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CASE:
THE REALIZATION AND INTERPRETATION
OF A RELATIONAL FEATURE

by

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ABSTRACT

This thesis examines the cross-linguistic realization of three Case types identified on the basis of the information they encode. Grammatical Case encodes information about grammatical roles, lexical Case encodes a fixed semantic interpretation which is lexically linked to a specific morphological Case, and semantic Case encodes contextually determined referential information. Inflectional features are identified as inherent, specified in the citation form of lexical items, or derived, requiring specification only in the syntax. The proposed Case type classification and feature distinction are used to examine a variety of Case-related phenomena including quirky subjects and existential constructions.

The study of quirky subjects reveals that they are locative predicate modifiers of stage-level predicates. Although marked with oblique lexical Case, their syntactic properties indicate that they are in the structural position associated with the grammatical Case of the subject. The Case patterns observed in this context demonstrate the possibility of an overt grammatical-lexical Case combination, and of the morphological realization of grammatical Case on an NP which is not in a grammatical Case position.

The study of English existentials reveals similarities to the quirky subject construction particularly with respect to a locative interpretation of the expletive subject, and the possibility of a grammatically Case-marked postverbal NP. The postverbal NP in this construction exhibits a grammatical-semantic Case combination. Cross-linguistically, the semantic Case feature of the NP in existential constructions interacts with other morphosyntactic factors, and exhibits varied morphological realization, surfacing as a Case marker and/or an article.

The examination of these and other Case-related phenomena reveals confusion about interpretation based solely on a particular Case-marking, and highlights the importance of examining the information encoded, especially when transferring morphological-based assumptions from one language to another.

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GLOSSARY

A blocking element is an identical feature with a different specification.

Derived Features only require specification in the syntax, and may be changed if marked on citation forms.

Grammatical Case is a configurational property which identifies grammatical roles. The grammatical Case-markings used in the thesis are as follows:

- a) **S**-marking identifies the subject position of intransitive verbs
- b) **A**-marking identifies subject position of transitive verbs
- c) **O**-marking identifies object position of transitive verbs
- c) **IO**-marking identifies object position of prepositions (indirect objects)

Inherent Features are specified in the citation or isolated form of lexical items, and cannot be changed in syntactic derivations.

Lexical or inherent Case is a lexical property of certain predicates which encodes a fixed semantic relation identified by a specific morphological Case-marking on a predication argument.

Marking refers to the morphological marking of features on lexical items. The marking of features, particularly citation form features, is not necessarily indicative of feature specification.

Percolation Constraints: a) Features must percolate until licensed.
b) Features may continue to percolate if no blocking element is met.

Relational Identification identifies information about elements participating in predicate-argument relations, or in contextually-specified referential relations.

Semantic Case encodes referential information about the nominal in relation to its spatial and temporal context.

Specification refers to the inherent specification of citation form features, and to the specification of derived features in syntactic derivations.

Chapter 1

Introduction

1.0 Introduction

Although the encoding of nominal information by morphological Case¹ has long been studied by both traditional grammarians and linguists, (Pāṇini (300-600BC?), Jespersen (1924)), (Bloomfield (1933), Hjelmslev (1935)), the role of this feature, and its expression remain a lively matter of ongoing research. The purpose of this thesis is to provide a unified account of the cross-linguistic variation found in the realization and interpretation of Case. Crucial to the proposed analysis is the distinction between inherent features, those which are lexically specified, and derived features, those which only require specification in syntactic derivations. According to this distinction, Case, although realized on nominals, is a derived nominal feature and an inherent verbal feature.²

Based on the function of Case as an encoder of information about the predicate-argument relation, and of referential information about the relation of a nominal entity to its context of occurrence, I propose a tripartite classification of Case which distinguishes Case type according to the nature of the relational information encoded. The proposed licensing procedure requires first, that the relational information be identified, second, that it be licensed by feature matching, and third, that the identified information (and its interpretation) be recoverable from morphosyntactic properties. The inherent / derived feature distinction and the proposed Case classification provide a base for examining the cross-linguistic variation found in the morphosyntactic realization of Case, and lead to a better understanding of both its realization and interpretation.

1.1 Previously Proposed Case Types

Previously proposed Case types include structural and inherent Case. According to Chomsky (1981:170-171) structural Case is a configurationally determined Case which includes nominative, objective, oblique, and genitive, while inherent Case is determined by the properties of a "[-N]

¹ Case with capital C is used to distinguish morphological Case, whether abstract or overt, from other uses of this word. The marking of nominal information on predicates may be referred to in terms of grammatical and/or semantic roles as well as Case. See Blake (1994) for a discussion of the cross-linguistic distribution of Case.

² Case contrasts with the features of person and number which although frequently realized on verbs, are inherent nominal features. In a survey of 50 languages, Bybee (1985) found that while only 56% of verbs had inflectional person-number-subject agreement, 72% had inflectional tense, mood, and aspect.

governor", and is "presumably closely linked to θ -role". The following Latin example demonstrates overt structural Case, with the unmarked nominative identifying *puer*, the noun governed³ by agreement, and the accusative or objective marker *-as* identifying *puellas* as the noun governed by the transitive verb.

- 1 Latin
 Puer puell-as am -at
 the boy(NOMsg) girls(ACCpl) loves(3sg)
 'The boy loves the girls'

Based on the occurrence of morphological Case, Chomsky posits "abstract" Case, the covert marking of Case in languages without morphological Case illustrated in the English example in (2a).

- 2 English
 a) The boy(NOMsg) love-s(3sg) the girl-s(ACCpl)
 b) He(NOMsg) love-s(3sg) them(ACCpl)

Examples such as (2b) appear to lend support to the claim for abstract Case as they exhibit remnants of the English Case system found in the pronominal paradigm.⁴

Two Case types not represented in Chomsky's structural and inherent Case classification are semantic Case described in Babby (1986, 87), and the strong and weak Case distinction proposed by de Hoop (1991, 1992a&b). Both of these Case types are linked to interpretation. Babby (1986:205) demonstrates semantic Case with examples such as the following.

- 3 Adverse Instrumental in Russian
 a) Volna razbila lodku
 wave(NOMf) smashed(3sg.f) boat(ACC)
 'The wave damaged the boat'

³ Chomsky's (1981:165) definition of government is presented in Chapter 3.

⁴ However, see Emonds (1985:237) who argues that the Case of English pronominals is "false case", and that correct usage of the "prestige subject pronoun" results from a mixture of factors including minor local rules, avoidance of certain constructions, formulaic usage, and "constant semi-conscious sociologically determined self-correction".

- b) Volnoj razbilo lodku⁵
 wave(INSTR) smashed(3sg.n) boat(ACC)

According to Babby, the choice of nominative or instrumental Case is dependent upon interpretation, with the instrumental Case emphasizing a "natural" event with "undesirable, or even calamitous consequences". Unlike inherent Case marking, semantic Case alternates with structural Case, and although it has an interpretative value, it is not theta-dependent since the theta-role appears unchanged whether the nominal is marked nominative or instrumental.

