124) **NO LDA OUT OF FINITE ENVIRONMENTS**

a. Firoz-ne soch-aa ki [Mona ghazal gaa-tii
Firoz-ERG. think-PFV.M.SG. that Mona.F. ghazal.F. sing-HAB.F.
hai].
    be.PRES.3.SG.

b. *Firoz-ne soch-ii ki [Mona ghazal gaa-tii
Firoz-ERG. think-PFV.F.SG. that Mona.F. ghazal.F. sing-HAB.F.
hai].
    be.PRES.3.SG.

‘Firoz thought that Mona sings ghazals.’ (Boeckx 2004: ex. 9)

The Multiple Agree analysis proposed in this thesis excludes contexts like (124) because the complex predicate head cannot access a CP, defined as an impenetrable domain; this makes it therefore unable to value its features against those of the embedded predicate. Once a (finite clause) barrier separates the two predicates, the process of restructuring is blocked.

This might explain two other contexts from which LDA is absent in Hindi. One of them refers to sentences that contain infinitives with internally Case-licensed genitives, while the other is related to environments in which infinitives are inherently Case-marked. A note is necessary regarding the former, as well as the general picture of infinitives in Hindi. Some researchers, including Butt (1993, 1995), have proposed that Hindi infinitivals are in fact NPs. Their true nominal nature would explain why such forms can take genitive subjects, receive case-marking, and possess morphology which is identical to that of more canonical nouns. It is undeniable that what are called infinitives might contain “nominal” features cross-linguistically; but it is an equally
valid remark that more than often infinitives can alternate between a verbal and a nominal function, whose reflexes might or might not be mirrored in the morphology. An account which would be more in line with the distributional patterns in Hindi, and elsewhere, would be a non-homogeneous one: infinitives can construct an NP, but they might also project a “defective” verbal configuration, which lacks valued phi-features, but can contain unvalued ones. If the lines of such taxonomic organization are assumed, both the conditions necessary for restructuring, as well as LDA exceptions can be explained. Similar observations about an underlying dichotomy with Hindi infinitivals are made by Bhatt (2005), although the details differ in some respects from the explanation proposed here.

If Hindi “infinitivals” project an NP, then they can take a genitive subject (which in Hindi is seen only with other NPs), but they will not be permitted in a complex predicate/restructuring configuration. The latter contains a complex predicate functional projection which needs to value its uninterpretable features against more than one predicative head. An infinitival in NP guise lacks predicative features, and moreover projects a more complex structure which includes a layer for the subject (whose Case marking will be genitive). The presence of the subject will give rise to an intervention effect, cancelling the right valuation relations. The subject might also delimit an unaccessible embedded domain. Therefore, LDA will be blocked with NP infinitives:

(125) INFINITIVES AND GENITIVE SUBJECTS

a. Firoz-ne [Shabnam-kaa ṛotii khaa-naa] chaah-aa.
   Firoz-ERG. Shabnam-GEN. bread.F. eat-INF. want-PFV.M.SG.
   ‘Firoz wanted Shabnam’s eating bread.’

b. INFINITIVES WITH GENITIVE SUBJECTS – NO LDA
   *Firoz-ne [Shabnam-kaa ṛotii khaa-nii] chaah-ii.
   Firoz-ERG. Shabnam-GEN. bread.F. eat-INF.F. want-PFV.F.SG.
   ‘Firoz wanted Shabnam’s eating bread.’

c. INFINITIVES WITHOUT GENITIVE SUBJECTS – LDA POSSIBLE
   Firoz-ne [ḥotii khaa-nii] chaah-ii.
   Firoz-M.-ERG. bread.F. eat-INF.F. want-PFV.F.SG.
   ‘Firoz wanted to eat bread.’
   (Bhatt ex. 45)

A second context in which LDA might not be possible proves to also require further investigation. It is sometimes mentioned in the literature that agreement with an argument of the embedded infinitival is not possible if the infinitival is case marked. That this is not an absolute condi-
tion is seen from the grammaticality of examples like (119) above, in which the embedded form translated as *gerundive* bears oblique case morphology.

Some remarks are in order regarding the presence of Case marking with restructuring and secondary predicates. First of all, the presence of Case morphology does not unambiguously indicate that the root represents or functions as what is traditionally called a noun. Case marking on secondary predicates, as well as with clausal material is an indication that more is left unexplained about the nature of case. As already seen, in languages like Russian or Finnish, in which secondary predicates exhibit dedicated Case, it is almost impossible to collapse depictives or resultatives (in Finnish) with NPs. The two classes are distinct in semantic, morphological, and syntactic terms, complying with traditional adjectival tests. In the analysis proposed in this thesis, morphology associated with the secondary predicate Case is taken to be the surface reflex of the presence of the secondary predicate head, which constructs a precise type of bare adjectival/infinitive, and specifies its narrow semantics. What one notices when case markings of Hindi infinitives are investigated is that in LDA contexts only the so-called oblique cases are permitted. The function of such cases could be taken to be similar to the Instrumental/Essive/Translative (which are also seen as “oblique”, in a sense) in Russian, Finnish, or other languages in which secondary predicates bear Case markings. Of course, the dual nature of the Hindi infinitives requires more investigation, which goes beyond the purposes of this thesis, and is therefore left for future research.

The third important context in which LDA is strictly disallowed will be examined in more detail, as it provides a crucial piece of evidence supporting the restructuring nature of the process. It is known from extensive cross-linguistic investigation (Cinque 1999) that restructuring is generally possible with complement infinitivals/non-finite embeddings, and disallowed with subject clausal material. Hindi fully confirms this pattern. Subject infinitives do not tolerate LDA:

(126) HINDI SUBJECT INFINITIVES – NO LDA

<table>
<thead>
<tr>
<th>mehnat</th>
<th>kar-naa/*kar-nii</th>
<th>achchhaa/*ii</th>
<th>ho-taa/*ii</th>
<th>hai.</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>hardwork.</em></td>
<td><em>do-INF.DFT.</em></td>
<td>*do-INF.F.</td>
<td><em>good.DFT./F.</em></td>
<td><em>be-HAB.DFT./F.</em></td>
</tr>
<tr>
<td>‘It is good to work hard.’</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

As expected, the NPI test discussed above does not hold with subject infinitivals. A negation head placed in the domain of the subject infinitive does not license NPIs in the matrix domain:
(127) **Hindi Subject Infinitives – No NPI Licensing in the Matrix Clause**

a. mehnat nahī: kar-naa (*kabhi-bhii) achchhaa
   hardwork.F. NEG. do-INF.3.SG. ever good.M.SG.
   ho-taa hai.
   be-HAB.M.SG. be.PRS.3.SG.
   ‘To not work is (*ever) good.’

b. [mehnat kar-naa] (kabhi-bhii) achchhaa nahī
   hardwork.F. do-INF.3.SG. ever good.M.SG. NEG.
   ho-taa hai.
   be-HAB.M.SG. be.PRS.3.SG.
   (Bhatt 2005: 39)

In conclusion, LDA in Hindi is characterized by the following features: i) process seen only with internal arguments of a special class of non-finite complements, as well as with secondary predicates and shared arguments. Bhatt (2005), following Butt (1995) identifies that class as containing predicates selected by what have been described as canonical restructuring predicates; ii) impossibility of application across a finite clause boundary; iii) normally blocked if the embedded predicate licenses a Genitive subject; iv) LDA works from bottom to top. As it has been observed several times, there are no instances of LDA where an embedded predicate agrees with an argument of the main predicate, if it has its own argument; v) agreement on the infinitival is “parasitic” on agreement with the matrix predicate. If LDA is not instantiated, then agreement with the embedded predicate is blocked. Similarly, agreement with the embedded predicate is obligatory if there is LDA:

(128) **No LDA Between the Embedded Predicate and the Matrix Subject**

*Mona per-ko dekh-nii chah-tii thii.
Mona.F tree-M.ACC. see-INF.-F.SG. want-HAB.F. be-PST.F.
‘Mona wanted to see the tree.’

The data from Hindi provide crucial support to the analysis proposed for secondary predicates in this paper. Moreover, it will be shown that it also explains in a more satisfactory manner instances exhibiting LDA with infinitivals.

3.5.3 Multiple Agree Analysis

As a reminder, secondary predicate structures are given a complex predicate analysis which makes use of a dedicated functional projection (F\textsubscript{RESTR}) specified with uninterpretable features which have to be checked against two (or more) predicative heads. These features have to be activated by a preliminary agreement relation with a head containing interpretable phi-
features. As a consequence of the complex predicative uninterpretable feature checking, the functional projection transmits the interpretable φ-features it obtains from the shared argument, to the predicative heads with which it enters into a *Multiple Agree* relation. The checking configuration is illustrated in (80), in broad terms, without paying attention to head directionality for now:

\[(129) \quad \text{[RESTR.}^0 \quad \text{[DP} \quad [\iota \phi] \quad [\text{VP V \ldots \text{[SP PRED 2]}]}\ldots \text{[uPRED]} \quad [uPRED] \quad \text{[uPRED]}\text{[uPRED]}\]

1. Probe 1: value \(u\phi\) in order to activate \(u_{\text{C-MPLX PRED}}\)
2. Probe 2: value \(c_{\text{C-MPLEX PRED}}\) by Multiple Predicate Agreement


Although the obligatory presence of agreement morphology on both predicates in Hindi LDA contexts suggests the existence of a multiple Agree operation which applies simultaneously, the details of the specific analysis can hypothetically vary. The four sections below introduce four distinct alternative accounts which use this intuition in some way or another. As these accounts have been formulated to exclusively address LDA with infinitival or participial morphology on the non-finite, they might leave some facts unexplained when applied to secondary predicates. It will be shown that the explanation proposed in this thesis is superior in that it avoids those problems, and can provide a unifying analysis of the restructuring class, in both its infinitival/participial and secondary predicate realizations.
3.5.4 Mahajan (1989)

One of the first LDA accounts in the generative tradition was proposed by Mahajan (1989). The gist of his paper resides in signalling the differences in Case assignment properties among participials and infinitives. According to Mahajan, if the Hindi imperfective participles can assign case to their internal objects, infinitives and perfective participles do not carry this specification. Infinitives can optionally assign Case, while perfectives are not inherent case assigners. As a result of their deficiency, the internal object of a transitive perfective has to be assigned case in a different manner. Mahajan (1989) hypothesizes that an Agr⁰ head in association with finite tense is responsible for this operation. The object of the perfective moves to the Spec of the matrix Agr⁰, which is the next available Case assignment position; on its way it also passes through the embedded Agr⁰. This is how agreement is obtained on both the matrix predicate and the embedded (perfective) participial. The same operation is at stake when the infinitival cannot assign Accusative Case, as schematized below:

(130) NO ACC. CASE ASSIGNMENT BY INFINITIVAL. LDA

\[
\begin{align*}
\text{[IP Sugato-ne]} & \quad \text{[AGRP ro} \text{ti}_1 \text{[VP [IP PRO] [AGRP [t}_1 \text{[VP t}_1 t}_1 \text{chaahii}_2]]]} \\
\text{Sugato-ERG.} & \quad \text{bread.F.} \\
\text{khaani}_1 [][][] t}_2 [t\text{agr}_2]] & \quad \text{chaahii}_2. \\
\text{eat-INF.F.SG.} & \quad \text{want-PFV.F.SG.} \\
\text{‘Sugato wanted to eat bread.’} 
\end{align*}
\]

Combining the defective character of some participles/infinitives with the postulation of case assignment properties of Agr⁰ allows Mahajan (1989) to account for LDA in a straightforward manner, without additional stipulation. But, from a minimalist perspective the postulation of an Agr⁰ head is highly problematic. Conceptual naturalness and economy require the avoidance of heads and projections devoid of semantic content, which must be used only as a last resort, and if the data cannot simply be explained in some other way. Moreover, the correlation between Case and Agreement is not unproblematic in itself. Thirdly, there are some conceptual problems with the specification of the case assignment properties of infinitives/participials, as systematized by Mahajan (1989).

Let’s examine these problems in more detail. Generally, argument structure specifies the case assignment properties of verbs. Following Burzio’s generalization, the licensing of the internal object case (accusative case) is connected to the projection responsible for the external ob-
ject, which is normally identified as \( v \). In a canonical sentential architecture, \( v \) is found below Aspectual/Infinitival heads:

\[
(131) \quad [\text{AspP} \text{Asp}^0_{[vP \text{ Ext-Arg } [\text{\_v\_\_}_{[vP \ldots]}]}]
\]

While there are languages in which the licensing of object Case is intimately related to the nature of Aktionsart (for example Finnish, where the location of Asp^0 is nevertheless lower than the representation in (131), the hypothesis that the addition of a perfective head can “detransitivize” a verbal root requires further motivation (see Hoekstra 1994 for suggestions in this line). The representation in (131) normally suggests that the case assignment property should not be cancelled by the addition of a higher aspectual head, as already noted by Butt (1995) and Bhatt (2005). Therefore, it is necessary to perform a thorough empirical investigation to see whether Hindi is indeed an exception to the canonical assumptions. A positive answer would imply that there are no situations in which objects of transitive verbal roots embedded under perfective aspectual heads can be licensed without the intervention of a higher Agr^0 head. As Bhatt (2005) has shown, this is not the case. Hindi allows contexts in which perfective heads are embedded under infinitivals and where overt objects are possible:

\[
(132) \quad \text{PERFECTIVES WITH OVERT OBJECTS} \quad \text{(Bhatt 2005: ex.13)}
\]

a. [Lataa-ji-kaa \textit{yeh} \textit{gaanaa} \textit{gaa-yaa} \textit{ho-naa}]
   Lataa-HON-GEN. this song sing-PFV. be-INF.
   namumkin hai
   impossible be.PRS.3.SG.
   ‘Lataji’s having sung this song is impossible.’

b. Ashaa-ji-ka \textit{yeh} \textit{gaanaa} \textit{gaa-yaa} \textit{ho-ne}]-se
   Lataa-HON-GEN. this song sing-PFV. be-INF.OBL.-INSTR.
   zyaadaa mumkin hai.
   more possible be.PRS.3.SG.
   ‘Ashaa-ji’s having sung this song is more likely than Lataa-ji’s having sung this song.’

The two examples above show that perfectives can co-occur with internal objects in Hindi. They represent a counterexample to Mahajan’s (1989) hypothesis that objects in LDA have to move for Case reasons to the main Spec, Agr^0 position. Moreover, there is yet another problem with this movement account, given the configuration in (131). Movement of the object (for Case reasons) has to obligatorily assume that the subject of the infinitival, PRO, is invisible and the object can somehow skip it. It’s not clear why that is; generally, the presence of PRO triggers minimality violations. On the other hand, an account which assumes that restructuring embed-
dings, as well as secondary predicates do not contain PRO fares better in other respects, and avoids this problem.

Although Mahajan’s (1989) hypothesis that the object of the embedded participles/infinitives in Hindi LDA moves to a matrix verb external position for case reasons does not seem to be correct, wide scope interpretations these objects obtain indicate that there is some basis to the intuition that such objects are found in a position from which they can take scope over the main predicate. Regarding the shared argument interpretations in LDA, one important observation numerous Hindi grammars and researchers make is that in such instances the agreeing object appears to be receive an interpretation related to “specificity”, or emphasis (Hook 1979, Davison 1988, Butt 1995, etc.). The description Hook (1979) gives is along these lines, illustrated with the examples in (133):

“After having said all this about agreement at a distance, it must be recognized that not all speakers observe it to the same degree...For some speakers there is a difference in meaning. Observing agreement at a distance puts emphasis on the object. Non-observance suggests a more general activity” (Hook, 1979)

(133) CORRELATIONS BETWEEN LDA AND SPECIFICITY

a. NO LDA – NO SPECIFICITY
   us-ne [kursiyā: tor-naa] shuruu ki-yaa
   he-ERG. chairs break-INF.M.SG. start do-PFV.M.SG.
   ‘He began breaking chairs.’

b. LDA - SPECIFICITY
   us-ne merii aaraam-kursii tor-nii shuruu ki-i.
   he-ERG. my.F. rest-chair.F.SG. break-INF.S. start do-PFV.F.SG.
   ‘He began breaking my easy chair.’

c. NO LDA – NO SPECIFICITY
   Ram-ne [roṭii khaa-naa] chaah-aa
   Ram.M.-ERG. bread.F. eat-INF.M.SG. want-PFV.M.SG.
   ‘Ram wanted to eat bread.’

d. LDA - SPECIFICITY
   Ram-ne [roṭii khaa-nii] chaah-ii
   Ram.M.-ERG. bread.F. eat-INF.F.SG. want-PFV.F.SG.
   ‘Ram wanted to eat a particular loaf/piece of bread.’

Presuppositional readings of the type seen with LDA (with their multiple sub-categories, among which specificity interpretations) are generally assumed to be obtained via a DP/NP movement.

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70 What Hook (1979) means by a “more general activity” is a non-specific (existential) reading of the object.
process to a position above the predicate. The correlation established between LDA and specificity interpretations suggests that when multiple agreement is established the object is found higher than the matrix predicate. Majahan (1989) captured this generalization in a straightforward way. The object ended up being higher than the matrix predicate because it had to raise to main [Spec, Agr0] for Case reasons. The counterexamples adduced in (132), on the other hand, indicate that objects of non-finite predicates can receive case low, inside the domain of the perfective predicate. But if the object is low, how are specificity readings obtained? The only acceptable way to solve this conundrum is to assume that Hindi objects with non-finite predicates have their case checked low, in the local domain, and then they raise for semantic reasons – in order to construct specificity meanings, Focus/Topic related notions, saliency. Given the previous discussion in chapter 2, this process is in fact in line with the cross-linguistic evidence – in many languages, among them Turkish, objects associated with “specific/presuppositional” interpretations appear in a position which is overtly higher or even outside the matrix predicate projection.

If the Multiple Agree analysis formulated along the lines of this thesis is correct, the existence of specificity readings in LDA is not surprising, given what was said about the semantic characteristics of shared objects with secondary predicates. The wide scope readings were taken as an important diagnostic against a small clause analysis of secondary predicates. On top of that, the unexistence of reconstruction effects forced an account which postulated that the shared object could not have originated in the complement position of the adjectival secondary predicate. The Hindi data, on the other hand, show that the object checks its case low, and therefore starts from a low position. If there are two locations in which the object can be found (assuming, as usual a copy theory of movement), then one would expect that reconstruction effects are possible in Hindi. This is indeed the case. More advanced investigation performed by Bhatt (2005) has indeed revealed that it is not always the case that objects in LDA are interpreted as carrying wide scope.

The two sentences in (134) contain objects of verbs of creation (134a), and a noun in a light verb construction (134b – ‘help do’). Bhatt (2005) describes these environments as constructions which “do not have referential interpretations”:

(134) LDA WITHOUT ‘SPECIFICITY’ SEMANTICS

a. Usha-ne potluck ke-liye daal banaa-nii] chaah-ii
   Usha-ERG. potluck for lentil.F. make-INF.F. want-PFV.F.
   thii.
be.PST.F.SG.  
‘Usha had wanted to prepare lentils for the potluck.’

Akbar-ERG my.F. help.F. do-INF.F. want-PFV.F. be.PST.F.SG.  
‘Akbar had wanted to help me.’

Although it is true that objects in light verb constructions are generally non-referential, this is not a universal tendency. Moreover, when the two examples above are examined more carefully, it can be seen that the nouns appear to carry specific intonation. It is also known that phonological devices are mechanisms by which grammar can signal saliency, or aboutness status. The analysis provided in this thesis for the nouns in (136 a, b) is that they have undergone movement to a topic/focus position which allows them to surface in a position above the matrix predicate, and to allow them to be seen by the complex predicate probe.

According to how the process of copy deletion works in the process of reconstruction, and knowing that objects in Hindi restructuring environments occupy both a low and a high position, one would expect to find the following possibilities:

<table>
<thead>
<tr>
<th>Position</th>
<th>High (above V)</th>
<th>Low (below V)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPECIFIC</td>
<td>√ (high copy interpreted and pronounced)</td>
<td>√ (low copy pronounced; high copy interpreted)</td>
</tr>
<tr>
<td>NON-SPECIFIC</td>
<td>√ (high copy pronounced; low copy interpreted)</td>
<td>? (low copy interpreted and pronounced)</td>
</tr>
</tbody>
</table>

**Table 5: Overt Scope and Specificity Correlations in Hindi**

As shown in the examples provided throughout this section, the combination High-Specific is what one most often sees in Hindi LDA. The option Non-Specific – High is also instantiated, as in (39). What about correlation Low-Specific? The existence of this option would imply that there are instances in which an object appears in a position below the main predicate, but which is nevertheless interpreted as triggering “specificity” implications. In such context, the high copy will be interpreted (and then deleted), while the low copy is pronounced. The following example from Davison (1991), as cited in Bhatt (2005), shows that this possibility is indeed instantiated (as expected). In this example one can see that the object is appears to be pro-
nounced low, due to some type of movement to the right periphery. In spite of this, an interpretation related to specificity is possible:

(135) **HINDI LDA WITH LOW OBJECTS**

\[\text{Muhiye zaruur t}_i \text{ aa-tii hai [saikil Me.DAT. definitely come-HAB.F. be.PRS.3.SG. bycycle.F. chala-nii]. ride-INF.F.} \]

‘I certainly know how to ride a (specific) bicycle.’ (Bhatt 2005: 14)

These observations indicate that Mahajan’s (1989) analysis according to which objects in LDA are higher than the predicate at the relevant stages in the derivation seems to be correct. However his assumption that they move for Case reasons is not empirically motivated; and, from a minimalist perspective the hypothesis that they move to Spec, Agr\(^0\) is also problematic. The question is: what position do such objects move to? And how is LDA obtained? Sub-section 3.4.5 below examines another analysis of Hindi LDA, namely Butt’s (1995), who accounts for the wide scope by proposing an incorporation process.

### 3.5.5 Butt (1995)

As opposed to Mahajan (1989), and many other analyses of Hindi LDA, the main purpose of Butt’s (1995) book is to also account for the optionality of this process. One aspect of Hindi non-finite embedded configurations is that multiple long distance agreement of the sort examined above is optional in some dialects. That is, there are speakers who judge sentences like (136 a) grammatical. Note that in this sentence the infinitive agrees with its object, while the main predicate does not. This is in opposition to a LDA sentence, where the matrix predicate also agrees with the object of the embedded infinitive (136 b):

(136) **HINDI: INFINITIVAL AGREEMENT BUT NOT LDA**

a. Shahrukh \([tehni kaat-nii]\) chaah-taa thaa.
Shahrukh.M. branch.F cut-INF.F. want-PFV.M.SG. be.PST.M.SG.
‘Shahrukh wanted to cut the branch.’

b. **HINDI: INFINITIVAL AGREEMENT BUT NOT LDA**

\[\text{Shahrukh [tehni kaat-nii] chaah-tii thii.} \]
Shahrukh.M. branch.F cut-INF.F. want-PFV.F.SG. be.PST.F.SG.
‘Shahrukh wanted to cut the branch.’

In order to account for the well-formedness of sentences like (136), Butt (1995) decomposes LDA into smaller operations, representing two distinct instances of agreement. According to her analysis, there is a basic agreement operation taking place between the infinitival and its object;
this can be followed by a subsequent process whose result is that the main predicate agrees with the embedded predicate.

The assumption Butt (1995) starts with is related to the nominal nature of Hindi infinitivals, which endows their specification with φ-features. Nevertheless these features are not intrinsic, but they can be specified by “agreement with the highest non-overtly Case marked argument.” This procedure raises some questions about what the highest argument is. Similarly to Mahajan (1989), Butt (1995) takes infinitivals to project an IP, with the specifier position occupied by PRO. According to canonical assumptions about argument hierarchies, the subject would therefore count as the highest argument. Nevertheless, LDA has the capacity to mysteriously overpass it. The problem is that this “PRO invisibility” assumption is not motivated in any way and thus appears to be ad hoc. It is known the featural content of PRO is normally visible in the establishment of agreement phenomena (one classical exemplification comes from Portuguese infinitivals, as discussed in Raposo 1987, 1989, 2000, among many others). Besides this inadequacy, which is easily avoided by an analysis in which embedded non-finites selected by restructuring predicates are assumed to not contain a subject licensing layer in the embedded predicate, there are also some problems with the actual analysis of LDA.

As already mentioned, for Butt (1995) the operation responsible for the agreement marking on the main predicate is a secondary cycle operation, independent from the agreement in the embedded IP. The main verb does not agree with the object directly; instead, as the infinitival has a nominal nature, and as there is no available argument in the matrix clause, the main predicate will enter into an agreement relation with the infinitival. This is how the latter ends up sharing the features of the embedded object. The split into more basic agreement instances allows Butt (1995) to provide a non-stipulative account of LDA non-obligatoriness. Nevertheless, a more basic question is still unanswered. Why is the agreement between the main predicate and the infinitival optional?

Butt (1995) connects this type of optionality to the presence of a rule of Noun Incorporation in Hindi, which applies non-obligatorily (as discussed in Mohanan 1995). When the noun undergoes the process of incorporation, agreement with the infinitival is blocked, and consequently there will be no agreement between the main predicate and the embedded predicate. Unfortunately, this hypothesis proves to be quite problematic. First of all, it does not provide a satis-
factory explanation for example (89 a). Secondly, it is known from Mohanan (1995), as well as Bhatt (2005) that the Hindi-Urdu incorporation patterns they examine do not seem to affect agreement at all. The two sentences in (137) below have been convincingly argued to involve incorporation in Mohanan’s terms (which Butt follows in its basics). Nevertheless, the default agreement marking on the verb (as expected under Butt’s account) would lead to ungrammaticality.

(137) HINDI INCORPORATION AND AGREEMENT (Mohanan 1995)

a. Anil-ne laṛke dekh-e/*dekh-aa.
   Anil-ERG. boys.M. see-PFV.M.PL./see-PFV.DFT.
   ‘Anil saw boys.’

b. Anill-ne laṛkiyã: dekh-ĩ/*dekh-aa
   Anil-ERG. girls.F. see-PFV.F.PL/see-PFV.DFT.
   ‘Anil saw girls.’

In conclusion, Butt’s (1995) incorporation account might give the right semantic output. In those cases in which there is incorporation there is no LDA, because the objects cannot be made salient by movement to a position where they can be seen by the probe whose features need to be valued. But the analysis suffers from both empirical and conceptual inadequacies. Section 3.5.6 examines yet another account proposed for Hindi LDA, namely Boeckx (2004).

3.5.6 Boeckx (2004)

The core of Boeckx’s (2004) analysis of Hindi LDA is that the complex predicate configuration is constructed by the application of an Agree process acting at a distance. As already mentioned, this basic observation is also one of the main tenets of the current analysis.

Boeckx (2004) explicitly connects LDA to defective intervention; the presence of a genitive subject in the embedded clause would prohibit the application of the Multiple Agree operation. Therefore LDA cannot apply over contexts which contain an embedded subject (be it PRO or lexically overt). But the strict assumption that Case and Agreement should not be dissociated (they are “two sides of the same coin”) is strongly maintained, an issue which is proven in this thesis to be problematic.

Boeckx (2004) examines another important LDA characteristic which not only motivates but also shows that an Agree at a Distance process is the only one tenable. Similarly to secondary predicate environments cross-linguistically, Hindi-Urdu LDA obtains when material intervenes between the shared argument and the embedded predicate, at least on the surface order. This shows that a Spec-head agree relation will not be able to give the right results in this context.
Boeckx (2005) makes the robust connection between LDA and restructuring, and is in this sense the closest in spirit to the analysis developed in this thesis. The other aspect his paper shares with the current discussion is the explicit interest in the mechanics of the LDA, and its structural implications.

The very specific connection Boeckx (2004) establishes is with clitic-climbing contexts in Romance languages. To repeat, the well-known phenomenon of clitic-climbing involves situations in which a clitic functioning like an argument in a specific type of embedded predicate is forced to raise to a syntactic position in the domain if the main predicate. Typical examples come from Romance languages, and they are re-inserted below:

(139) **ITALIAN**

María

<table>
<thead>
<tr>
<th>li</th>
<th>ha</th>
<th>voluti</th>
<th>prendere ti.</th>
</tr>
</thead>
</table>
Maria

| them.CL.3.PL. | have PL. | take. |

‘Maria wanted to take them.’

(140) **ROMANIAN**

María

<table>
<thead>
<tr>
<th>le</th>
<th>poate</th>
<th>scrie ti.</th>
</tr>
</thead>
</table>
Maria

| them.CL.3.PL.F./N. | can.3.SG. | write. |

‘María can write them.’

Boeckx’s (2005) analysis of Hindi LDA also takes Wurmbrand’s (2001) account of restructuring as a starting point. As a result of the “bare” status of embedded predicates in LDA contexts, the main predicate enters into a long distance Agree relation with the embedded object which cannot be licensed in its domain. The general implementation is that LDA infinitivals fail to license internal arguments because they lack the v layer. The derivation is saved when the functional domain of the main predicate is merged, due to the possibility of Long Distance Agreement, as schematized in (141) below:

(141) \[
[v \{V \{VP V Obj \}]]
\]

(Boeckx’s implementation of Hindi LDA)
The schema above captures what Boeckx (2005) calls the “downward” nature of the LDA, more specifically the observation that this process operates within the c-command domain of the Probe (attractor in Boeckx’s terminology). The “downward nature” is responsible for the ungrammaticality of sentences like (94) below, where the main and the embedded predicate agree with the matrix subject, by overriding the embedded object:

(142) DOWNDOWNWARD LDA

\*Mona per-ko dekh-nii chah-tii thii.
Mona.F. tree.M.-ACC. see-INF.F.SG. want-HAB.F. be-PST.F.
‘Mona wanted to see the tree.’ (Boeckx 2004; ex.13 adapted)

Obligatory agreement with the infinitival is assumed by Boeckx to be parasitic in nature. The connection explicitly examined is with the more canonical spreading processes of the type examined in phonology (among which vowel harmony). The morphological specification on the restructuring infinitival is, in this type of analysis, quasi-accidental in nature. Similarly to the phonological spreading processes, the mechanics simply values all potential elements within the perimeter of an upper limit (“Probe” in Boeckx’s terminology) and a lower limit (“Goal”). For Boeckx (2004) therefore, when the Probe examines its c-command domain, it detects a bare VP which contains an infinitival/participial form and a goal NP, and values both simultaneously, as schematized in (95):

(143) [v [V [VP V Obj ]]] LDA Multiple Agree in Hindi LDA

As the Multiple Agree configuration illustrated above is not “canonical” due to the presence of a verbal and nominal feature which are valued simultaneously, Boeckx (2005) hypothesizes that Hindi LDA is possible in this context because the infinitival is “gerundive” in nature. He relates this feature to a nominal feature infinitival/participial heads contain in Hindi-Urdu.