De Hoop's classification is based on the referential reading of NPs, with object NPs being interpreted as "generalized quantifiers" iff they bear *strong* Case, and as "part of a predicate" if they bear *weak* Case. She claims (de Hoop, 1991:137) that weak Case is "inherent in the sense that it is a default Case" assigned at D-structure. It is related to certain configurations, "For instance, government by a transitive verb", or "government by a preposition". Strong Case is "a structural Case licensed at S-structure". Although de Hoop relates her Case types to Chomsky's terminology, she uses the terms differently. There is no one-to-one correspondence between the strong-weak distinction and the structural-inherent distinction since, as she notes (1992b:154), nominative case can be both strong and weak, and "can be licensed with concomitant weak and strong readings."

The analyses of both Babby and de Hoop are discussed in more detail in chapter 3, but this brief summary serves to highlight an aspect of the encoding of nominal information not addressed by the structural / inherent Case distinction: the identification of referential interpretation. While Babby's three way Case classification addresses this problem, de Hoop's analysis concentrates more on explaining the strong / weak Case distinction than how this distinction relates to previously proposed Case types.

1.2 The Case Filter

While the details of the definitions and associated configurational requirements of structural and inherent Case have evolved considerably (cf. Chomsky, 1981, 1995), as can be seen by the two

⁵ As noted in Babby (1980:24), the third person singular neuter form indicates the absence of subject-verb agreement, and is used in impersonal sentences.

versions of the Case Filter cited below, Chomsky remains tied to the claim that all overt NPs must be Case marked.

- 4 The Case Filter (Chomsky, 1981:49)
 *NP, where NP has a phonetic matrix, but no Case.
- 5 The Case Filter (Chomsky & Lasnik, 1995:111)
 Every phonetically realized NP must be assigned (abstract) Case.

The Case Filter ensures identification of the information encoded, but does not specify Case type, nor address the issue of Case type combinations. Given the restricted occurrence of inherent Case, if the Case Filter refers uniquely to one Case type, it must be structural.

In the minimalist program (Chomsky, 1995:174) both structural Case and agreement are regarded as "manifestations of the Spec-head relation (NP, Agr)",⁶ and the Case Filter is viewed as an interface condition which requires all morphological features to be checked for convergence. Case is considered a property of heads (N or D)⁷ (Ibid.215), and like other features, is licensed by feature checking, a process which occurs between a head and an NP and is facilitated by Agr.

1.3 Proposed Case Types

The tripartite classification of Case I propose is based on its identificational function, and is designed to account for the encoding of relational information about nominals in nominative / accusative languages, ergative / absolutive systems, and what are variably referred to as active or split systems. The three Case types identified are grammatical, inherent, and semantic. Grammatical or Syntactic Case identifies the grammatical relations of NPs on the basis of their structural position. This Case type generally corresponds to Chomsky's structural Case and Babby's configurational Case. Lexical or Inherent Case identifies a fixed semantic interpretation of some aspect of the predicate argument relation. It is specified in the lexical entry of certain predicates and is consistently realized by a specific morphological Case-marking. Although the fixed semantic interpretation captures

⁶ Chomsky (Ibid.:173) also acknowledges the possibility of the more local *head-head* relation.

⁷ He puts aside the question of the DP-NP distinction.

Chomsky's idea of a theta-role link, it avoids the problem of theta-role identification and recognizes inherent Case as a predication feature which exerts restrictions on the Case and type of argument selected. Semantic Case combines aspects of the analyses of both Babby and de Hoop, by identifying contextually determined aspects of the nominal's referential relation.

The recognition of semantic Case provides an account of the Case-marking of "modifier NPs" in examples such as the following, NPs which Fabb (1980:54) suggests lack a theta-role and may even be caseless.

- 6 I saw him [the day before yesterday].

While the NPs of such examples appear to lack even "abstract" Case marking, I suggest that they are instances of semantic Case since they encode contextually determined referential information about the time of the event reported.⁸ Combined with the tense of the finite verb, the denotation of this NP provides a specific temporal reference for action expressed by the verb. Support for Case as a marker of temporal reference comes from languages such as Ancient Greek which, as shown by the following example, mark temporal reference by the adverbial accusative.⁹

- 7 Ancient Greek Adverbial Accusative
 Treis mēnas emeinen
 three(ACC) months(ACC) stayed(3sg)
 'He stayed three months'
 (Blake, 1994:31)

As a contextually determined feature, semantic Case is shown to have different realizational restrictions than configurationally or lexically determined Cases.

1.4 Proposed Case Theory

Gerds (1990:200) proposes replacement of the Case Filter with the principle of Relational

⁸ Additional support for the semantic Case-marking of temporal adjunct NPs comes from the assumption that they have a temporal theta-role. (Cf. Higginbotham, 1985).

⁹ The adverbial accusative in Ancient Greek was, according to Blake, used to express "extent in distance or time". The Case-marking of temporal adverbials is discussed in more detail in chapter 4.

Visibility stated below.

8 Relational Visibility

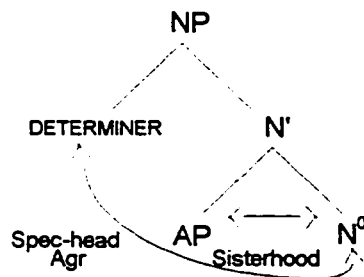
Every nominal must be relationally identified by some morphosyntactic means.

While acknowledging the role of Case as a marker of grammatical roles, this principle explicitly acknowledges the "abstract" Case assumption that morphological Case is not the sole means of identifying grammatical roles. In this thesis I consider Relational Identification to be the operative Case requirement since it distinguishes between the identification of relations and the morphosyntactic marking of these relations. Furthermore, it is better suited to providing an explanation of the licensing of the proposed information-based Case types than the Case Filter.¹⁰

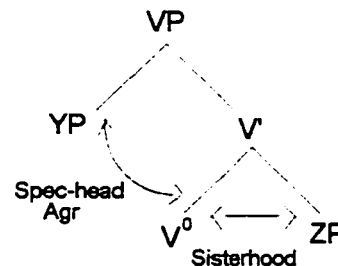
While maintaining the minimalist assumptions of inserted items being fully inflected, I make a distinction between inherent features, those present in the citation or dictionary form of lexical items, and derived features, relational features which are syntactically or contextually determined. Inherent features participating in concord relations and all derived features undergo relational identification, which ensures identification of shared features. The relational identification of features encoded in the grammar can occur under Spec-head agreement or sisterhood, as shown below for inherent nominal (a) and verbal (b) features.

9 Feature Sharing under Relational Identification

a) Inherent Nominal Features



b) Inherent Verbal Features



Licensing additionally requires that the relationally identified features match those of inserted lexical

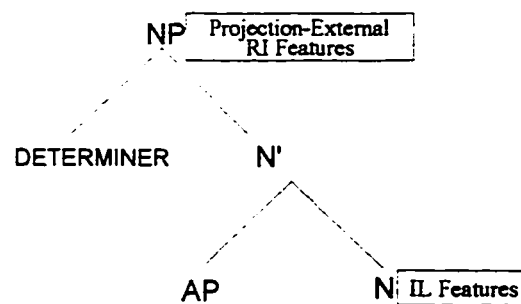
¹⁰ Relational identification provides a response to Emonds' criticism of pronominal Case as "false case" since his criticism refers to form not function.

items. Relational identification of contextually determined features requires that the specification of the features is encoded in the grammar match those of the context of discourse. Inflected lexical items are inserted into terminal nodes which are represented as categorial signatures, the word-level feature bundles outlined in Lieber (1992). Their features are unspecified and only receive their specification following lexical insertion.

Since agreement is a feature-specific relation, features can be individually licensed. Thus, if a verb has a Case feature and is in a Spec-head or sisterhood relation with a noun with the same Case feature, this Case feature can be licensed independently from the ϕ -features of person, number and gender.

The relational identification of features such as Case requires feature percolation to permit the matching of the relationally identified X^{MAX} features with the X^0 features specified by lexical insertion. The inherent inflected features of inserted lexical items can undergo projection-internal relational identification and are free to percolate upwards within their projection. Projection-external relationally-identified features are X^{MAX} features, and must undergo licensing by feature-matching with the features specified by lexical insertion. The locus of specification of projection-external relationally identified features and of inherent nominal features is shown below.

10 Projection-External Relationally Identified (RI) Features and Inherent Lexical (IL) Features in the NP



Given the assumption of feature percolation to the X' -position, sisterhood could suffice as the sole relational identification configuration since it would permit identification of the specifier-head and of

the head-complement relation.¹¹ However, spec-head agreement is maintained as a relational identification configuration since, in some instances, it eliminates the need for feature percolation to the X' position. Sisterhood permits relational identification of NP features previously identified by government, and eliminates the requirement for Agr-O as a feature checking position. Combined with the possibility of feature percolation, it also permits feature checking with XP-adjoined positions.

Throughout this thesis I attempt to provide an account of Case which incorporates and extends aspects of existing theories. Lieber's account of categorial signatures and of feature percolation is extended to the syntax, and Chomsky's account of feature checking is modified to recognize the distinction of Case as a an inherent verbal feature, and of the other ϕ -features as inherent nominal features. Both feature types are licensed by feature matching, but the inherent - derived distinction influences the selection of licensing by percolation and/or by the relational identification configurations of spec-head agreement and sisterhood.

Combined with the inherent - derived feature distinction, relational identification and feature percolation eliminate the requirement for a one-to-one correspondence between lexical and functional projections. The problem now becomes, to determine if there is still a requirement for functional projections, and if so, what triggers this requirement. This problem is addressed in chapter 4 in which I argue for an NP rather than a DP projection for the licensing of nominal features, and for two functional projections above VP for the licensing of verbal features. The functional projection immediately above the VP is TP, a projection for the checking of derived [+V] verbal features, with AgrSP, a projection for the checking of derived [+N] verbal features above this.¹² Additionally, sentences are assumed to require at least one functional projection, CP, which serves to check a variety of features, such as tense, agreement and interrogative features.

1.5 Organization of the Thesis

The numerous examples cited in chapter 2 demonstrate the considerable cross-linguistic

¹¹ See Zwart (1993:373) for a refinement of the minimalist program in which he adopts a one-level X-bar theory and formulates the hypothesis that "All licensing relations are sisterhood relations."

¹² I assume that this is a minimal requirement for functional projections with Icelandic arguably requiring more. (Cf. Roberts (1993), Moorcroft (1995)).

variation found both in the syntactic and referential relations identified by Case, and in the marking of these relations. Case is shown to be a marker of relational information, but on the basis of the morphosyntactic variation observed in the realization of its marking, and following Gerdts' principle of Relational Visibility, relational identification is distinguished from actual the morphological marking by Case. Following a detailed review of previously proposed Case types in chapter 3, I further explain and motivate the classification of Case types based on the type of relational information encoded. In chapter 4, I examine the distinction between Case and the other ϕ -features, and the nature of the nominal projection. I show that restrictions on the realization and licensing of Case are related to the type of information encoded, and to the locus for the specification of this information. I examine the interaction of grammatical and lexical Case in the context of quirky subjects in chapter 5, and the interaction of grammatical and semantic Case is in English existentials in chapter 6. The analysis proposed for existentials emphasizes similarities with the morphological coding properties of quirky subject constructions, and the problem of transferring a Case encoded distinction to languages without morphological Case. Chapter 7 reviews the proposed Case types and licensing mechanisms, and highlights how the proposed analysis provides a unified explanation for the cross-linguistic variation found in the realization and interpretation of Case.

Chapter 2

Case: Its Form, Function, and Meaning

2.0 Introduction

Case is a morphological feature which encodes information about nominal relations. Following examples illustrating the considerable variation found in the form of morphological Case, I examine variations in its coding function based on the type of information encoded, and variations in its interaction with other morphosyntactic features such as word order, agreement, and determiners. The relational information it encodes is shown to be of two types, one related to the predicate argument relation, and the other to the relation of an entity to its referential context. Although relational information is commonly encoded by Case, as specified by Gerdt's principle of Relational Visibility, Case is not the sole means of identifying it.

2.1 Form: The Marking of Case

In agglutinative languages, such as Turkish, each Case is uniquely identified by a suffix¹, as shown by the Case and number distinction in following paradigm for the nominal stem, *adam* 'man'.

	SINGULAR	PLURAL
NOMINATIVE	adam	adam-lar
ACCUSATIVE	adam-i	adam-lar-i
GENITIVE	adam-ın	adam-lar-ın
DATIVE	adam-a	adam-lar-a
LOCATIVE	adam-da	adam-lar-da
ABLATIVE	adam-dan	adam-lar-dan

Table 1
Turkish Case Paradigm²

¹ In the summary of the Greenberg (1954) classification cited in Katamba (1993), language type is linked to the ratio of morphemes per word (mpw) in the following manner.

- i) Isolating or Analytic: 1.00-1.99 mpw
- ii) Inflecting or Synthetic: 2.00-2.99 mpw with the simultaneous realization of different morphemes
- iii) Agglutinative: 2.00-2.99 mpw with the separate realization of each morpheme
- iv) Incorporating or Polysynthetic: 3.00 or more mpw

² Both the Turkish declensional paradigm, and the Russian one which follows, are from Comrie, (1989:44).

This paradigm also exhibits the common characteristic of an unmarked nominative singular.³ This unique identification of each morpheme contrasts with languages such as Russian which, as shown by the declensional paradigm in table 2, has portmanteau morphemes combining both Case and number, and syncretic forms such as *stol* 'table' (NOMsg / ACCsg), and *lip-y* 'lime tree' (GENsg/NOMpl / ACCpl) which correspond to more than one morphosyntactic description.