Boeckx (2004) also claims that an extension of the Multiple Agree analysis he proposes can account for the participle agreement contexts of the type seen in French (Kayne 1989):

(144) FRENCH PAST PARTICIPLE AGREEMENT

les femmes que Jean les a admirées.
the women.F.PL. that Jean.M. CL.PL. has admired.F.PL.
‘the women that Jean has admired.’

As the Spec-Head relation is irrelevant for the establishment of agreement with the past participle, the process has to receive a different explanation. For Boeckx (2004), the presence of
functional head hosting clitic objects is the deriving source, instead. In this aspect, Boeckx (2004) follows Taraldsen (2002) in assuming that the agreement seen on past participle is implemented as a result of the presence of clitic-related functional projection. This projection acts as the probe, in Boeckx’s view, and agrees with both the participle and the object clitic. The derivation has the requirement that this clitic probe be active only when the object is a goal. The Multiple Agree configuration is represented in (145):

\[(145) \quad \text{[ClP Cl [...[VP Part. Obj-clitic]]] LDA} \quad \text{Boeckx 2004 – Multiple Agree}\]

Boeckx (2004) and the proposal in this thesis share the hypothesis that agreement on the non-finite head (adjectival, past participle) is the result of the presence of a higher probing functional projection checking multiple sets of (identical) formal features. The crucial difference resides in the content of this functional projection. In order to further address the superiority of the featural specification as related to complex predication some problems regarding Boeckx’s analysis will be outlines. It will be shown that given some empirical facts from Hindi that Boeckx (2004) does not address, a host of crucial details of his analysis are not tenable.

Boeckx (2004) motivates the Clitic specification of the probe which establishes multiple agreement relations on two main observations: i) the presence of clitic raising processes in Romance restructuring contexts; ii) the specificity semantics associated with the internal object. As can already be deduced from the discussion about the specificity semantics of shared objects in LDA, on a closer inspection it turns out the presence of a clitic higher head is problematic at least for the second diagnostic. The issue reduces, in fact, to the precise nature of the clitic elements. An alternative account for these syntactic objects is that in Romance (or other languages that exhibit them) they may function as morphological markers of agreement, and they are not necessarily probing heads by themselves. When the two hypotheses are contrasted, it is immediately clear that the agreement account provides a more comprehensive account, while Boeckx’s (2004) suggestion leaves some data unexplained.

First of all, not all instances of restructuring in Romance contain a clitic projection. Their complex status can nonetheless be determined by the examination of other diagnostics just as negation tests, anaphora, etc. An analysis that assumes that clitics are just a morphological spell-out of agreement, can explain their optionality/absence by bringing into discussion various sorts
of parameters which are involved in clitic licensing. For example, in Romance, clitic doubling of internal objects is subject to factors like animacy hierarchies, formality status, etc. A fine grained network of morphological correlations of such checking relations seems to be at stake, and this is explained in a more straightforward way by taking clitics to be agreement markers. On the other hand, if they are indeed the initiators of Multiple Agreement processes in restructuring, it is not clear why they are overt in some restructuring instances, while missing in others. This observation does not necessarily contradict Boeckx (2004), but it does not offer much support for his implementation either. The Probe responsible for the agreement spreading can as well be some other projection. Nothing hinges on that projection being the clitic.

The second piece of evidence Boeckx (2004) adduces in order to support the hypothesis that the clitic head acts as the probe bears on the specificity effects which have been mentioned with respect to Hindi LDA (see the discussion on Majahan’s analysis, and examples in 85); such interpretive results also hold in many other languages in which agreement between the matrix predicate and an object of the embedded domain is established (see Polinsky and Potsdam 2001 for a recent description from Tsez, a.o.). As the clitics Boeckx (2004) makes reference to can be assumed to carry inherent featural compositions related to ‘specificity’, the presence of a Clitic probe easily accounts for the respective interpretations. But, it proves very hard to maintain for those instances in which specificity can be cancelled in favour to an existential interpretation (as shown in example 86). An account in which specificity (associated with wide scope) and its existential alternation are explained as deriving from a reconstruction process runs into less problems than an explanation which ties it to the obligatory presence of a head endowed with specificity semantics. The latter will not derive those cases in which an existential reading is observed; in fact, it will prohibit such contexts.

Boeckx (2004) does mention that participial agreement under passivization should be accounted for in different terms. The hypothesis is that in those cases the participial is in fact an adjective, which agrees with the shared argument independently. The author does not develop this analysis, but it should be clear that the sole existence of an agreement relation between the adjective and the internal argument will not be able to explain the multiple agreement facts in Hindi, as well as the restructuring diagnostics.
In conclusion, an investigation of the details of the Hindi-Urdu LDA shows that a Multiple Agree process makes better predictions than an account encompassing simpler instances of local agreement relations. As seen with Butt (1995), the latter cannot derive the obligatoriness of the process. As with regards to what initiates this process, two hypotheses are under scrutiny: a) a projection specified with complex predication features, as argued for in this thesis; b) a clitic head, as assumed by Boeckx (2004). This section has identified the major problems the clitic approach faces, and has showed how the complex predicate account avoids them. The last option one has to check is whether the specification of the Multiple Agree inducing projection can be yet distinct. One proposal deserves some discussion in this respect, namely Bhatt (2005) who takes the matrix T to be responsible for this process.

3.5.7 Bhatt (2005)

Bhatt (2005) also shares one of the main assumptions of this thesis, namely that the existence of a covaluation process by which the uninterpretable features of the two predicates can be checked by the same Probe, and which is closely related to the restructuring character of such constructions. The distinctions reside in the nature of the Probe, as well as in the particular implementation of Agree. Bhatt (2005) discusses LDA as seen with subordinate infinitivals, and participials, and is able to account for the problematic aspects left unaddressed/unobserved in the previous three accounts.

The main claim of Bhatt (2005) is that LDA contexts require a relaxation of the specification of Agree, as envisaged in Chomsky’s classical implementation (Chomsky 2000, 2001, 2004, 2007). The operation AGREE is proposed instead, which is defined as in (146) below:

\[
\text{(146) AGREE is the process by which a head } X^0 \text{ (the Probe) with a complete set of unvalued uninterpretable features identifies the closest } Y^0/YP \text{ in its c-command domain with the relevant set of visible matching (i.e. nondistinct) interpretable features (the Goal), and uses the interpretable features of } Y^0/YP \text{ to value its uninterpretable features. (If the Probe is } \varphi \text{- complete and the Goal has unvalued uninterpretable features, the Probe values and deleted those features) [Bhatt 2005, ex. (1), and (17)]}
\]

The crucial difference between Chomsky’s Agree and AGREE (as formulated by Bhatt 2005) lies in the non requirement of the latter that the Goal be active. The activity condition is related to the presence of uninterpretable features, as usually. In Chomsky’s Agree system (2000, p. 6), matching of Probe and Goal is subject to a pair of necessary conditions:
(147)  a. Goal as well as probe must be active (i.e. must contain a relevant set of uninterpretable features) for Agree to apply.
b. $\alpha$ must have a complete set of $\varphi$-features (it must be $\varphi$-complete) to delete the uninterpretable features of the paired matching element $\beta$.

Bhatt’s claim, on the other hand, is that cross-linguistic instances of LDA can only be explained if one Probe is allowed to enter into an Agree relation with a goal which might not have the corresponding active features. Moreover, in such instances, there is no correlation between Case and agreement.

In order to explain instances of LDA, Bhatt (2005) makes a precise connection between the Multiple Agree process, and object agreement. As noticed in the introductory part of this section, if the subject is not visible due to the overt case morphology it bears, the verb agrees with the object, even if the sentence does not contain a restructuring predicate. An example is also repeated below:

(148)  **Hindi Object Agreement**
-Sugato-ne kiitab pa-rh-ii. 
‘Sugato read the book.’

As the glossing indicates, the subject (Sugato) bears overt ergative Case, which precludes it from entering into an agreement relation with the matrix verb. The agreement is established instead with the object, as the latter does not carry overt Case marking. In Bhatt’s account, typical instances of subject-predicate agreement are triggered by finite $T$ with its associated unvalued $\varphi$-features. According to the morphological specifications of Hindi-Urdu, when the subject is not overtly Case marked, finite $T$ identifies it as the closest argument, and uses its interpretable visible $\varphi$-features. This is how canonical subject predicate agreement is obtained in sentences like (101) below:

(149)  **Hindi Subject Agreement**
-Mona amruud khaa-tii thii. 
-Mona.F. guava.F.PL. eat-HAB.F. be.PST.F.SG. 
‘Mona used to eat guavas.’

[TP Mona T’ [VP guava kha-tii] T^0] 

Agree
If the φ-features of the subject are not visible, the second closest argument is assumed to be the object. Finite T uses those interpretable features to value its uninterpretable set; the morphological result is agreement with the object, as in (102):

(150) HINDI OBJECT AGREEMENT

\[
\begin{align*}
\text{Ram-ne} & \quad \text{imlii} \quad \text{khaa-yii} \quad \text{thii.} \\
\text{Ram.M.ERG.} & \quad \text{tamarind.F} \quad \text{eat-PVF.F} \quad \text{be.PST.F.SG.}
\end{align*}
\]

‘Ram has eaten tamarind.’

\[\text{TP Ram-ERG. T’ [VP imlii khaa-yii] T^0 = thii} \]

Agree

The concomitant agreement on participles is derived in a similar manner. If the subject is not visible, T inspects its domain and finds Asp, a head which can be specified as habitual or perfective. Assuming a verb-internal subject hypothesis, the structures are as below:

(151) \( T^0[uF] \ldots [Asp^0[uF] \ldots [_{vp} \text{SUBJ} [\varphi F] v [_{vp} \text{V OBJ} [\varphi F]]]] \) 
\( \text{(Asp = Habitual)} \)

(152) \( T^0[uF] \ldots [Asp^0[uF] \ldots [_{vp} \text{SUBJ - Erg} v [_{vp} \text{V OBJ} [\varphi F]]]] \) 
\( \text{(Asp = Perfective)} \)

A constant idea in Bhatt (2005) is therefore the unification of LDA with object agreement, in the sense that both are considered to involve the same Agree mechanism, under identical conditions. Bhatt (2005) does not examine LDA with secondary predicates; as already mentioned, the same patterns are observed when the embedded predicate is an adjectival. The correlation between object agreement and LDA might indicate that the establishment of obligatory Multiple Agree relations is not necessarily an inherent characteristic of restructuring, but rather a property which is made salient when certain configurational settings are met. In Hindi-Urdu, object agreement is taken to be an indication of a certain sub-type of ergativity, because the empirical data illustrates it when the matrix verb is aspectually specified as perfective. According to Bhatt, the perfective aspectual head, in collaboration with T checks the ergative Case on the matrix subject. What one needs to make sure is that LDA as seen here is not a simple quirk of Hindi-Urdu syntax and morphology which might not necessarily say anything about restructuring and complex predicate formation mechanisms per se.

One important piece of evidence indicating that ergativity is not a sine qua non requirement for LDA comes from examples in which T is set as present, and the aspectual head has a habitual specification. In such contexts, if the subject bears overt Case marking, other than the
ergative, and the matrix predicate introduces an embedded predicate in a restructuring configuration, LDA will still apply. Examine the example in (105), which contains the verb *aa* (‘to know how’), a restructuring predicate par excellence in Hindi:

(153) **LDA WITH PRESENT TENSES**
Nadia-DAT. car.F. drive-INF.F. come-HAB.F. be.PRS.3.SG.
‘Nadia knows how to drive a car.’

In this sentence, the auxiliary (spelling out the T head, as generally assumed for Hindi-Urdu has the value [present], and the aspectual head is habitual (which does not accept ergative external arguments). The subject bears Dative case, which is morphologically distinct from the ergative. Long Distance Agreement, as well as the parasitic agreement on the embedded predicate are still required, although the sentence does not contain a perfective head.

Another important observation is that dependent agreement on the embedded predicate is seen in other environments besides contexts in which the embedded predicate has an object. This indicates that embedded predicate *covaluation* is not restricted to instances of object agreement. Rather, multiple agreement processes can be established with other salient *shared* arguments, for example subjects \(^{71}\), as shown in (154). It is interesting to notice that the spreading of agreement is seen and accepted only with those predicates that are part of the restructuring class.

(154) **MULTIPLE AGREEMENT WITH SUBJECTS**
\(\begin{array}{ccc}
\text{a. } & \text{Monica} & \text{chal-\text{ii}} \\
& \text{Monica.F.} & \text{drive-INF.F.SG.} \\
& \text{‘Monica wants to drive.’} \\
& \text{chaah – tii} & \text{want-HAB.F.SG.} \\
& \text{be.PRS.3.SG.} \\
\text{b. } & \text{Shahrukh} & \text{gaa-naa.} \\
& \text{Shahrukh.M.} & \text{sing. INF.M.SG.} \\
& \text{‘Shahrukh knows how to sing.’} \\
& \text{aa-taa} & \text{come.HAB.M.SG.} \\
& \text{be.PRS.3.SG.} \\
\end{array}\)

Bhatt (2005) has to make the assumption that the embedded non-finite forms are in a sense defective. They cannot function as probes; the assumption that they project bare structures, lacking an external argument introducing layer is crucial in this respect, as seen in the other LDA analyses. This observation is easily extended to adjectives as secondary predicates. Bhatt’s analysis is

\(^{71}\) Indirect objects obligatorily carry overt Case markings in Hindi-Urdu, and this makes them invisible to entering into agreement relations with matrix predicates.
therefore, extremely promising. By allowing an Agree at a distance mechanism, Bhatt (2005) is also able to successfully account for the contexts in which the object is spelled-out low; this will explain the low, narrow scope, existential readings. Although no specific connection to reconstruction is made, Bhatt does follow Fox (2001) and explains that the alternation specific/non-specific is obtained by a non-obligatory raising of the object. The only difference between infinitives and adjectives is that adjectives might not license their objects – therefore, if they do not license them, it must be the case that shared objects with secondary predicates are introduced as separate arguments.

The only problem is with the assumption of T as a Probe. Complex predicates do require feature spreading even in contexts in which there is no possible finite T. Examine the examples below in which “consider stupid” sequences require the spreading of agreement, even if consider does not function as a matrix predicate, but is rather a non-finite participial:

(155) Non-finite complex predicates and multiple agree
a. choot-i sooch-i bili.
small-F.SG. think-PFV.F. cat. F.
‘cat considered small.’
b. *choot-a sooch-i bili.
small-D.SG. think-PFV.F. cat. F.
‘cat considered small.’

As example (155b) indicates, the adjective cannot be marked with a default form, if consider carries feminine singular agreement features. Moreover, what one finds when examining contexts like the ones in (155) is that multiple feature-identical agreement is required, irrespective of the presence of the complex predicate in finite or non-finite contexts. This picture holds not only in Hindi-Urdu, but also in Romance, and Slavic, as well in many other languages tested (among which Icelandic, and Japanese). This indicates that more is at stake than a finite T agreement initiator. On the other hand, the assumption that complex predicates are constructed via the intervention of a complex predicate functional projection explains the data without further stipulation.