	I A		II	
	SINGULAR	PLURAL	SINGULAR	PLURAL
NOMINATIVE	stol	stol-y	lip-a	lip-y
ACCUSATIVE	stol	stol-y	lip-u	lip-y
GENITIVE	stol-a	stol-ov	lip-y	lip
DATIVE	stol-u	stol-am	lip-e	lip-am
INSTRUMENTAL	stol-om	stol-ami	lip-oj	lip-ami
PREPOSITIONAL	stol-e	stol-ax	lip-e	lip-ax

Table 2
Russian Case Paradigm

The ambiguity inherent in both portmanteau and syncretic forms complicates the task of isolating the Case marker, and the information it encodes.

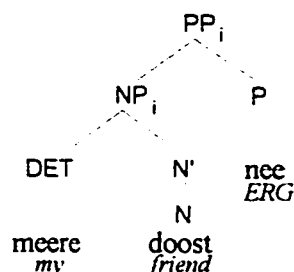
In languages which have both affixes and adpositions, there is sometimes confusion about the form and function of Case markers.⁴ This is evident in Urdu, an SOV language, which is a sister dialect of Hindi. According to Khan (1989), traditional grammarians provide lists of postpositions such as *par* 'on, at', and *tak* 'until, up to, by', whose most recognizable characteristic is their Case assigning properties.⁵ The classification of *koo*(DAT) 'to' and *nee*(ERG), is particularly problematic. Binding facts for the reflexives *apnaa* 'self's' and *xud* 'self' suggest that *nee* should not be considered a postposition since, as such, it would block a c-command relation between subject NPs and

³ In ergative/absolutive systems, the absolutive is usually the unmarked form.

⁴ According to Blake (1994:10), adpositions express finer distinctions than inflectional Case in such languages.

⁵ With reference to examples with the possessive marker *kii*, Khan demonstrates that both Case and theta-roles are assigned to the left.

1 Urdu
 [TP[PP[_{NP}meeree doost] **nee**] [vP[PPapnee naukar koo] bulaayaa]]
 my friend(ERG) self's servant(DAT/ACC) called
 'My friend called his servant'
 (Ibid.:81)

2 The Ergative Marker in Urdu

Sadock (1991) proposes a dual form solution for a similar problem in Hungarian, which centres around certain relational suffixes traditionally referred to as "case endings".⁸ As shown in (3)

⁸ Hungarian examples are from Sadock (1991:131-132).

below, both suffixal (a) and independent (b) forms act as adpositions since they do not mark determiners and adjectives, except in demonstrative constructions such as (4).

3 Hungarian
 Suffixal and Postpositional Forms

a) egy fehér ház- **ról**
 a white house-from
 'from a white house'

b) egy fehér ház **mellett**
 a white house beside
 'beside a white house'

4 Marking with Demonstratives

a) ez -**ról** a ház -**ról**
 this-ról the house-ról
 'from this house'

b) ez **mellett** a ház **mellett**
 this beside the house beside
 'beside this house'

When the object of postpositions such as *mellet* is pronominal, the pronominal, *em* 'me', occurs as inflection on the postposition as in (5a), and on the suffixal forms such as *-ban* 'in', which acts like a stem with "its own internal vowel quality" as in (5b).

5 Pronominal Objects

a) **mellettem**
 'beside me'

b) **bennem**
 'in me'

On the basis of such distribution, Sadock concludes that these relational suffixes are "syntactic adpositions with the optional status of suffixes to stems" (Ibid.:132).

However, the problem of identification of Case markers extends beyond the affix / adposition distinction. In polysynthetic languages, the information encoded by "Case" may also be encoded in verbal affixes called agreement markers, with variation in the naming of such markers often reflecting

differences in theoretical perspectives. This is shown below in Table 3 by the variation in the glosses of Mithun (1991), Rosen (1984), and Van Valin (1985), for the first person prefixes *wa-* and *ma-* of Lakhota, a Siouan language.⁹

	wa	ma
a) MITHUN (1991:514)	wa-hi 1s came 'I came'	ma-k^húže 1s sick 'I am sick'
b) VAN VALIN (1985:365)	wa-hi 1sgA -arrive 'I arrived'	ma-khúže 1sU sick 'I am sick'
c) ROSEN (1984:60)	wa-čeye 1st(NOM) cry 'I cry'	ma-haske 1st(ACC) tall 'I am tall'

Table 3
Gloss Variation in for *wa-* and *ma-* in Lakhota

While Mithun's glossing (a) is neutral with respect to the status of these markers, she links the use of *wa-* and *ma-* with intransitive verbs to their function as the agent and patient of transitive verbs, a function which resembles the semantic basis for the A(ctor), U(ndergoer) gloss of Van Valin (b). Rosen's use of traditional Case names reflects her contention that, although distributional facts suggest a semantic distinction between *wa-* and *ma-*, this distinction is not consistently expressed in the syntax. While acknowledging occasional opacity due to lexicalization, Mithun's use of theta-role terminology reflects her claim that a semantic distinction best captures the observed mismatch between transitive and intransitive subjects and the Lakhota agent category.

The status of agreement markers in polysynthetic languages is a matter of ongoing debate which extends beyond the interpretative differences associated with the *wa-* and *ga-* of Lakhota, and concentrates more on their grammatical status. In the following examples from Choctaw, a Muskogean null subject language, Davies (1986:2) glosses the agreement markers as Case.¹⁰

⁹ Lakhota, also referred to as Lakota, or Teton is closely related to Dakota.

¹⁰ Although not glossed, the translation of *-li-* indicates that it must also be marked for plurality.

- 6 Choctaw
 Chi -bashli-li -tok
 2ACC cut **1NOM** pst
 'I cut you'

Jelinek (1989) claims that such markers are in fact the arguments, while optional free-standing nominals are adjuncts, which, in her terms, makes Choctaw a pronominal argument (PA) language. Baker (1991) questions the argumental status of such agreement markers on the basis of data from Mohawk, an Iroquoian language. He proposes a level-sensitive Case Filter, arguing that agreement markers in Mohawk can only absorb the Case features of heads. This enables such markers to pass the Case Filter at S-structure (or PF), after which they are deleted at LF, and Case is reassigned to the coindexed *pro* and trace arguments of overt NPs.¹¹ Whether viewed as arguments or as bearers of Case prior to LF, both analyses acknowledge that these agreement markers are verbal affixes which encode the type of information encoded by the Case morpheme.¹²

2.2 The Function of Case

Whether nominal affixes, adpositions, or verbal agreement markers, many languages exhibit the co-occurrence patterns between Case, grammatical and thematic relations of the predicate-argument structure, outlined in Table 4 below.¹³

¹¹ In Baker's analysis, the overt NPs are in adjoined positions, while null pronouns, complement clauses and traces of WH-movement and noun incorporation are in argument positions.