One important remark is necessary before concluding this chapter. The data from Hindi strongly supports a Multiple Agree analysis, as well as the unambiguous restructuring character of configurations involving secondary predicates. However, the question could be raised about whether the Hindi facts are representative for the cross-linguistic picture. The answer entertained in this thesis is yes. The main motivation for this claim is rooted in the systematic patterns seen in other languages, beside Hindi. Long-distance agreement, as well as as restructuring diag-
Nostics are also found across Romance, Germanic (German, Icelandic), Japanese, Finnish, etc. The data from Hindi appears to provide one the most robust pieces of evidence, but crucially not the only one cross-linguistically. Hence, it can safely be assumed that it’s not a quirk of the language, without large influence on the formulation of the theory of secondary predicates.
4 Licensing

This last chapter addresses some specific issues regarding secondary predicate licensing. There are two parts, the first of which is dedicated to depictives, and the second to some aspects of cross-linguistic variation with resultatives. The proposals presented here are to be taken as possible, preliminary ways of analyzing the data; they are by no means full fledged accounts. Restricting the analysis to depictives for now, in the domain of secondary predicates, less discussed is the observation that in many languages overlap relations do not appear to be well-formed when constructed with specific classes of verbs, among which are the unergatives, or the so-called ‘pure statives’. Surprisingly, if the secondary predicates are made ‘heavy’ by the addition of ‘semi-quantifiers’ (‘all’, ‘very’, etc.) or focus, the structures become acceptable. The question is then: what is at the source of these restrictions?

Scopal interactions, discussed in Chapter 2, have shown that a complex predicate analysis is best equipped to provide a satisfactory account of secondary predicates, as a class. Case and agreement patterns, as examined in Chapter 3, have further imposed the need of more structural complexity inside the multiple predicate string. Hence a structure in which the two predicates combine via the intervention of a functional projection which can be specified semantically in distinct ways, along the general divide simultaneity vs. result is proposed, as shown in (1):

(1) Pred₁ₑᵢ Pred₁ Pred₂ₑᵢ Pred₂

Secondary predicate (OVERLAP/RESULT/…)

Cross-linguistic observations also support an account in which the two broad classes of secondary predicates are treated as two variants of the same process. Thus, similarly to Rothstein (2006), and going against the more established GB tradition, it is assumed here that the two variants are constructed by the same type of syntactic processes. Nevertheless, the account has to be formulated in such a way as to give the possibility of deriving cross-linguistic variation. Repeating the observations already mentioned several times, it is well-known that resultative secondary predicates appear to be absent in many (families of) languages, although a satisfactory account for this restriction is far from being available (see Zubizaretta and Oh 2008, Williams 2005, for recent remarks). On the other hand, depictives are not unproblematic themselves.
Across languages, they also appear to be subject to similar conditions of licensing, which are again poorly understood (see Rapoport 1999, for preliminary remarks). A comprehensive theory of secondary predicate licensing has therefore to provide answers regarding the nature of these restrictions. This chapter presents some paths the analysis can proceed, but no actual theory will be provided. Noting that the remarks below should be taken as initial and still to be developed observations, the chapter is divided into two main parts. In 4.1 conditions of licensing of depictives are examined, while in 4.2 some parameters of resultative variation are further investigated. The conclusion is that understanding the semantics of the secondary predicate introducing is crucial to understanding why resultatives and depictives are subject to the very types of restrictions seen cross-linguistically.

4.1 Licensing depictives

The goal of this subsection is to lay the foundations of a theory of depictive secondary predicate licensing that can account for restrictions of interaction with specific classes of predicates and shared arguments. For this end, in 4.1.1 a class of (novel) restrictions on depictive licensing is introduced. In 4.1.2 it is further shown that a complex predicate analysis is necessary in order to start addressing the interactional patterns of depictives. As one of the conditions of depictive licensing appears to be congruence of the two predicates, a typology of building blocks of verbal and adjectival heads is constructed in 4.1.3. Further it is shown how quantification can resolve some sortal mismatches between the two predicates, and taxonomy of aspectual conflict repair strategies is established. The last section contains a conclusion, as well as further questions and problems that are still open for discussion.

4.1.1 Licensing depictives: what does ‘overlap’ need?

As already said, the classic description of the depictive is provided in Halliday (1967:62): ‘a characteristic ascribed to one of the participants in the clause; but it is one that relates specifically to the process in question.’ Hence, depictives represent types of secondary predicate that are both event and participant oriented. Several illustrative examples are resumed below:

(2) Cliffi arrived tired/happyi. (subject oriented depictive)
(3) Johni wrote the letter drunk/happyi. (subject oriented depictive)
(4) The hunters ate the fishi rawi. (object oriented depictive)
Another classic observation is that licensing of depictives (DEPs) appears to be subject to very strict yet mysterious restrictions, at the syntax-semantics-morphology-prosody-interface (see Rothstein 1983/1985, Rapoport 1993, McNulty 1988, Williams 1983, 1995, Winkler 1997, Simpson 2005, etc.). More specifically, these restrictions come under three main subtypes. First of all, cross-linguistically, there appears to hold a not previously addressed hierarchy of subject oriented depictives; this regards their interaction with syntactically relevant aspects of main predicates. This hierarchy indicates that unaccusative predicates are more accessible for depictive modification than transitives, while undergatives are only available under special conditions. Hence, the interactional pattern is as in (5) below:

\[(5) \text{ unaccusative} > \text{ transitive} > \text{ unergative} (> \text{ more accessible})\]

To see what this implies regarding the unergative-depictive interaction, examine the contrast in (6). As can be seen in (6a) depictives are not well formed with unergatives. Surprisingly, the structures improve when a ‘semi-quantifier’ is added (6b):

\[(6) \quad a. \text{ */ Cliff laughed happy, (unergative vs. unaccusative in 1, and transitive in 2) } \\
    b. \quad \text{ Cliff, laughed all happy/giddy.}\]

A second paradigm of interactions reveals that depictives cannot be licensed by certain classes of ‘pure stative predicates’; surprisingly, the structures improve if explicit temporal restrictiveness is introduced. In (7a), an attempt to combine the depictive young with the stative predicate own results in ill-formedness. Again, when the temporal restrictor when is explicitly introduced, the depictive is allowed.

\[(7) \quad a. \text{ * Jake owned a car young. (Winkler 1997, ex.6) } \\
    b. \quad \text{ Jake owned a car when young.}\]

Thirdly, it can also be noticed cross-linguistically that subjects of some middle intransitive achievements are not available for depictive modification. Examine the contrasting sentences in (8 a, b) below. Such examples are particularly interesting in that overt modal quantification in the domain of the main predicate allows licensing (as shown in 8 b):

\[(8) \quad a. \text{ *The potatoes fried/chopped raw } \\
    b. \quad \text{ The potatoes won’t fry/chop raw.}\]

The three main interactional classes are extremely useful in order to understand what it means to be a depictive. More specifically, one has to answer the question of what these interaction patterns tell about the conditions of licensing of depictives, and to further establish the complete taxonomy of these interactions. Also, particularly salient for the purposes of the current thesis is
an investigation of how the restrictions above contribute to disambiguating between the two competing syntactic analyses of secondary predicates: a) (syntactic) complex predicate account; b) small-clause account. The two possible configurations are illustrated in (8):

(8) a. Complex predicate

b) Small clause

(Hornstein 1999; 2001; Hornstein and Boeckx 2010)

The discussion in Chapter 2 has arrived at the conclusion that strong readings of shared arguments can only be satisfactorily accounted for under a complex predicate analysis (8a). Namely, anti-reconstruction patterns favor a configuration in which the shared argument is not merged lower than the matrix predicate, and hence will not be available for interpretation in the low position at any stage during the derivation. The specific interactional patterns illustrated above also suggest that at some level the two predicates have to match in relevant features. A small clause analysis won’t explain this without further stipulation, as under such an account the secondary predicates have a (reduced) clausal status, and aspectual matching with the main predicate should not be an issue. Based on these preliminary observations, this chapter will attempt to present the basic steps in modeling of a complex predicate analysis. In the end, it will be further demonstrated that this account is superior to a small clause instantiation.

4.1.2 Modeling a complex predicate analysis

Any configuration proposed for secondary predicates has to make some precise predictions about the syntactic status of these elements. The crucial question is: are depictives (or resultatives, for that matter) adjuncts or complements, in the traditional GB split? Closest to empirical facts appear to be the conclusions Bresnan (1982) as well as Simpson (2005) drew regarding secondary predicates. For Bresnan (1982), depictives are seen as special types of ‘arguments’, ‘optional

subcategorizing predicate complements’. Simpson (2005) also shows that the most adequate representation of these categories is to see them as one of the means of constructing (phonologically) complex events at the V level. The behavior of secondary predicates under various syntactic tests suggests therefore that, even if they are introduced in the domain of the main predicate by adjunction, they end up being treated as if they were true complements. And this observation seems to hold when it comes to what are called unambiguously adjunct types (*eat raw, walk drunk, arrive tired*, etc.). In many languages, depictives are subject to the process of restructuring which is blocked in the case of true adverbial adjuncts, as well as in the case of functionally rich types of non-finite complements. In this respect, see the discussion of Italian presented in Stowell (1989). Moreover, as seen in Chapter 3, in languages like Hindi depictives undergo Long Distance Agreement, which is restricted to restructuring contexts. Even more relevant, in some languages, the depictive can overtly incorporate into the main predicate. Examine the examples in (9) from Alamblak (Sepic family of Papua New Guinea).

(9) **ALAMBLAK** (Bruce 1984: 175-6; van der Auwera and Malchukov 2005, ex. 38)

a. Miyukham fa-*nfri*-më-an-m.
   Fruit *eat raw*-REM.PST.-1.SG.-3PL.
   ‘I ate the fruit raw.’

b. Yënř fëhm hti-*bro*-më-r-m.
   child *pigs* see-big-REM.PST.-3.SG.-3PL.
   ‘The child saw the pigs (as being) big.’

Although overt incorporation, as well as restructuring, indicate a tight connection between the two predicates, it is also uncontroversial that depictives have a greater freedom of realization than resultatives. Intuitively, depictives rather qualify for the status of adjuncts (as seen in their prosodic make-up for example), at least under their more independent types. This gives rise to

---

Prosody and the phonological component are taken here under a broad acception, as encoding the processes related the establishment of linear order, and its sensitivity to prominence marking (as under focus, for example, see also Winkler 1996). It is well-known that not all classes of secondary predicates appear to have the same status, when the PF-side is brought under discussion. For example, it is a classic observation that depictives appear to be more ‘independent’ than ‘resultatives’, which are felt as being closer to the matrix predicate. Even among depictives an independence ranking is usually established (as discussed by Simpson 1983, among many others). To illustrate this latter claim, a general distinction is normally made between true depictives and circumstantials. The contrast is mainly semantic (while depictives encode a simple overlap relation, circumstantials provide further specification about the circumstantial; connection between the two predicates, i.e. whether causality, anteriority, purposiveness relations might also be involved. Let’s look at the contrast below:

(i) John left upset. (*depictive*: overlap relation, only).

(ii) John left, upset. (*circumstantial*: because he was upset, etc.)
a puzzle: how to reconcile the syntactic freedom with processes of incorporation? Thus, even though depictives preserve their own prosodic domain (focus marking), they incorporate, and obey semantic and syntactic aspectual/sortal matching with the main predicate. In (10a), a so-called *adjunct depictive* is illustrated. Remember that an individual level depictive is not well-formed in this context. A similar type of restriction is seen with less-adjunct types of secondary predicates, namely those merging with *consider*-type predicates (10b). This time individual-level predicates are required, while stage level predicates are not acceptable.

(10)  

a. He entered the room *tall/tired;* (individual – level adjective not permitted)  
b. The professor considered the students *intelligent/tired.*  
   (stage – level excluded)

This thesis shows that the solution to this conundrum resides in understanding the type of Merge procedure secondary predicates make use of. Just like resultatives, adjunct depictives construct syntactic complex predicates; their apparent “adjunct” status is given by the type of Merge they instantiate. It is proposed that an implementation of *Parallel Merge* (Citko 2005, Nunes 2004), under *Multiple Agree* (Hiraiwa 2004, Chomsky 2008) is the process needed to account for their syntactic and semantic behavior. A sample derivation for a sentence containing a more adjunct like secondary predicate is provided below in (11):

(11)  
DERIVATION  
A man arrived tired.  
Num/Lexicon =  
{a, man, Situation0, VCMPLX, V, arrive, DEP, STAGE, STAGE/INSTANT, A, Vtired}  

[Situation0 = functional projection specified with setting the situational binding of the two predicates. Introduces the shared argument]  
[Sortal functional material (Stage, etc.) is briefly described below]

While the contrast might not be easy to perceive by many native speakers in an out-of-the-blue situation, in larger discourse settings, circumstantials are highly prominent (see the discussion in Stump 1982). Beside their semantic flavours, circumstantials can also be distinguished from pure depictives on syntactic and morphological grounds; for example, circumstantials are not subject to the process of incorporation, do not follow the Case patterns analyzed in the previous chapter, require a larger pause separating the domain of the natrix predicate (indicated by a comma in example ii), behave more like true adjuncts, do not respect the aspectual restrictions which are characteristic to depictives, etc. Due to these properties, circumstantials have not been analyzed in this thesis; the discussion was restricted to the more puzzling types, in a sense, – the depictives. The examples have been selected in such a way as to avoid confusion with circumstantials.
i) Assemble Secondary Predicate:

---

ii) Assemble $V_{\text{arrive}}$:

---

iii) $\text{DEP} + V_{\text{arrive}}$: Parallel Merge

---

iv) Merge Situation$^0$, and shared argument

---

v) Merge $V_{\text{CMPLX}}$
MULTIPLE AGREE OPERATION, responsible for CONFLATION OF PHONOLOGICALLY INDEPENDENT PREDICATES

The Multiple Agree operation described in more detail in Chapters 2 and 3 is responsible for valuing the predicative (and other uninterpretable) features of the two predicates simultaneously. Recall that its overt realization is the morphological agreement marking on the secondary predicate (as in Icelandic, in (12)), or on both the main and the secondary predicate, as in Hindi (12):

(12) **OVERT AGREEMENT IN SECONDARY PREDICATES**

a. **ICELANDIC**

Ég tel barnið gafað. (Icelandic)

I consider child.the.N.SG.ACC. smart.N.SG.ACC.

‘I consider the child smart.’

b. **HINDI**

Vivek-ne bili choot-i sooch-i. (Hindi)

Vivek-ERG cat.F. small-F. think-PFV.F.

‘Vivek considers the cat small.’

### 4.1.3 Overlap relations

In order to further understand the sortal restrictions introduced above it is necessary to examine the semantic specification of the depictive head in more detail. Starting from the semantic entries
for depictive heads as proposed in Geuder (2002), as well as Pylkkänen (2008) the licensing conditions in (15) are proposed.

As discussed in chapter 3, Geuder (2002) is one of the first analyses in which a precise formalization is proposed for encoding the relations depictives exhibit. The intuition behind the entry in (13) is that what characterizes this secondary predicate is the introduction of an overlap relation. Hence a depictive describes a state that holds during an event and involves an overlap relation \((o)\) between the event and the state:

\begin{equation}
\text{We had eaten tired.}
\end{equation}

\[
\exists t \ ( t < t_0 \ & \ & \lambda x \ [ \exists e(eat(e)(x) \ & \ \exists s \ [ e \circ s \ & \ tied(s)(x)) \ & \ t = \ \text{AFTER}(e)] ) \ (we)]
\]

The same implementation is found in Pylkkänen’s (2008), as seen in the entry in (14):

\begin{equation}
\text{Pylkkänen’s (2008) entry for Dep (We have eaten tired)}
\end{equation}

\[
\begin{align*}
a. & \quad \lambda f_{<e, ss>,}, \lambda x. \lambda e. (\exists s) f(s, x) & \& e_o s \\
b. & \quad \text{Dep P} \quad \lambda x. \lambda e. (\exists s) \text{tired(s)} & \& \text{in (x, s)} & \& e_o s \\
\text{tired} & \quad \text{Dep} \quad \lambda x. \lambda s. \text{tired(s)} & \& \text{in (x, s)} & \quad \lambda f_{<e, ss>,}, \lambda x. \lambda e. (\exists s) f(s, x) & \& e_o s 
\end{align*}
\]

Although both Geuder (2002) and Pylkkänen’s (2008) note some of the interactional patterns mentioned above, they leave unaddressed the precise licensing conditions of depictives. In order to capture both the restrictions of individual/stage level secondary predicates, as well as the quantificational restrictions with unergatives and middles, it is proposed that depictives are subject to the dual licensing conditions in (15). The first requirement says that a depictive must have access to an argument in order to saturate its predicative content. The second requirement, in turn, makes sure that the two predicates are of the same aspectual/sortal type. In order for a predicate to obtain the correct aspectual/sortal specification, it must be the case that the predicate is quantized.

\begin{equation}
\text{Licensing condition for Dep}
\end{equation}


A depictive secondary predicate is licensed only if (i) and (ii) are met:

i. the Rule of Subject-Predicate-Linking

ii. the Rule of Predicate-Predicate-Linking
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Rule of Subject-Predicate-Linking
Every depictive secondary predicate must be linked to an argument at LF; linking
must be identified at PF.

Rule of Predicate-Predicate-Linking
i. Only predicates of the same type can be linked.
ii. Linking occurs between the event/aspect/sortal roles of the primary and
the secondary predicate under a Parallel Merge condition.
iii. Unspecified event/aspect roles of the main predicate have to be bound/set
either internally to the complex predicate, or at the sentential level.
iv. Complexes containing depictives are not licensed if there are unspecified
event/aspect roles.

4.1.4 Building blocks of verbal and adjectival classes

The mechanics of the process of Multiple Agree are specified as to value simultaneously the un-
interpretable predicative feature of the (two) predicates seen in secondary predicate construc-
tions. What is still left to be formalized is the aspectual/sortal matching of the predicates. Re-
member from chapter 3 and the two examples in (10) that:

- **consider** – type predicates require individual-level secondary predicates
- **enter** – type predicates require stage-level secondary predicates

1993, Winkler 1997, etc., *stage-level predicates* (SL) encode transitory, bounded, temporally re-
stricted states (ex. happy), while *individual-level predicates* (IL) make reference to inherent,
immutable properties (ex. intelligent, etc.).

The distinction in (10) goes beyond canonical inner aspect properties; what is relevant for sec-
ondary predicates is the distinction between eventualities seen as a undifferentiated whole, and
eventualities set as containing differentiated stages. As these properties go beyond (inner) aspect
specifications, they are collapsed here under sortal taxonomies. It appears that main and second-
ary predicates have to agree/match in the sortal type. Starting from the assumption that stage-
level predicate output stages/transitions, while individual-level predicates encode properties as a
whole, the question is: *How are wholes and stages obtained?*

The answer proposed in this thesis is that lexical categories are composed with functional ma-
an inventory of the following heads is proposed: **stat, whole, stage, delimited whole**.
When merged with a root, \textsc{stat.} outputs an undifferentiated eventuality. More simplistically said, what is obtained in this case is a pure statives like \textit{own}, which might have as a counterpart in the adjectival domain non-quantized adjectives like \textit{mathematical} (which are not allowed with secondary predicates, unless coerced by overt degree morphology).

(16)

\[
\begin{array}{c}
\text{own} \\
\text{STAT} \\
\text{V} \\
\text{V} \rightarrow \text{OWN} = \text{POSSESSION}
\end{array}
\quad \text{(undifferentiated as stage/partition/whole)}
\begin{array}{c}
\text{ei} \\
\text{STAT} \\
\text{V} \\
\text{V} \rightarrow \text{OWN} = \text{POSSESSION}
\end{array}
\quad \text{(categorized root; see Harley 2005)}
\]

= correspondent in the adjectival domain: non-quantized adjectives (\textit{mathematical})


c. This work seems almost mathematical.

\textit{Whole}, on the other hand, constructs predicates in which the eventuality is not seen as being partitioned under stages, and sub-stages. If reference to the eventuality needs to be made, the whole must be accessed. It is assumed here that predicates like \textit{consider} are constructed with a head specified as \textit{whole}, similarly to individual level predicates.

(17)

\[
\begin{array}{c}
\text{consider} \\
\text{WHOLE} \\
\text{V} \\
\text{V} \rightarrow \text{CONSIDER}
\end{array}
\quad \text{(\textit{find} under its \textit{consider-like} reading, \textit{want}, etc.)}
\]

i. I consider the students \textit{intelligent}.

ii. I found those proposals \textit{appealing}.

ii. * I consider the students \textit{happy}. (unless \textit{happy} is understood as \textit{IL})

= correspondent in the adjectival domain: individual-level predicates

b)

\[
\begin{array}{c}
\text{intelligent} \\
\text{WHOLE} \\
\text{A} \\
\text{A} \rightarrow \text{INTELLIGENT}
\end{array}
\]

The other sortal head, \textsc{stage}, creates eventualities which can be further partitioned into transitions of the same type. Stage-level predicates are the correspondent in the domain of adjectives.
The last sortal component examined here is the DELIMITED WHOLE. As opposed to WHOLE, it constructs eventualities which are delimited as stages, but nevertheless the stages obtained correspond to repeated wholes. Due to their dual character, such types of predicates can take both individual-level or stage-level adjectives.

4.1.5 Explaining the restrictions: the role of quantification

With the licensing conditions in place, and a mechanism of formalizing sortal types established, we can go back and address the patterns in (6) and (7) we started with. Why does example (6 a), (repeated here as 20) improve when a quantifier is added?

CASE 1. DEPICTIVES AND UNERGATIVES

a. */? Cliff laughed happyi.
b. Cliffi laughed all happyi/giddyi.
One general observation is in range with respect to the interaction between depictives and unergatives. Cross-linguistically, the latter are not among the classes of verbs that accept depictives, as shown in Table 1 below.

| Verbs of motion or position | Many students go barefoot  
The train arrived empty.  
The plates lay in the cupboard wet.  
He sat happy. |
|----------------------------|-----------------------------|
| Verbs of existence, state, change of state | He was born blind  
He lived alone. |
| Verbs of finding and meeting | They found him dead.  
I met him on the road drunk. |
| Verbs of perception | I didn’t see one of them drunk. |
| Verbs of remembering | I remember you tiny. |
| Psych predicates | John prefers his coffee black.  
John prefers his coffee naked. |

**Table 6: Types of Verbs that Commonly Accept Depictives**  
(see also Simpson 2005, Nichols 1981)

The answer proposed is that the co-occurrence facts are due to the unspecified sortal nature of unergatives. It has been shown in Hale and Keyser (2002) that unergatives are special types of predicates; the \( v \) (creating the verb) merges with an N which further conflates/incorporates into \( v \). This precise structural make-up is what makes them look and behave like unsortally specified pure statives \( (own) \). Attaching a sortal functional projection might lead to conflict with a possible sortal status of N; hence intrinsically, they will be left unmarked (they are not \( v_{\text{WHOLE}}, v_{\text{PARTITION}}, v_{\text{REPEATED WHOLE}}, \ldots \)), and therefore will be unable to merge with secondary predicates.

One possibility to save the derivation is to impose further delimitedness/gradability into the secondary predicate, making it Situation Salient/dynamic. This feature can percolate up to the complex predicate, to bind the unspecified aspectual feature of the main predicate, as shown in (22).

(21) Structure of unergatives (Hale and Keyser 2002)

```
(21) Structure of unergatives (Hale and Keyser 2002)
```

![Structure of unergatives](image)
Case 2 deals with the contrasts in (7 a and b) repeated here as (23).

**Case 2. Depictives and Pure Statives**

(23)  
   a. *Jake owned a car young.  
   b. Jake owned a car *when* young.

The sortal status of *own* is represented in (16); remember that *own* is intrinsically STAT, undifferentiated as stage/partition/whole. A secondary predicate cannot merge, as the overlap relation cannot hold. A possibility to fix the inconsistency is to *add an explicit temporal delimitation* (*when*). The state of the secondary predicate and the eventuality of the main predicate will overlap during the explicit temporal delimitation. Nevertheless, the full account of these facts must be left for future work.

The third situation is the most complex. The contrast is repeated here as examples (24).

**Case 3. Depictives and Medio-passives**

(24)  
   a. *The potatoes, fried/chopped *raw*.  
   b. The potatoes *won’t* fry/chop *raw*.

It is preliminarily proposed that in order to understand these kinds of restrictions it is necessary to further investigate the structure of middles with respect to their sortal status. Passives and middles create *undifferentiated stativity*. See Gehrke and Grillo (2009) for an explicit account according to which “the movement of a stative subevent to a discourse related position at the edge of the verb” is what characterizes passives. An important observation about the examples in (24) is that they are ill-formed only under their middle reading; under an inchoative reading, the ill-formedness disappears. The observation that the sentence can be improved when modal quantification is present in the sentence might argue for a default binding provided by quantification...
at the clause-level. What is bound by overt modal quantifiers is in fact the Degree slot which
gradable adjectives only are inherently specified for. This quantification specification percolates
up to the complex predicate and binds the unspecified sortal status of the main predicate.

(25)  a. The juice won’t freeze fresh. (all the examples are from Simpson 2005, 65)
b. The potatoes won’t fry raw.
c. ??The song was sung drunk.
d. This song can’t be sung drunk.
e. *Cartons of beer are often carried drunk.
f. Cartons of beer can’t easily be carried drunk.

**CASE 4. THE ADJECTIVE MUST BE SCALAR**

This is in fact a very old observation. Bolinger (1972) was among the first to notice that if predi-
cates like *seem* are used with APs, the adjective heads have to be scalar. His original examples
are the ones below (page 77); note that such examples are not necessarily ungrammatical, but
rather conveying a type of mismatch which results in oddness.

(26)  a. The music seems nice/*choral.
b. The problem seems insoluble/*mathematical.

As expected after the discussion of the examples below, when degree modification is introduced
the sentences become perfect. Compare example (26) with example (27):

(27)  a. The music seems almost choral.
b. The problem seems pretty much mathematical.

**4.1.6 Conclusions and further questions**

The restrictions examined above reveal one important licensing condition of depictives: the se-
mantics of overlap introduced by the depictive head requires that:

I) The two predicates have the same sortal status
II) The main predicate has a specified/delimited sortal status; pure statives,
    and sortally unspecified categories are excluded

Mismatch/unsorted contexts can be solved by introducing further quantification at the complex
predicate level, or at the sentential level. The important question is what makes the overlap rela-
tion require these setting. Further research is necessary in order to understand what being in an
overlap relation means, extending the observations formulated in Chapter 3.
4.2 Results turning into manners?

The second part of this chapter contains some preliminary remarks about the nature of resultatives, another well-defined class of secondary predicates. As opposed to depictives, resultatives have had a more privileged status in cross-linguistic research, due to their mysterious patterns of variation. Numerous contributions in lexical semantics and argument structure have been concerned with the structure, as well as the puzzling absence of phonologically-independent resultative secondary predicates (of the type pound flat) in many languages, among which are Romance and Slavic (see Gruber 1965, Jackendoff 1972, Talmy 1975, 2000, Levin and Rappaport Hovav 1995, Goldberg 1995, Synder 1995, 2001, Hale and Keyser 2002, Zubizaretta and Oh 2008, etc.).

There are at least three classes of explanation as to the lack of these types of resultatives in many languages. On the one hand, researchers have been concerned with determining whether successful encoding of resultativity is to be attributed to the differences between the categories V and P (Fábregas 2007, Gehrke 2008, or Folli 2002 for an extension discussion of Romance). The other two proposals start from the assumption that resultativity has to be seen as a parameter in its own right. A very tight connection is made between the existence of robust compounding and the existence of resultatives in a specific language. The cross-linguistic examination in Snyder (1995, 2001) has revealed that languages that allow free compound formation also encode resultativity under phonologically free forms. Following the same path other researchers have noted that the existence of resultativity can be correlated to yet other processes outside VP (see Zubizarreta and Oh 2007, Demonte 1991, Folli and Ramchand 2005, etc.). Besides the connection between the mechanism responsible for compounding, and resultativity, other processes have been also investigated, starting with conflation at the lexical level (following Gruber 1965, and more recently Hale and Keyser 2002), manner incorporation (Zubizarreta and Oh 2008), and general lexical subordination (Haugen 2009, Mateu 2005, Mateu and Rigau 2007, McIntyre 2004). The second class of accounts deserves special attention. This is due to the fact that they attribute resultativity at the lexical level to a parameter that can create complex forms out of phonologically independent objects. If the story told in this thesis is correct, it results that both depictives and resultatives have to make use of that type of complex object creation by preserving phonological autonomy. The question is then, why are resultatives absent in classes of languages that allow depictives? What else do resultatives need?
This subsection analyzes novel data from Romanian, a strict non-resultative language; the focus is on a robust class of constructions in which what appears to be resultative semantics is constructed and even morphologically encoded with bare nouns. The resultative component (together with supplementary senses of intensification and accumulation) is crucially preserved under lexical conversion of the main predicate. This might indicate that the resultative is attached at the root level (similarly to the cut thin type in Levinson 2007), and therefore could be taken to provide further support for analyses which take resultativity to be built via specific processes (conflation, incorporation, etc.) possible only at the root level (Kratzer 2005). Because adjectives are too rich morphologically in Romance, they will be automatically blocked, while bare forms should be accepted. This paper shows that the root analysis is incorrect; Romanian bare nouns do allow adjectival forms separating them from the main predicate. An important feature that distinguishes the Romanian bare noun results from more canonical resultatives is that the former can encode restricted “turning-into” (temporary, “all-of-a sudden”) semantics vs. the more typical “becoming” (in its durative sense) component of true resultatives, providing more support for Talmy’s account (2000). Cross-linguistic data shows that syntax is highly sensitive to this contrast, which has nevertheless not received intense attention in the literature. The task is then to find out how this distinction is built structurally, and to answer the non-trivial question of how to build a verb. What this preliminary distinction shows is that there is variation across languages in the semantic specification of the functional projection creating a specific type of secondary predicate. Section 4.2.1 starts by presenting the relevant data from Romanian.

4.2.1 Romanian: the bare noun pseudo resultatives

Romanian follows the general pattern of Romance, where phonologically independent resultatives are absent. Thus the adjective in a sentence corresponding to English (27) can only be interpreted under a depictive reading, or as an attributive adjective (in Romanian adjectives are postnominal):

(27) **ENGLISH ADJECTIVAL RESULTATIVE**
The woman cleaned the table spotless.
*Resultative reading:* the woman cleaned the table and as a result the table became spotless

(28) **ROMANIAN – RESULTATIVE IMPOSSIBLE**
Femeia a curățat casa strălucitoare.
*Resultative reading:* impossible
*Depictive reading:* The woman cleaned the house while the house was spotless.
Attributive reading: The woman cleaned the spotless house.

Surprisingly, apparent resultative semantics is possible if the secondary predicate is spelled out as a noun. The existence of this type of construction, named here the bare noun pseudo resultative (BNPR), therefore allows the investigation of the possible roots of resultativity by a comparison with true resultatives. What is it that the true resultative contains, while the bare noun pseudo result does not? After an examination of the conditions of use, as well as of structural requirements, it will be shown that there are at least two distinctions between the bare noun construction and the pure resultative: a) if the latter contains a functional projection specified as BECOME, the former is rather specified containing TURN INTO (instantaneous) semantics; b) the TURN INTO projection further merges with a depictive head.