¹² The glosses of Van Valin and Mithun for the Lakhota examples above suggest an analysis similar to that proposed by Jelinek in which the agreement markers are the arguments. Rosen's glossing system is more in line with that of Baker in which the markers absorb the Case features of a coindexed *pro*.

Phillips' (1993) account of a range of asymmetries in Yimas, a split ergative Papuan language, combines the analyses of Jelinek and Baker by claiming that the nominative-accusative affixes are arguments which have undergone incorporation, and the ergative-absolutive affixes are functional heads which agree with arguments in their specifier positions.

¹³ In languages which usually observe these patterns, interruptions in them usually signal a change in interpretation.

CASE	GRAMMATICAL ROLE	THEMATIC ROLE
Nominative	Subject	Agent
Accusative	Direct Object	Theme, Patient
Dative	Indirect Object	Goal, Patient

TABLE 4
The Co-occurrence of Case, Grammatical Roles, and Theta Roles

In spite of the variation in the form and function of the markers of this type of information, this table represents common association patterns which, although they do not occur in all languages, suffice to permit a minimal comparison of the type of information encoded.¹⁴ The encoding of grammatical relations by Case is demonstrated by the following example from Old English.¹⁵

- 7 Old English
- a) Se man sloh þone cyning
 the(NOM) man(NOM) slew the(ACC) king(ACC)
 'The man slew the king'
- b) Þone cyning sloh se man
 the king(ACC) slew the man(NOM)
 'The man slew the king'

These examples support the correspondences of table 4 since the grammatical roles of subject and object are identified on the basis of the morphological marking of Case on the determiners.¹⁶ Although these morphological Case markings have been lost in Modern English, as shown below, the

¹⁴ Such correspondences have a long history as witnessed by Pāṇini's Kāraka theory which is compared to today's theta theory by Blake (1994:64) who notes that the relation of the kārakas to the Case system of Sanskrit lacked a one-to-one correspondence. Moorcroft (1995) proposes a system in which morphological Case and syntactic structure have different functions.

¹⁵ The dates and abbreviation used for the different periods of English referred to in this thesis are as follows:
 Old English (OE) 450-1100
 Middle English (ME) 1100-1450
 Early Modern English (EMnE) 1450-1750
 Modern English (MnE) 1750-

¹⁶ Given the syncretic nominative and accusative nominal Case forms, only the definite article form permits Case identification.

more rigid SVO word order now permits identification of the grammatical roles of subject and object.

- 8 Modern English
 a) John(S) hits the ball(O).
 b) *The ball(O) hits John(S).

Here, word order and verbal agreement serves to identify information previously encoded by Case, and co-occurrence patterns serve to support the claim of covert or abstract Case, since the subject is assumed to have nominative Case, and the object, accusative Case.

Although word order and verbal agreement identify the grammatical relations encoded by Case in the English example above, the one-to-one correspondence between Case and grammatical function is not without exception. This is shown in the following examples from Hindi and Icelandic in which nominative Case is associated with a nonsubject argument.

- 9 Nonsubject Nominatives
 a) Hindi
 ravii-ne roṭii k^haayii
 Ravi(ERGmsc) bread(NOMfem) eat(perf.fem.sg)
 Ravi ate bread
 (Mohanani, 1990:134)¹⁷
 b) Icelandic
 Barninu batnaði veikin
 the-child(DAT) bettered the-disease(NOM)
 'The child recovered from the disease'
 (Andrews, 1990:169)

Another aspect of the predicate-argument relation encoded by Case is the use of genitive Case to identify the participants in the possessor - possessed relation as shown below.

¹⁷ Although some transitive subjects are marked ergative, Mohanani (1990:88), argues against the presence of the feature absolutive in the Hindi Case system. She claims that verbal agreement in Hindi is with the highest argument associated with nominative Case.

- 10 Genitive Case
 a) German
 Eva-s neue Wohnung ist groß
 Eva(GEN) new apartment is large
 'Eve's new apartment is large'
 b) English¹⁸
 Eve's new apartment is large.

Morphological Case is also used to encode referential information about the nominal in the context of discourse. Cross-linguistic variation is found in the expression of this information by morphological Case, word order, quantifiers, and/or determiners.¹⁹ In the following example, partial quantity is expressed by partitive Case in Finnish, but by the quantifier *some* in the English gloss.

- 11 Finnish
 Joimme olutt-a
 drank(1pl) beer(PART)
 'We drank **some** beer'
 (Chesterman, 1991:92)

This variation extends to the expression of definiteness and /or specificity. In Hindi, Case encodes the definite / indefinite distinction identified by the determiner system of English. As discussed in Singh (1992), the marker *-ko* encodes the definiteness of animate direct objects as shown by the contrast in (12a&b).

- 12 Hindi
 a) raam-e **murgii** maarii
 Ram(ERG) chicken kill(perf)
 'Ram killed **a** chicken'

¹⁸ Genitive Case in English provides another instance of suffix / preposition ambiguity, with the debate centering around whether genitive Case is a suffix or underlyingly the preposition *of*.

¹⁹ Vainikka & Maling (to appear) suggest that there is a degree of complementary distribution between Case and overt markers of definiteness. This is similar to the Philippi's (1994) suggestion that strong NPs have a functional projection (FP) on top of their NP structure which is variably realized as a determiner or an abstract Case element.

- b) raam-ne murgii ko maaraa
 Ram(ERG) chicken kill(perf)
 'Ram killed **the chicken**'
 (Singh, 1992:200)

Just as word order permits identification of the grammatical roles associated with nominative and accusative Case in Modern English, it can serve to identify the definite / indefinite contrast of inanimate objects in Hindi. The unmarked word order in Hindi is SOV,²⁰ and if this order is followed, inanimate objects are interpreted as indefinite as in (13a).²¹ Interruption of this order by topicalization of the direct object suffices to indicate its definiteness as shown in (13b).

- 13 Hindi
 a) siitaa-ne aaj subah aam khaayaa
 Sita(ERG) today morning mango eat(perf)
 Sita ate **a mango** this morning
 b) **aam** siitaa-ne aaj subah khaayaa
 mango Sita(ERG) today morning eat-(perf)
 Sita ate **the mango** this morning
 (Singh 1992:196-197)

With the SOV word order of (13a), the ergative Case marking identifies the subject, and by elimination, the direct object which is interpreted as indefinite in its preverbal position. When this word order is changed, by topicalization of the direct object (13b), it is interpreted as definite.

With reference to examples such as the following, Enç (1991) claims that, in Turkish, specificity is encoded by morphological Case.

- 14 Turkish
 a) Ali bir piyano-yu kiralamak istiyor
 Ali one piano(ACC) to-rent wants
 'Ali wants to rent **a certain piano**'

²⁰ Hindi is a strictly postpositional language, and although the unmarked word order is S-IO-DO-V, with auxiliaries following the verb, according to Mahajan (1990:19), its word order is actually quite free.