The bare noun pseudo resultatives follow the pattern in (29); as the diagram shows, a bare noun can be attached to a verb, noun or adjective. The interpretation obtained is similar to a resultative, with the observation that the noun also carries flavours of intensification, or “superlativity”.

(29) TEMPLATE OF BARE NOUN PSEUDO-RESULTATIVE FORMATION

V/ADJ./DP + BARE NOUN

Regarding verbs, there does not seem to be any restriction as to whether the verb has to be transitive or intransitive (unaccusatives, no examples seem to be found with forms that would correspond to unergatives). Also, various inner aspect properties, i.e., whether the verb is specified as an achievement, accomplishment, or activity, do not make a distinction. Here are some relevant examples:

(30) TRANSITIVE ACTIVITY
a curăța (casa) lună
to clean house.the moon
≈ ‘to clean (the house) until it becomes (like the) moon (= spotless)’

(31) a bate măr
to beat apple
‘to beat until it becomes apple (=red/soft)’

(32) INTRANSITIVE ACTIVITY
dormi/a-dormi buștean
to sleep/inch.-sleep log
‘to sleep/fall asleep to the point of turning into a log’
(33) **INTRANSITIVE ACHIEVEMENT**
   a  răci  *cubză*  
   to  catch a cold  guitar/violin
   ≈ ‘to catch a cold such that the voice sounds like a violin’

(34) **INTRANSITIVE ACHIEVEMENT**
   a  îngheța  *boconă.*
   to  freeze  ice?  
   (Etymology and meaning unknown)
   ‘to freeze to the point of turning into ice’

(35) **ADJECTIVES (STATIVE RESULTATIVES) + BARE RES.**
   a)  supărat/deștept/frumos  *foc;*
      angry/smart/beautiful.m.sg.  fire/flame
      ≈ ‘angry/smart/beautiful/ to the extent of turning into fire (= red/bright)’
   b)  prost  *grămădă*
      idiot  pile
      ‘idiot to the extent of turning into a pile’

From the examples above one can see that the semantics of these elements is closer to that of resultatives; the state denoted by the noun does not hold at the initial stage of the eventuality, but is rather encoded as obtaining as a result of an eventuality. What is even more intriguing about bare noun pseudoresults is that they do not form an closed class – new forms are being created in modern Romanian, irrespective of the aspectual (aktionsart) type of the main predicate and of the adjectival class. The only restriction holding across the group is that the noun must be bare. No DP-related functional material (such as plural marking, quantifiers, degree, definiteness, indefiniteness marking) is tolerated:

(36) **NO D-RELATED MARKING POSSIBLE**
   a)  l-au  bătut  pe  oameni
      cl.3.pl.m.-have.3.pl.  beat.pst.prt.  specf.  man.pl.
      măr/*mere/*mărul/*un măr.
      apple/apple.pl./apple.the/a apple.
      lit. ‘They have beaten the men apple/*apples/*the apple/*an apple.’
      ‘They have beaten the men up.’

Another important observation about these constructions is that the NP must carry intensification semantics. The secondary predicate is interpreted as a superlative, indicating that the state

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*75* See Williams (2005) for a discussion of resultatives with states.

*76* Another possible analysis would be to assume that the bare nouns instantiate types of *measure phrases* (of the kind seen in English ‘walk a mile’, ‘eat a ton’. The only problem with such congruence is that the latter present clear morpho-syntactic differences in Romanian - for example, they accept D-related material (in/definiteness, plural
is holds/is to the highest degree. Some preliminary observations about why this is so will be provided when the structure of this construction is analyzed in more detail in section 4.3, with the remark though that much more is yet to be said about this.

Another property characterizing these constructions is that their syntax appears to be frozen, in a sense. The NP cannot precede the head; structures like the ones in (36) are not only semantically deviant, but also ungrammatical:

(37)  
    a) *a lună curăța (cf. 29);
      to moon clean
    b) *foc supărat/deștept/frumos (cf. 34 a)
      Fire angry/smart/beautiful

Yet, the most interesting property of these constructions is that the bare noun pseudoresult appears to be preserved under transcategorial alternations. There are some very subtle restrictions, mainly related to the nature of nominalizations. Examine the sentence in (38) in which various (eventive) nominal forms can alternate with the verb clean:

(38)  
    Curățenie/*curățare/curat lună este ceea ce îmi doresc.
      ‘Cleanness/cleaning/cleaning.SUP. moon is that what I.DAT. desire’
    ‘Cleanness/cleaning moon is what I want’ (stative, state result, or action meanings)
      (cf. 20)

As Romanian is well-known for its idiosyncratic morphological properties, the nominalizations included in (38) are further decomposed below:

(39)  
    curățenie = √curat ‘clean’ + Epenth. V. e + Noun suffix:- nie
    curățare = √curat + Inf. – a + Nominalization (action) suffix:- re
    curat = √curat + Ø nominalization (action) [the supine pattern]

Some examples of adjectives constructed from the same root as the verbs in (29) are given in sentence (40), while in (41) one can see verbs constructed from the same bases as the adjectives in (35 a):

(40)  
    V→Adj.  casă curăță/curățată lună.
    House.F.SG. clean.F.SG./cleaned.PST.PRT. F.SG. moon.
    ‘House clean/cleaned moon’

marking, specificity, etc.), and may appear in distinct positions in the clause. The precise relation between these two constructions is nevertheless worth a more detailed investigation, which at this point will be left for future work.
(41) Adj $\rightarrow$ V a supără/a se deştepta a se face frumos foc to make angry/to SE become smart/to SE make handsome fire. ‘to make angry/to become smart/to become handsome fire’ (cf. 34a)

The presence of elements with apparent resultative semantics in a language in which more canonical resultatives of the English type are missing raises non-trivial questions not only about the precise location of these constructions in the typology of resultatives (Washio 1997), but also about their structure. The researcher is interested in understanding what is these constructions have, and why the more general Germanic type resultatives are absent. What one needs to look at therefore are other types of constructions in which apparent resultative semantics is possible. Two such categories have been identified in the literature; on the one hand, there are the so-called pseudoresultatives of the ‘cut thin’ type discussed by Levinson (2007), and on the other hand the ‘result oriented adverbs’ scrutinized by Geuder (2002). These two accounts are presented in some detail below, with the purpose of establishing a comparison with the Romanian data. But as can be seen, the latter differ in crucial entailments, although the ‘adverbial’ flavor is preserved. Hence, another type of analysis is required in their case.

4.2.2 Levinson (2007): Implicit creation verbs & Pseudo-resultatives

In a similar line to this chapter, Levinson (2007) is mainly interested in those sequences that possess resultative semantics in languages in which true resultatives of the Germanic pattern might be absent. Her main attention is directed towards ‘adverbials’ of the type seen in (41), which she dubs pseudoresultatives:

(42) a) The man cut the bread thin.
    b) The child knotted his laces tight.

In spite of their resultative semantics, examples similar to ‘cut thin’ are possible in Romanian; surprisingly (or not) the pseudoresult has to be bare, i.e., it does not behave like a true adjectival as it cannot have phi-feature agreement overt inflection. This characteristic has led some researchers to classify these constructions as adverbs (see Kratzer 2005, Washio 1997, Mateu 2002, also Geuder 2000 for similar classes). In (43) below, although the noun which is apparently modified is feminine, the pseudoresult does not normally take feminine, singular inflection, but must be bare (normally the masculine/neuter ending) instead:
Levinson (2007) denies an adverbial analysis to these types of constructions. She notes that pseudoresultatives are possible with implicit creation verbs, like braid, tie, pile, chop, slice, knot, powder. These classes of verbs have not been intensively discussed in the literature (Geuder 2000, Osswald 2005, also Clark and Clark 1979 on the so-called goal verbs); they entail the creation of an entity which might nevertheless not be expressed in the syntax. Clark and Clark (1979) provide the following characterization: “the important characteristic of these verbs is their factivity: the shape, entity, form, or role denoted by the parent noun comes to exist by virtue of the action denoted by the verb” (p. 774). In order to capture this intuition more formally, Levinson (2007) proposes that in implicit creation verbs the roots are predicates of individuals, <e, t>, which denote a set of individuals which share the property denoted by an implicit noun, on the lines of (43) and (44):

(44) Mary braided her hair. (= created a braid)

(45) 

vP
    vgoal 
      DP
        TO
          her hair
          IN
            √P
              √braid

The pseudoresultative is a modifier of the implicit argument, as shown in (46):

(46) \( \lambda x. \text{ braid}(x) \land \lambda y. \text{tight}(y) \)
Levinson (2007) also notices that there are some pieces of evidence supporting the structure in (45). Pseudoresultatives are different from canonical resultatives in the entailments obtained. If in ‘hammer the metal flat’, the entailment is that ‘the metal is flat’, things are a completely different with “cut thin”, or “braid tight”. This observation is more explicitly confirmed by examples like (48 ab) in which what is thin is not the bread, but the slice cut out of the bread:

(47) **CANONICAL RESULTATIVES ENTAILMENTS**  
Mary hammered the metal flat, → The metal is flat.

(48) **PSEUDORESULTATIVE ENTAILMENTS: IMPLICIT ARGUMENTS**  
a) Mary braided her hair tight. → A tight braid was created.  
   → Mary’s hair is tight.  
b) Mary sliced the bread thin. → A thin slice was created.  
   → The bread is thin.  
c) Mary ground the coffee beans fine. → Fine coffee grounds were created.  
   → The coffee beans are fine.

Levinson’s data (2007) is extremely useful because it shows that apparent resultativity has different roots than canonical resultativity. Unfortunately, the entailment tests do not give the same results when the Romanian pseudoresultatives are analyzed. That is, the Romanian bare nouns behave more like canonical resultatives in this respect; for native speakers, when someone cleans the house moon, it must be the case that the house will end up being ‘moon’ (clean), and not that the cleaning was done in a ‘moon’ manner.

(49) a curăță casa lună → casa este ca o lună  
to clean house.the moon → house.the is like a moon (spotless)

The contrast between (49) and (48) suggests that an analysis along Levinson’s (2007) lines is not adequate for the Romanian data; to this can be added the observation that the bare noun pseudoresultatives are not generally possible with implicit creation verbs. Let’s examine the predictions of Geuder’s (2002) theory of result oriented adverbials.

4.2.3 **Geuder (2000)**

Geuder (2000) discusses the case of some resultative adverbs which “semantically modify a resultant state contributed by the verb”. These very common examples are included in (50):
RESULTATIVE ADVERBS:

a) They decorated the room *beautifully*.
b) She dressed *elegantly*.
c) They loaded the cart *heavily*.

The analysis he proposes is that in the compositional semantics, resultative adverbs are predicates of events, but they are ultimately oriented towards an individual; they end up receiving an interpretation as if they were predicates of individuals. The individual these predicates are oriented towards is “one that is created as a result of the event”, hence these kinds of resultative adverbials should be possible with “implicit creation verbs”, which make salient a “created individual which is not explicit in the argument structure of the verb”. In order to capture both predicate and event orientedness, Geuder (2000) makes use of Nunberg’s (1995) Predicate Transfer operation, defined as an extra syntactic rule which maps the event described by the verb to a pragmatically salient individual:

(51) PREDICATE TRANSFER OPERATION
\[ \lambda P \lambda y [\exists x \text{dom} h: h(x) = y & P(x)] \]

CONDITION ON PREDICATE TRANSFER: Let P and P’ be sets of properties that are related by a salient transfer function \( g_t : P \rightarrow P' \). Then, if F is a predicate that denotes a property \( P \subset P \), there is also a predicate F’, spelt like F that denotes the property \( P' \), where \( P' = g_t(p) \)

Another observation Geuder (2000) makes is that entailments of result oriented adverbials are not identical to those of typical “manner adverbs” (52 vs. 53):

(52) They decorated the room *beautifully*.
-\( \rightarrow \) The decorating event was beautiful.
-\( \# \) They decorated the room in a beautiful manner. (manner paraphrase)

(53) The police carelessly arrested Fred.
-\( \rightarrow \) The police arrested Fred in a careless manner.

Resistance under manner paraphrases is a characteristic shared by the Romanian bare noun pseudodoresults (54):

(54) \( a \text{ curăța} \) (casa) \( lună \)
to clean house.the moon
-\( \rightarrow \) The cleaning event was ‘moon’ (clean)
-\( \rightarrow \) The cleaning event was done in a clean manner
Another property Geuder’s (2002) constructions share with the Romanian bare nouns is the preservation under categorical alternations. Result oriented adverbials are possible with nominalizations, just like the bare nouns (see example 30):

(55) RESULT ORIENTED ADVERBIALS AND NOMINALIZATIONS
   a) They decorated the room beautifully. ⇆ beautiful decoration
   b) She dressed elegantly. ⇆ elegant dress
   c) They loaded the cart heavily. ⇆ heavy load
   d) She wrapped the gift nicely. ⇆ nice wrapping.

Although they share numerous properties with the result oriented adverbials, the Romanian bare NPs also appear to create entailments that are similar to canonical resultatives (as already shown above). The question is now what type of analysis would reconcile the two properties. In order to provide an accurate analysis it is also necessary to further specify the limits of this class. The section below shows that these constructions cannot be collapsed with other types of intensifiers, or constructions with various specifications of degree.

4.2.4 Intensifiers and bare noun pseudoresultatives (BPNR)

In Romanian there are other constructions with intensification semantics which might require a bare noun. Therefore it is crucial to properly establish the limits of the class of pseudoresultatives. A careful examination shows that there are (at least) four diagnostics that distinguish BNPSEUDO from other constructions with similar “intensifying semantics”77. As the examples in (56) – (63) show, the bare noun pseudoresults: i) cannot appear in inverted comparative qualitative binary structures; ii) cannot accept “ca/precum” (“like”) comparison; iii) cannot accept amount/extent comparison or approximate qualification; iv) accept/require “turn into” morphology.

Let’s start with the first diagnostic, namely the comparative qualitative binary structures. These are sequences of the type “a jewel of a village”, and have been analyzed recently in den Dikken (2006), among others. The interest in these structures is given not only by their semantics, but also by their intricate syntax, which permits an inversion relation to be established. The canon-

77 The structures containing BN PseudoRes marked with * are ill-formed under the resultative reading. However, interpretations irrelevant to the discussion might be possible.
cal simplified representation\(^{78}\) of qualitative binary structures assumes a small-clause-like configuration, followed by the raising of the non-verbal predicate into a Q(uantifier) Phrase generated above the small clause, and the raising of ‘village’ into an N head below QP and above the small clause:

\[(56)\]

\[
\text{QP} \quad \text{QP}
\]

\[
\begin{array}{c}
\text{Q'} \\
\text{Q} \\
\text{DP (small clause)} \\
\text{of D/Num} \\
\text{D}' \\
\text{a D} \\
\text{NP} \\
\text{N} \\
\text{SC}
\end{array}
\]

\[
\langle \text{village} \rangle \quad \langle \text{jewel} \rangle
\]

In Romanian, comparative qualitative binominals can be formed either from an adjectival predicate or a nominal predicate. These are the so-called comparative qualitative binominal AdjP (as shown in 57, where the position of the adjectival morți ['dead'] can be switched to a pronominal one, just like in English), and the comparative qualitative binominal NP (CQB, shown in 58). When the intensifier predicate is placed pronominally, the preposition de ‘of’ must be inserted. But, different from English, the comparative qualitative predicative head cannot carry any type of D-related material (as seen in 58). What is important for our purposes is that although the comparative qualitative can take predicative adjectival and nominal heads (see 56), the pseudoresultative cannot exhibit the same type of alternation. More clearly said, it is not possible for a pseudoresultative noun (which must be bare, just like the noun in a comparative qualitative DP) to invert and to connect to its argument via ‘de’. This is shown clearly in (57) and (59):

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\(^{78}\) As pseudoresultatives are distinct both structurally and semantically, not much detail is provided here about qualitative inverted constructions. See Dikken (2006) and the references cited there for a detailed discussion, as well as Moro (1997) for further exemplification and analysis.
(57) ROMANIAN CQB AdjP
   a. oameni beți morți
      people (M.PL.) drunk. M.PL. dead. M.PL.
      ‘people drunk’
   b. oameni morți de beți
      people (M.PL.) dead. M.PL. DE drunk. M.PL.
      ‘people drunk to the extent of being/looking dead’

c. BNPSEUDORes. – No CQB AdjP
   *(masă) lună de curăță /curățată. (cf. 56 a and b)
      table (F.SG.) moon DE clean. F.SG. cleaned. PST.PRT.F.SG.
      INTENDED: ‘table clean(ed) to the extent of resembling the moon.’

(58) CQB (N de N construction, ex. ‘a jewel of a village’, etc.)
   a. un munte de (*un) om
      a mountain DE (a) man.
      ‘a mountain of a man.’ (i.e., a man who is tall and well-built)

(59) BNPSEUDORes. – No CQB NP
   *(om) grămadă/tămâie de prost. (cf. 57 b; 59)
      man. M.SG. pile/incense DE stupid. M.SG.
      INTENDED: ‘a stupid (nominal) of a pile/incense’

The second test indicates that the pseudoresultatives do not possess the syntax of a true comparative. Syntactic comparatives are constructed with the simple marker ca ‘like’, or the complex ca și (‘like and’), which appear syntactically in a medial position between the two elements found in the evaluative relation. This is illustrated in examples 60 (a and a’), with those types of sequences that are possible in qualitative comparative structures. Attempting to add the comparative morphology to the bare noun pseudoresultative gives ill-formedness (61):

(60) “CA/PRECUM” (‘LIKE’) COMPARISON – NOT POSSIBLE WITH BN PSEUDORes.
   a. beți ca și morți a’. om ca un munte.
      drunk. M.PL. like and (= even) dead man like a mountain.
      ‘drunk as if dead’
      ‘man (tall) like a mountain’
   b. *prost ca tămâia/o grămadă.
      stupid. M.SG. like a pile/incense DE a pile
      INTENDED: ‘stupid like incense/like a pile’
   c. *a curăța ca o lună.
      to clean like a moon.
      INTENDED: ‘to clean like a moon’

(61) AMOUNT/EXTENT COMPARISON OR APPROXIMATE QUALIFICATION - NO BN PSEUDORes.
   a. om cât un munte
      man like a mountain
      ‘man as tall as a mountain’
      INTENDED: ‘to be in love like a pipe’
   b. *îndrăgostit cât o lulea.
      fall in love. M.SG. like a pipe
      ‘man as tall as a mountain’
Examining the data above, one could assume that qualitative comparative, as well as amount/extent comparison are not possible with pseudoresults because of a constraint which blocks the insertion of any type of material between the two predicates. This restriction could be related to the fact that the two predicates need to form a special kind of complex in narrow syntax. Hence, the problem won’t necessarily be related to the fact that the construction does not have comparative semantics. This hypothesis cannot be correct, however, as the complex can be split by the adjectival/participial *făcut* (‘turned into’). Examine a typical pseudo-resultative sentence in (62):

(62) **BARE NOUN RESULTS AND THE MORPHOLOGY OF “TURNING INTO”**

<table>
<thead>
<tr>
<th>proşti</th>
<th><em>făcuti</em></th>
<th>grămadă/*grămezi.</th>
</tr>
</thead>
<tbody>
<tr>
<td>idiot/stupid.M.PL.</td>
<td>turned into.M.PL.</td>
<td>pile/*pile. F.PL.</td>
</tr>
</tbody>
</table>

≈ ‘idiot(plural) turned into pile’

Interestingly, the presence of “turning into” morphology also distinguishes the BNRs from other bare noun uses (the so-called ‘similitives’). The latter do not allow the adjectival/participial *făcut*, while they do accept the comparative *ca* (‘like’):

(63) **BARE NOUN SIMILITIVES**

<table>
<thead>
<tr>
<th>“Turning into” morphology</th>
<th>“Ca-comparative”</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) singur <em>cuc</em></td>
<td>No - *singur <em>făcut</em> <em>cuc</em></td>
</tr>
<tr>
<td>alone.M.SG. cuckoo</td>
<td>alone turned into cuckoo</td>
</tr>
</tbody>
</table>

‘(man) alone like a cuckoo’

Yet another remark that has to be made about the ‘turning into’ morpheme is that its interpretation is different from what is obtained with other types of bare noun constructions. A relevant example is given by constructions like the one in (64). What is very surprising about sequences like this one is that they behave in a dual manner; there are contexts in which the comparative morphology is present. In order to avoid a potential cacophony with the use of *ca*, the comparative is *precum*, composed from the preposition-like element *pre* or *pe* (on’) and the adverbial wh-element *cum* (‘how’). On the other hand, there are also contexts in which the past participle or adjectival *făcut* is allowed, but with a change in meaning. Some remarks are therefore necessary.

The past participle *făcut* is an adjectival form of the verb *face*, which in English can be translated as either ‘make’, ‘do’, ‘create’, or ‘turn into’ (in both transitive and intransitive uses). When the past participle is used with bare noun pseudoresults, the ‘turning into’ reading is attributed to the secondary predicate. Hence what sentence (62 a) says is that some specific people are so stupid,
that as a result of their stupidity they ‘turned into’ piles. On the contrary, when făcut splits the members of a similitive construction, the reading is completely distinct. What (64 c) says is that something was turned or created white like the feather grass, and not that something is so white that it ‘turns into’ feather grass. This crucial distinction is more transparent in (64 b’), where the only interpretation is that a specific entity was created white, and it resembles the feather grass. Notice that (64 b’) permits both the participial and the comparative marker; the presence of morphological correlates of both elements is not possible with the bare noun pseudo-result. An attempt to force them would lead to the loss of the pseudoresultative reading with idiomatic flavor, and would output instead an interpretation which is purely comparative, entailing that the discussion is about some idiots that are created/made in the same way the piles are created. What is lost in these types of readings is the sudden accumulation along a path component. In sentence (62), the characteristic of ‘pile’ is seen as a sudden result of another characteristic which is to such an extent that it turns into ‘pile’. The comparative reading simply equates two properties, with no entailment of result.

(64) SIMILITIVES AND ‘TURN-INTO’ SEMANTICS

<table>
<thead>
<tr>
<th>TURN-INTO</th>
<th>COMPARATIVE MORPHOLOGY</th>
</tr>
</thead>
<tbody>
<tr>
<td>A) albă colilie</td>
<td>No – similitive meaning</td>
</tr>
<tr>
<td>white.F.SG. feather grass</td>
<td>Yes – albă precum colilia white like f.g.</td>
</tr>
<tr>
<td></td>
<td>Yes – “turning into” semantics ⇒ Yes - with “turning into” + “creation” semantics</td>
</tr>
<tr>
<td>b) albă făcută colilie</td>
<td>‘turned white like feather grass’</td>
</tr>
<tr>
<td>white.F.SG. turned into. F.SG. feather grass</td>
<td>white turned into like f.g.</td>
</tr>
<tr>
<td>‘created white like feather grass’</td>
<td></td>
</tr>
<tr>
<td>c) *proşti făcuţi</td>
<td>precum grămada/grămezile.</td>
</tr>
<tr>
<td>idiot/stupid.M.PL. turned into.M.PL. like pile.the/*pile.the.PL.</td>
<td>≈ ‘idiot(plural) turned into pile’</td>
</tr>
<tr>
<td>≈ ‘idiots who are made in the same way as the piles are made.’</td>
<td>OK</td>
</tr>
</tbody>
</table>

---

79 As the reader could have noticed by now, all the bare noun pseudo results possess highly idiomatic readings. This is not surprising when resultatives are examined; moreover the idiomaticity patterns seen here are not uncommon cross-linguistically. To get a sense of this, one can compare the Romanian sentence in (32) with the English resultatives of the type ‘to shout oneself hoarse’, or the Icelandic counterparts seen below. Idiomatic readings on the same mold as Romanian are also possible in Chinese, and Russian, to cite just a few languages. This thesis does not make any attempt to further formalize the semantic–conceptual roots of such idioms. A list of the possible conceptualizations is left for future work. The only remark about the nature of idiomaticity is made in the last section when it is shown that the attachment of the relevant projections at the root level creates the locus for idiom formation.
As a summary, bare noun pseudoresultatives are not possible with qualitative-comparative syntax, do not allow typical comparative markers, and the semantics of amount/extent constructions. As opposed to the latter, the bare results allow “turning into” morphology. This is represented in Table 1:

<table>
<thead>
<tr>
<th></th>
<th>QBNP-INVERSION</th>
<th>COMPARATIVES</th>
<th>AMOUNT-COMPARATIVE</th>
<th>TURNING INTO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bare noun pseudo results</td>
<td>*</td>
<td>*</td>
<td>*</td>
<td>✓</td>
</tr>
<tr>
<td>Bare nouns similitives (6)</td>
<td>possible</td>
<td>✓</td>
<td>possible (depending on the lexical semantics of the comparand)</td>
<td>*/ difference in meaning</td>
</tr>
<tr>
<td>Qualitative adjectives</td>
<td>✓</td>
<td>*</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>Qualitative nouns</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>*</td>
</tr>
</tbody>
</table>

**Table 7: BN pseudo-results vs. constructions with similar intensifying semantics**

The presence of the ‘turning into’ morphology proves very useful for the investigation of the nature of this construction, and of resultativity in general. One of the accounts related to the ‘resultative’ parameter predicts that resultative secondary predicates must not appear in languages in which lexical categories carry overt inflection: “resultative(s)….are marginal cases of serialization that are possible in German or English (but not in Romance, for example) because in those languages, adjectival roots cannot enter syntactic derivations without inflection” (Kratzer 2005, page 177). An account along Kratzer’s (2005) lines would therefore find the bare status of the noun phrases unsurprising – resultatives cannot be highly inflected. Let’s examine the outline of this account in its more general lines in the following section.

### 4.2.5 Kratzer (2005)

Kratzer (2005) is concerned with the semantics and syntax of resultatives in German. One typical example is in (65):

(65) Die Teekan leer trinken.  
     The teapot empty drink  
     ‘to drink the teapot empty’

(Kratzer 2005, ex.7)

Her analysis is very similar to the syntactic complex predicate proposed in this thesis for secondary predicates, with the mention that Kratzer (2005) discussed resultatives only and takes depictives to be different (without further specifying in what respect). As represented in the diagram in (66), the two independent eventive lexical predicates are “piled on top of each other”: trinken + leer [+cause].
The lower verb inaudibly incorporates into the higher verb, similarly to what is seen in serial verb constructions ([buy eat] bread); according to Kratzer (2005), “we can assume that whatever forces compounding for serial verb constructions can be assumed to force compounding for adjectival resultatives as well” (page 204). Note that the mechanics required in order to construct resultatives violate of the Proper Head Movement Generalization. The preliminary assumption Kratzer (2005) makes is that the functional head CAUSE has a role in potentially avoiding this conflict; in order to follow the canonical syntactic incorporation theory, CAUSE should be able to turn a phrase into a head, and trigger incorporation. The only problem is that, as Kratzer herself notes, it is not clear how to motivate such an explanation, and the theory should after all permit incorporations of this kind.

The Proper Head Movement Generalization is not an insurmountable problem. Assuming Chomsky (1995) all that is required is that incorporation takes place at LF; uniheadedness and phrase to head raising are aspects LF is not sensitive to, as they at most matter at PF, because of the morphological component which has different sets of rules. This observation coupled with the empirical facts that resultative secondary predicates are possible in languages in which adjectives carry inflection weaken Kratzer’s (2005) theory, and hence leaves the Romanian bare nouns under the same problematic status. The examples below contain sentences from Icelandic and Finnish; the glosses unambiguously reveal the obligatory gender, number, and Case marking on the former adjectives, and the number and case marking on the latter:

(67) **ICELANDIC**

a) Hann öskraði hálsin sinn hásan/bare form impossible
    He shout.PST. throat.M.SG.ACC.the his. ACC. hoarse.M.SG.ACC.
    ‘He shouted his throat hoarse.’

b) Ég barði kjótið flatt/flat
    I pound.PST. cutlet.N.SG.ACC.the flatt.N.SG.ACC./flat.BARE
‘I pounded the cutlet flat.’

c) Ég flat-barði/*flatt-barði kjötið
   I flat.BARE-pound.PST./flat.N.SG.ACC. - pound.PST. cutlet.N.SG.ACC.the.
‘I flat-pounded the cutlet.’

(68) FINNISH
Maanvilielijä ampu-i ketu-t kuoliai-ksi/*kuoliai/
Farmer.SG.NOM. shoot-PST.3.SG. fox-PL.ACC. dead.PL.-TRANSL./ dead.PL.
*kuollut/*kuolleet
dead.BARE/dead. PL. ACC.
‘The farmer shot the foxes dead.’

4.3 Towards an analysis

What the tests examined above show is that the Romanian bare nouns are not types of degree words, or intensifying comparatives. They resemble canonical resultatives when it comes to the entailments they give rise. But then, why aren’t adjectival resultatives possible in Romanian? In what sense are the bare noun results distinct from the typical resultatives seen in Germanic? In this section it will be demonstrated that the answer to these two crucial questions reside in the nature of the functional projection constructing the Romanian resultatives. The issue of regular Germanic resultatives reduces to a trivial selection problem: as opposed to adjectival resultatives which contain a BECOME head, Romanian bare nouns are constructed with a projection whose featural specification is more of TURN INTO, encoding a restricted type of change.

Starting with the earliest studies in lexical semantics (Gruber 1965, Jackendoff 1972, Dowty 1979, etc.), resultatives have been shown to involve a complex structure. There is agreement (in lexical semantics) upon the obligatory presence of two building blocks: CAUSE (special type) and BECOME. As an exemplification, examine the entries proposed for resultatives in two well-known studies (Dowty 1979, Levin and Rappaport 1988):

(69) He sweeps the floor clean
a) [[He sweeps the floor] CAUSE [BECOME [the floor is clean]]] (Dowty 1979, p.93, ex.5)
b) x CAUSE [y BECOME (AT) z] BY [x ‘wipe’ y] (Levin and Rapoport 1988, p.2, ex.2a)

As said above, Romanian bare nouns can be separated from the matrix predicate by the adjectival/participial făcut ('turned into', 'created'). This verbal/adjectival form is constructed from the basic face, which can be translated as ‘make’, ‘do’, ‘create’ (70 a), and which can be also used

---

80 Element which is seen overtly in a variety of languages: Finnish, Hungarian, Chinese, Thai, ASL, etc.
with the reflexive marker ‘se’. In the latter use, it can also mean ‘to become’, ‘to turn into’, ‘to transform into’:

(70)  

a) A făcut o casă.  
   Has made.Pst.Prt. a house.  
   ‘S/he has made/built/created a house.’  

b) S-a făcut mare/doctor.  
   SE-has made.Pst.Prt. big.Sg./doctor.  
   ‘S/he has become big/a doctor.’  

c) A devenit medic.  
   Has become.Pst.Prt. doctor.  
   ‘S/he has become a doctor.’  