²¹ Indefinite animate NPs may additionally be marked with *ek* 'one' which Singh (1992:193) describes as "an emphazier of indefiniteness".

- The presence of the accusative Case morpheme *-(y)i*²² in Turkish imposes a *specific* interpretation on the NP to which it is attached (14a), while the absence of Case morphology in (14b) is indicative of a nonspecific reading.

2.3 Case Systems

15a) She(NOM) returned
b) She(NOM) saw him(ACC)

²² The high front vowel of the accusative Case morpheme varies in frontness and roundness in accordance with vowel harmony.

²³ The most common pattern is for nominative and absolutive Case to be unmarked. Ergative systems should, according to Dixon (1987:11), be referred to as absolutive/ergative, given the parallel roles played by nominative and absolutive Case, and by accusative and ergative Case in each system.

while transitive subjects are assigned ergative Case as shown in the Dyirbal examples below.²⁴

- 16 Dyirbal
- a) yabu -Ø banaga-n^yu
mother(ABS) return(nonfut)
'Mother returned'
- b) yabu -Ø ŋuma-ŋgu buṛa-n
mother(ABS) father(ERG) see(nonfut)
'Father saw mother'
- (Dixon, 1979:61)²⁵

In his discussion of ergativity, Dixon (1979) uses the symbols S for the subject NP of intransitives, and A and O²⁶ respectively for subject and object NPs of transitive verbs, functions which he considers "universal semantic-syntactic primitives" (Ibid.:59). In transitive sentences, A is distinguished from O by its "potential agency". Table 5 summarizes the different transitivity-based Case patterns found in each Case system.²⁷

	NOM/ACC		ERG/ABS	
	Subject	Direct Object	Subject	Direct Object
Transitive Verb	NOM(A)	ACC(O)	ERG(A)	ABS(O)
Intransitive Verb	NOM(S)		ABS(S)	

TABLE 5
Transitivity-Based Case differences

²⁴ Word order in Dyirbal is free, but Dixon's examples follow the "normal order of constituents". Selection of the nonfuture allomorph -n^yu or -n is dependent upon whether the verbs belong to the -y conjugation (*banaga-y*), or the -l conjugation (*buṛ-l*).

²⁵ The nonliteral glosses are derived from Dixon's description, but are not provided in his examples.

²⁶ Although many studies use these terms, confusion often results as their significance is not always explained, nor is their use necessarily consistent with Dixon's description. Some authors retain S and A, but use P for O, identifying it with *patient*, the theta-role commonly associated with direct objects (cf. Comrie, 1978, 1989).

²⁷ Bittner & Hale (1996:3) posit 5 different Case systems based on Case-binding relations. The 5 systems are: accusative, ergative, active, 3-way, and split.

In (15) and (16), the Case systems are distinguished by the differing Cases names for the A, O, & S functions, but the crucial factor in determining language type is not the Case names per se, but the manner in which the NPs fulfilling these functions pattern. In NOM/ACC languages, A & S pattern together; in ERG/ABS languages, O & S pattern together.²⁸ This patterning may be morphological or syntactic. If morphological, it is observable in the Case markings of the NPs, and/or in the verbal agreement morphology; if syntactic, it is observable in coordinate and subordinate constructions.

According to Dixon, the examples below demonstrate that Dyirbal is a syntactically ergative language since clausal coordination combines a common NP which surfaces as an intransitive (S) subject in one clause and a (deleted) direct (O) object in the other. This is shown below where the S argument of (17a) combines with the deleted O argument of (17b) resulting in (17c).

- 17 Dyirbal
- a) **ŋuma** banaga-n'u
 father(ABS) return(nonfut)
 'Father(S) returned'
- b) **ŋuma** yabu-ŋgu buɾan
 father(ABS) mother(ERG) saw(nonfut)
 'Mother (A) saw father(O)'

²⁸ The notion of ergativity put forth by Dixon differs from that presented in the frameworks of Relational Grammar (RG) (Perlmutter and Postal (1984), C. Rosen (1984)) and of Government & Binding (GB) (Burzio, 1986) in which ergativity is based on initial (D-structure) grammatical relations. In RG, unergative is used to describe subjective or initial S arguments, while unaccusative is used for S arguments derived from initial O arguments. Burzio uses the term ergative for verbs such as *sink* which have the potential to alternate between transitive and intransitive uses, and for intransitive verbs like *arrive* which lack external theta-roles and do not assign (structural) accusative Case. Belletti (1988) uses both ergative and unaccusative interchangeably, but in the manner Burzio uses the term ergative. Dixon criticizes the expanded use of the term ergative since it makes classification of languages as nominative or ergative difficult since "... every language has that kind of ergativity" (Dixon, 1987:7).

- Coordination of S and A arguments is only possible following antipassivization, a process by which an A NP becomes a derived S NP, and an O NP becomes oblique. This is shown in (18) below, where (17a) and (16b) are repeated as (18a&b). Only when the A argument of (18b) becomes a derived S argument following anti-passivization (18c), can coordination of the S and A arguments of (18a&b) occur as in (18d).

- Interruption in the dominant patterning of each system is possible and is associated with a

³⁰ The coordinated elements, the antipassive form and the intransitive sentence, may be ordered with either element first.

change in interpretation. Dixon describes 2 types of mixed intransitive systems: split-S systems,³¹ and fluid-S systems. In split-S systems, there are 2 groups of S NPs, one which patterns as As, and one which patterns as Os; in fluid-S systems there is one group of S NPs which optionally exhibits A/O variation.³² Fluid-S systems may also be referred to as active/stative systems (cf. Sapir (1917), Klimov (1979), Harris (1982,1985)), a term which reflects whether or not the S NP participates actively in the predicated action. Split systems, whether described as split, fluid, or active, are indicative of an interruption in the dominant morphological coding of the S NP and the accompanying verbal inflection. While these interruptions are associated with a change in interpretation, the Case of the S NP is not limited to that of A or O NPs. It may also be marked oblique, and verbal inflection may be 3rd person singular, the unmarked form for person and number agreement.

According to Dixon, morphologically based splits are distinguished by the source of the split. The split in the morphological coding of the Dyirbal pronominal system is triggered by the semantics of the NP. It distinguishes first and second person pronouns from other NP types as shown by table 6 below, (Dixon's table 2).

	1st & 2nd person pronouns	3rd person pronouns	proper names	common nouns
TRANSITIVE SUBJECT (A)	- <i>ŋ</i> (NOM)	- <i>ŋgu</i> (ERG)	- <i>ŋgu</i> (ERG)	- <i>ŋgu</i> (ERG)
INTRANSITIVE SUBJECT (S)	- <i>ŋ</i> (NOM)	- <i>ŋ</i> (ABS)	- <i>ŋ</i> (ABS)	- <i>ŋ</i> (ABS)
TRANSITIVE OBJECT (O)	<i>na</i> (ACC)	- <i>ŋ</i> (ABS)	- <i>ŋ</i> (ABS)	- <i>ŋ</i> (ABS)

TABLE 6

The Case Morphology of Subject and Object Nouns and Pronouns in Dyirbal³³

Only the first and second person pronouns, the ones which, according to Dixon, have the highest

³¹ Split systems are referred to as both *split ergative systems*, and *split-S systems*. Baker (1988:444) uses the terms *ergative*, *split ergative* and *active* to refer to agreement systems which he distinguishes from the morphological markings of *accusative* or *ergative* Case systems.

³² According to Dixon's (1979:84) definition, in *fluid-S* systems, the S NP of any intransitive verb has the potential to pattern as A or O. This contrasts somewhat with Klaiman's (1991:630) description of *fluid-S* systems as having a 3-way split in which some Ss pattern as A, some as O, and some show optional A/O variation.

³³ Following Dixon, the unmarked Cases in this table are indicated by -*ŋ*.

Even though pronominal morphology follows nominative / accusative patterning, in coordination they demonstrate the ergative pattern of conjoining the S and O arguments, as shown by the examples below.

- According to Silverstein (1976), all ergative systems exhibit a split based on the degree of agentivity of NPs, and often have an additional nonrandom split based on clause-type distinctions such as clause such as matrix versus subordinate, and tense distinctions such as present versus past, and aspectual distinctions such as imperfective versus perfective. According to Harris (1990:41) Georgian provides an example of an active system³⁵ in which three factors influence Case marking:

³⁵ Harris (1987) argues for an active analysis of Georgian, but Hewitt (1987) argues against this analysis and in favour of an ergative interpretation of Georgian. Confusion about classification of the Case system of Georgian is often reflected in the Case names and agreement markers found in the glosses. As found in the literature on other South Caucasian languages, *nominative* (sometimes referred to as *indefinite* Case) may be used for *absolutive*, and more specific to Georgian *narrative* may be used for *ergative*. While the subject and object verbal agreement markers in Series I, class 1, 2 & 3 pattern in a NOM/ACC manner, the Case of a singular direct object NP is variably glossed as *dative* (Hewitt, 1987) or *accusative* (S.Anderson, 1984), a possibility given that the morpheme in question is homophonous.

20 Georgian³⁶
vano-s daumalavs pul -i
Vano(DAT) hideIII.3(PERF) money(NOM)
'(Apparently)Vano has hidden the money'
(Vamling 1991:7)

Some split-S systems may be triggered by the semantics of the verb as shown in the Choctaw examples below in which some Ss have the **A** Case marking (a), while others have the **O** Case marking (b), a division which again appears to reflect the degree of agentivity.

- 21 **Choctaw**
a) **Hiha -li** -tok
 dance-1NOM(A) pst
 'I danced'

b) **Sa- hohchafo -h**
 1ACC(O) hungry pred
 'I am hungry'
- (Davies 1986:14)

³⁶ Vamling does not gloss agreement markers, verb class and Series as shown. I follow Harris (1981) in using Roman numerals to mark verbal Series which is indicative of tense-aspect, and Arabic numerals to mark Class which is based on transitivity. Series markers referred to by Vamling as *thematic* suffixes are found in series I and the first evidential of Series III (-av), but are lacking in series II.

³⁷ The adverb *apparently* is not acceptable in the glosses for series I and II. The evidential mood is used by certain languages to signify that the speaker is uncertain about the validity of what s/he is saying.

intransitive verbs whose subject Case markings vary optionally between those of **A** NPs and **O** NPs depending on whether the action is volitional or not, as shown by the glosses in the example below.

- 22 Choctaw
 a) Habishko-li -h
 sneeze 1NOM pred
 'I sneezed' (on purpose)

 b) Sa- habishko -h
 1ACC sneeze pred
 'I sneezed'
 (Davies 1986:36)

As can be seen by this discussion of nominative and ergative Case systems, although classification on the basis of Case names alone is somewhat misleading, Dixon's **A**, **S** and **O** terms permit comparison on the basis of grammatical relations rather than specific Case markings. At the morphological level, one must not only consider the patterning of the Case markings of the **A**, **S** and **O** arguments, but also the verbal inflection associated with these arguments, to determine language type. However, even if verbal and nominal morphology suggest a particular classification, it may be applicable only at the morphological level. The patterning of the **A**, **S** and **O** arguments coordination and subordination must be considered to determine whether the classification extends to the syntax.

2.4 Case as a Relational Feature

Regardless of its form, Case has the potential to encode information about the participants in the predicate-argument relation, and about the referential relation of an entity to the context of discourse. On this basis, I refer to it as a relational feature. As such, it has the potential to distinguish the grammatical relations of subject and object, and hence to distinguish the external and internal arguments of the predicate argument relation, in both ergative/absolutive and nominative/accusative Case systems. The correspondences outlined in table 4 demonstrate the additional function of identification of thematic relations. As illustrated by the Finnish, Turkish, and Hindi examples, Case also has the potential to identify contextually determined features of the NP such as quantity, definiteness, and specificity, features linked to its referential interpretation. The dual nature of this

relational feature is shown in figure 1.

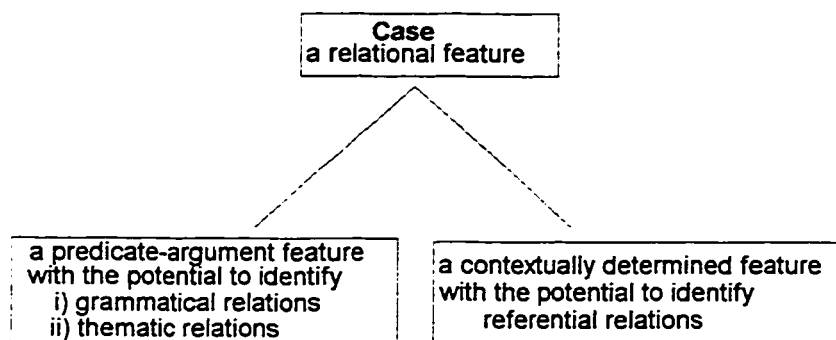


Figure 1
The Dual Nature of Case

2.5 The Realization of a Relational Feature

According to the Case Filter, repeated below, all NPs must be Case marked.

- 23 The Case Filter (Chomsky, 1986:74)
 Every phonetically realized NP must be assigned (abstract) Case.

Following Aoun, Chomsky (1986:94) revises the Case Filter by relating it to theta theory with the Visibility Condition stated as below:

- 24 The Visibility Condition (Chomsky, 1986:94)
 An NP can receive a theta-role only if it is in a position to which Case is assigned, or is linked to such a position.

The Visibility Condition also refers to abstract Case since the NP need not have morphological Case, but only be in, or be linked to, a position to which Case is assigned.