Romanian has a lexical entry resembling the English ‘become’ – the verb deveni. Although the past participial făcut in (70 b) can be replaced with the past participle of become, there is a difference in meaning between the two. The sentence in (70c) containing the past participle of become entails a more time-consuming, temporally extended process, while in (70b) the process is seen as more instantaneous, and resembling a ‘turning into’ eventuality. This can be better seen by examining the contrast in (71). ‘Deveni’ cannot entail ‘turn into’, while ‘face’ is felicitous in such a context.

(71)  

a) se face  
   to make  
   ‘to become/to turn into’  

b) făcut medic.  
   SE-have.3.Sg. become/turned into physician.  

<table>
<thead>
<tr>
<th>a) ‘He became a physician.’</th>
<th>b) ‘He turned into a physician.’</th>
</tr>
</thead>
</table>
| a’ ) A devenit medic.  
   have.3.Sg. become physician.  
   ‘He became physician’  
   (He went to med school, etc.) | b’ ) S-a transformat în medic.  
   SE-have.3.Sg. turned into in physician  
   ‘He turned into a physician’  
   (Instantaneously, by miracle, etc.)  
   OR  
   b” ) S-a prefăcut în(tr-un) medic.  
   SE-have.3.Sg. turned into in a physician  
   ‘He turned into a physician’  |
| a” ) S-a transformat în medic.  
   SE-have.3.Sg. turn into in physician.  
   ‘He turned into a physician.’ | b” ) A devenit medic.  
   have.3.Sg. become physician.  
   ‘He became a physician.’ |

Interestingly, făcut cannot be replaced with the past participle of deveni (‘become’) when functioning as part of the complex predicate containing the bare noun. This is seen in (72), vs. (73).
Moreover, *făcut* cannot be replaced by the past participle of the verb *create* either, indicating that its semantic contribution is not that of creation or causality:

(72)  proşti  

\[\text{idiot/stupid.M.PL.} \]  

\[\text{făcuţi}  \]  

\[\text{grămădă/*grămezi.}  \]  

\[\approx \text{‘idiot(plural) turned into pile’}  \]

(73)  *proşti  

\[\text{idiot/stupid.M.PL.} \]  

\[\text{deveniţi}  \]  

\[\text{grămădă/*grămezi.}  \]  

\[\approx \text{‘idiot(plural) who have become (a) pile’}  \]

(74)  *proşti  

\[\text{idiot/stupid.M.PL.} \]  

\[\text{creaţi}  \]  

\[\text{grămădă/*grămezi.}  \]  

\[\approx \text{‘idiot (plural) who were created (like a) pile’}.  \]

The observation that the past participle does not permit the insertion of any gradability-related material further indicates that *făcut* is used under its ‘turn into’ variant:

(75)  *proşti  

\[\text{idiot/stupid.M.PL.} \]  

\[\text{făcuţi}  \]  

\[\text{aproape/cam}  \]  

\[\text{grămădă/*grămezi.}  \]  

\[\text{pile/*pile. P.FL.}  \]

\[\text{INTENDE READING: ‘idiot(plural) turned into rather/almost a pile.’}  \]

(76)  A  

\[\text{devenit} \]  

\[\text{aproape} \]  

\[\text{medic.}  \]

\[\text{Has become.PST.PRT. almost doctor.} \]

\[\text{LIT. ‘He has become almost a doctor.’}  \]

(77)  A  

\[\text{devenit} \]  

\[\text{cam} \]  

\[\text{prost.}  \]

\[\text{Has become.PST.PRT. rather stupid.M.SG.} \]

\[‘\text{S/he has become rather stupid.’}  \]

A further hint into the nature of *făcut* in the bare noun context comes from its uses in traditional fairy tales, in which it indicates an unexpected, out-of-sudden type of change. Interestingly, even in these contexts it accepts nouns only, and cannot be replaced by *become*:

(78)  

\[\text{S-a ascuns în cameră,…,zmeul dat năvală supărat foc; ea s-a \textit{făcut pasăre} imediat, si a zburat; zmeul a încercat să o prindă, însă ea s-a \textit{făcut stană de piatră}….}  \]

\[\text{Romanian fairy tale}  \]

(79)  

\[\text{\textit{a devenit pasăre},…, \textit{a devenit stană de piatră}….}  \]

\[\text{\textit{a deveni} = become}  \]

(80)  

\[\text{(the princess) hid in her room, but the monster burst in angry fire; the princess turned into a bird immediately and flew away; the monster tried to reach her, but she turned into a rock….}  \]

Another type of indication that *făcut* has the semantics of ‘turn into’ in the bare noun construction comes from a more detailed examination of the differences between it and the canonical
Germanic resultative. It has been noted several times in the literature that resultatives of the *pound flat* type (or the *clean spotless*, for that matter) set up a relation between the two predicates such that the eventuality of the secondary predicate progresses with the eventuality with the main predicates. In other words, there is a path of accumulative pounding which corresponds to accumulative stages of ‘flattening’, as shown in Figure 9.

**“Pound flat” Type**

![Diagram of Path of simultaneous accumulative pounding and “flattening”](image)

<table>
<thead>
<tr>
<th>Stages of pounding</th>
<th>a</th>
<th>b</th>
<th>c</th>
<th>d</th>
<th>e</th>
<th>f</th>
<th>g</th>
<th>h</th>
<th>i &gt; n……</th>
</tr>
</thead>
</table>

**Figure 9: Simultaneous Accumulation in Germanic Resultatives**

For these reasons, Germanic resultatives are well-formed with activities, and generally impossible with states and achievements (see Rapoport 1993, etc.). The Romanian bare nouns, on the other hand, are not specified for the semantics of ‘accumulation’. The eventuality of “turning into” is rather salient only at the end stage of the eventuality of the main predicate (see Napoli’s 1992 intuition that the limited class of doubling resultatives in Italian make “the verb’s natural endpoint more salient”, a.o.). After the “turning into”, the two eventualities proceed in parallel, as if overlapping (as seen in Table 3). The no “accumulation along a path” is not surprising given Talmy’s (2000) observations that *path* component is not available in Romance languages (Talmy 2000) as a verbal satellite. Hence, the Romanian bare nouns are possible with achievements (a răci cobză, etc.) and states (the adjectival examples).

**“Romanian bare noun” Type**

![Diagram of Stages of cleaning](image)

<table>
<thead>
<tr>
<th>Stages of cleaning</th>
<th>a</th>
<th>b</th>
<th>c</th>
<th>d</th>
<th>e</th>
<th>f</th>
<th>g</th>
<th>h</th>
<th>i &gt; n……</th>
</tr>
</thead>
</table>

**Figure 10: No Accumulation along a Path in Romanian Bare Noun Results**
Given these observations, what is the structure of the Romanian bare noun constructions? Section 4.4 proposes a preliminary configuration developing on an analysis proposed by Embick for resultative secondary predicates constructed with state participials.

### 4.4 Turning the bare nouns into a structure

Embick (2004) contains a discussion of resultative secondary predicates constructed with result state participials of the type seen in (81) and (82):

(81) \[ \text{RESULTATIVE PARTICIPIALS WITH RESULTATIVE SECONDARY PREDICATES} \]
The metal is *hammered flat*.

- *hammered* = under the result state meaning (with coercion, possibly)
- (the metal is in a state of having become hammered; a state resulting from an event)

Examples like (81) are extremely useful for the analysis of the Romanian bare nouns because they illustrate resultativity under stativity. The structure Embick (2004) proposes for (81) is given in (82):

(82) Embick’s structure for sentence (81)

```
……………Asp
    AspR vP
      DP Δ v
    the metal v aP
      √HAMMER FIENT
```

Embick (2004) represents the BECOME component by the v[FIENT]. √*hammer* attaches as part of a complex head with v[FIENT], under a process of DIRECT MERGE, which following Chomsky (1993) is taken to create a simple complex head from a root and v, as shown in (83). This complex head subsequently moves to a higher v agentive head in sentences like *John hammered the metal flat*.

(83) √HAMMER v

```
……………Asp
    AspR vP
      DP Δ v
    the metal v aP
      √HAMMER v[FIENT]
```

Embick (2004) further assumes that ‘when v[FIENT] appears in the immediate context of √HAMMER, this head is spelled out as – Ø. It is only in the context of Roots like √FLAT that
\(v[F\text{IENT}]\) is realized as \(-\text{en}\.\) Moreover, ‘the root that is attached to \(v[F\text{IENT}]\) by this operation is interpreted as a \textit{means} component.

Embick’s discussion of stative resultatives is extremely useful for the Romanian data. But there are some problems which require attention. First of all, there the \(v[F\text{IENT}]\) itself, which is intended to be a become-like operator, but appears to be more similar to Cause in Embick’s analysis. Secondly, if \(v[F\text{IENT}]\) is spelled out as \(\emptyset\), where does the “become” morphology seen with resultatives cross-linguistically come from? Cross-linguistic data with alternations make implausible the assumption that the ‘become’ morphology is simply a result of the operation of (direct) Merge. Also, is \(v[F\text{IENT}]\) always interpreted as “means”? Does the UG inventory contain other types of heads needed in resultatives, but which are not necessarily interpreted as means?

In order to explain the Romanian data, it is necessary to have both the CAUSE and BECOME heads, just like a classical analysis of resultatives. This will allow the distribution of the complex semantic burden; the “turn into” head merges with the \(\sqrt{}\) (‘moon’ in this case), and as a result of Direct Merge the bare noun is obtained. This bare noun further merges with a depictive which at its turn merges with the V resulting from the direct merge between the root \(\sqrt{\text{curat}}\) and \(v[F\text{IENT}]\).

\[
(84)\quad\text{a curăța (casa) lună}
exto\quad\text{clean house.the moon}
\]

\[
\begin{array}{c}
\text{Asp} \\
\text{Asp} \\
\text{v} \\
\sqrt{\text{curat}} \quad v[F\text{IENT}] \quad \text{DEP} \quad N \\
\text{DEP} \quad \text{DIRECT MERGE} \quad \text{DIRECT MERGE} \\
\text{TURN-INTO} \quad \sqrt{\text{moon}}
\end{array}
\]

This extremely interesting construction with resultative semantics demonstrates that cross-linguistic variation in this domain has a wider range of sources than usually thought. According to the analysis proposed in this chapter what distinguishes the Romance family from the Germanic branch (and other languages in which resultative secondary predicates are possible) is simple selection from the inventory of functional categories made available by Universal Grammar. Germanic selects a BECOME head, while Romance rather uses a TURN-INTO functional
projection. More research into the Romanian BNPRs, a severely understudied class (no previous analysis of it could be found) will hopefully provide more insight into its nature, and ultimately, into the sources of a robust pattern of cross-linguistic variation.
5 Conclusions

This thesis has examined four important properties of secondary predicates, and has established the conclusion that an enriched complex predicate analysis (reviving an analysis first proposed in Chomsky 1955/1975) is best equipped to account for them. The first thematic chapter (Chapter 2) investigated the nature of the strong/wide-scope readings of the shared arguments. After evaluating possible theories, the conclusion was reached that the shared argument has to be generated outside, above the matrix and the secondary predicate. At least two important pieces of evidence support this structure: a) the sensitivity of this argument to binding under reconstruction; b) the possibility of narrow-scope readings triggered by a reduced class of adjectives, the so-called quantificational adjectives. These give rise to narrow scope readings because of their featural composition which requires them to take scope over a DP. In order to capture the position and the nature of the functional category which introduces the shared argument above the two predicates, a connection with other classes of embeddings which show the same wide-scope sensitivity has been made, namely Copy Raising constructions. Building on previous accounts, it has been proposed that the shared argument is introduced by a functional projection called Situation, which specifies the spatio-temporal stage over which the two predicates stage.

As the complex predicate analysis disrupts a strictly local relation between the secondary predicate and its subject argument, a theory must be provided that accounts for the overt \( \phi \)-feature and Case agreement seen in these constructions. Two main claims were made with respect to this in Chapter 3. First of all, regarding Case, cross-linguistic data reveals a wealth of possibilities, out of which the most common are Case agreement and dedicated Case. In languages like Russian, the distinction between the two strategies was demonstrated to have semantic roots – dedicated Case signals that the overlap relation between the secondary and the matrix predicate has to be strict, while agreeing Case encodes various types of extended overlap, that is those situations in which the eventuality of the secondary predicate might go beyond that of the matrix predicate. Regarding the other means by which this cross-linguistically salient distinction is encoded, it was shown that the overt spell-out of the secondary predicate introducer is another well-attested strategy. If dedicated Case is obtained by feature checking under a head-complement configuration, Case (and \( \phi \)-feature) agreement is the result of a Multiple Agree process, initiated by a special \( v \) flagging these constructions. A Multiple Agree relation by which the predicate features of the two (or more) predicates is at the root of the process of restructuring.
Chapter 3 ended with a detailed examination of the analysis as applied to Hindi, a language in which secondary predicates provide a robust indication of restructuring, as well as long distance agreement in which all predicates must carry overt ϕ-feature agreement.

Chapter 4 includes two main parts. The first section listed a series of properties of secondary predicates, among which the requirement that they merge with bounded predicates. A purely syntactic analysis is not well equipped to address them; what this section shows is possible steps that could be taken in order to account for the co-occurrence restrictions. Part two switched to resultatives, in an attempt to analyze a puzzling construction with apparent resultative construction in a Romance language that does not normally allow resultative secondary predicates of the type seen in English. The preliminary analysis showed that the obscure absence of resultatives in some classes of languages can be attributed (among other things) to the differences in the type of BECOME heads selected by individual languages.

The strong conclusion of this thesis is that there is a class of secondary predicates which must be seen as forming a complex predicate structure (following Chomsky’s account in 1955/1975). Nevertheless, the class of adjectival predicates is much larger than this. Particularly salient cross-linguistically are those those types which, besides introducing an overlap relation further specify conditions on how the two predicates are connected. This is the domain where notions like purposiveness, finality, and concessiveness are robust, as can be seen in example (1) from Romanian:

(1) **Romanian - Circumstantial**

Ion a plecat, nervos.
John has left angry, M.SG.

*Reading:* John left {because, although, …} he was angry.

And yet, in languages like Latin or Irish, configurations are possible in which the secondary predicate and one argument appear to form a constituent to the exclusion of the main predicate. Following the well-established tradition, these constructs are termed here *absolutes*:

(2) **Latin - Absolute**

Quid intra moenia deprensis hostibus faciatis?
What in wall-N.PL.ACC. caught-M.PL.ABL. enemy-M.PL.ABL. do-SUBJ.2.PL.
‘What would you do {when, after, while, if, …} the enemy is caught within the walls?’
The complex predicate analysis argued for in this thesis would obviously have numerous difficulties in accounting for the examples like (1) – (3). But, on the other hand, the observation that simple depictives and resultatives are instantiations of complex predicate relations does not entail that a small clause account is not possible or available for secondary predicates. The cross-linguistic picture seems rather to indicate that in this area both complex predicate and small clause structure instantiations are necessary. In fact, both circumstantial and absolute are different enough from more syntactically restricted depictives and resultatives to warrant the former a completely different analysis. For example, processes of restructuring are systematically blocked when depictives/resultatives are replaced by a circumstantial, or sentence margin. Also, the former are obligatorily independent from the matrix predicate, with which cannot form a phonological unit. Obviously, it is also clear and apparent that the two classes have numerous characteristics in common. Circumstantials and absolutes have to be argument oriented, and establish intricate agreement patterns just like simpler depictives and resultatives. One of most important questions left open in this thesis is how to articulate an account which would be comprehensive enough as to encompass the properties of the large class of argument oriented modifiers.
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