Following an examination of the expression of grammatical relations in 37 languages, Gerdt (1990:200) proposes the following principle of visibility³⁸ as an alternate to the Case Filter.

³⁸ Gerdt (Ibid.:209) provides a detailed analysis of the languages studied, and on the basis of observed tendencies, additionally proposes the following principles:

- i) Relational Economy: Nominals tend not to be multiply identified
- ii) Relational Priority: Nominals tend to be identified by the first means available.

25 Relational Visibility

Every nominal must be relationally identified by some morphosyntactic means.

As noted in the examples from modern English, Choctaw, and Hindi, this identification may be accomplished by Case, word order, verbal agreement, a determiner system, or by Case in conjunction with one of these morphosyntactic strategies. While the possibility of varied strategies is implied by the Case Filter and Visibility, Relational Visibility states it explicitly. It avoids the requirement for "abstract" Case to accommodate the identification of grammatical and/or theta relations by a morphosyntactic strategy other than Case. Although, in its original formulation, relational visibility refers to grammatical relations, it readily permits an extension to referential relations, those identified by semantic Case. In the following chapters, I use the term *relational identification* to refer to the identification of aspects of predicate-argument and referential relations, and limit use of the term Case to the morphosyntactic marking of the identified relation.

2.6 Summary

We have seen that Case is chameleon-like with the potential to surface in a variety of forms including nominal affix, adposition, clitic, and verbal agreement marker. It also has the potential to function as an encoder of both grammatical and semantic information. While the patterns for the morphological encoding of grammatical information vary in nominative/accusative and ergative/absolutive Case systems, this variation is generally limited to the morphology, and only rarely, as in the case of Dyrbal, is it extended to the syntax. The split and active Case systems discussed demonstrate that an interruption in the standard morphological encoding of grammatical roles often reflects a change in meaning associated with the degree of agentivity of an argument.

With reference to cross-linguistic evidence, Case was shown to have the potential to encode relational information about predicate argument structure, and about contextually determined referential interpretation. This highlights the relational function of Case in two different contexts, and supports the Case classification proposed in chapter 1 since it acknowledges the functional differences of Case within these contexts.

Chapter 3

Case Types

3.0 Introduction

In this chapter I review previously proposed Case types, and present the tripartite classification of Case introduced in chapter 1 in greater detail. While incorporating aspects of previous analyses, the proposed classification is based on the type of information encoded. The three Case types introduced in chapter 1 include grammatical Case which encodes grammatical roles, inherent Case which encodes a fixed semantic relation by means of a lexically specified morphological Case, and semantic Case which encodes contextually determined referential information. With the exception of inherent Case which must be morphologically realized by Case, the morphosyntactic means for identification of the relational information encoded varies.

3.1 Chomsky's Structural / Inherent Case Distinction

3.1.1 Structural Case

In the Government and Binding framework (GB) of Chomsky (1981:170), structural Case, a property of the formal configuration of government, is generally dissociated from θ -role. Government is defined as follows:

- 1 Government (Chomsky, 1981:165)
 α governs γ where:
 $[\beta \dots \gamma \dots \alpha \dots \gamma \dots]$, where
- i) $\alpha = X^0$
 - ii) where β is a maximal projection, if β dominates γ then β dominates α
 - iii) α c-commands γ

C-command is defined as follows:

- 2 C-command (Ibid.166)
 α c-commands β iff
- i) α does not contain β
 - ii) Suppose that $\gamma_1, \dots, \gamma_n$ is the maximal sequence such that
 - (a) $\gamma_n = \alpha$
 - (b) $\gamma_i = \alpha^j$
 - (c) γ_i immediately dominates γ_{i-1}

then if δ dominates α , then either

- (I) δ dominates β , or
- (II) $\delta = \gamma_i$ and γ_i dominates β

According to this definition, a head c-commands every constituent within the domain of its highest projection, while a nonhead only c-commands its sister.¹

Cases identified on the basis of these structural configurations are as follows:

³ Configurations for Structural Case in GB

- a) NP is nominative if governed by AGR²
- b) NP is objective if governed by V with the subcategorization feature: $_ NP$ (i.e., transitive)
- c) NP is oblique if governed by P
- d) NP is genitive if governed by $[_{NP} _ X]$

In these instances, structural Case identifies the grammatical relations of subject (a), object (b), indirect object (c), and possessed NP (d).

Although Chomsky (1986) reclassifies both oblique and genitive as instances of inherent Case, as noted below, the connection between Case and grammatical roles is retained.

- ⁴ We assume that objective Case is assigned to the object of a verb³ and nominative Case to the subject of a finite clause, and that prepositions assign oblique case to their objects. (Ibid.:74)

In the minimalist program, Chomsky (1995:110) maintains the connection of nominative Case with finite subjects, accusative Case with direct objects, and oblique Case with pre- or postpositions in nominative /accusative languages. However, he (Ibid.:173) proposes that structural Case is assigned

¹ The different notions of c-command are discussed in Travis (1984:19-20). She notes that for Reinhart (1976), the c-command domain for 2 constituents is the first branching node which dominates both of them, while for Aoun & Sportiche (1981) it extends to the first maximal projection.

² To account for nominative Case assignment by government and agreement, Chomsky (1981:264) modifies his description of nominative Case assignment to the following:

"At S-structure, assign nominative Case to NP co-superscripted with and governed by AGR."

³ While intransitive verbs are generally not Case assigners, Chomsky notes that "under restricted conditions", such as *he dreamt a dream*, they can be.

in a Spec-head relation, in the functional projections of AgrS and AgrO. The Agr projections are mnemonics for a collection of the ϕ -features of gender, number, and person. The ϕ -features are determined by the Agr head, and Case is determined by the tense and/or an adjoined verbal element.

3.1.2 Inherent Case

Within the GB framework, inherent Case⁴ is closely linked to theta-role assignment, and is described as follows.

- 5 Inherent Case in GB (Chomsky, 1981:170)
 NP is inherently Case-marked as determined by properties of its [-N governor].

The lexical entries of verbs are assumed to have both a θ -grid and a Case Grid. Following Williams (1981a), Stowell (1981), and Belletti & Rizzi (B&R) (1988), the external θ -role⁵ assigned to the subject is singled out, and θ -grids have minimal internal structure. If a verb assigns lexical Case, its Case-grid contains specifications of the inherent Case(s) which is idiosyncratically associated with the theta role of one or more of its arguments. The linking of Case grids and θ -grids is shown below, with the external θ -role being underlined and not Case-linked.

- 6 Case and Theta-Grid Link
 θ -Grid: $\theta \dots \theta_i \dots \theta_j \dots$
 | |
 Case-Grid: $C_i \dots C_j \dots$

Chomsky (1986:192) notes that the projection principle which states that lexical structure must be represented categorially at every syntactic level comes into conflict with the Case Filter in constructions such as the following, since unlike verbs, nouns and adjectives do not assign Case to their complements.

- 7 a) the [destruction [the city]]

⁴ Inherent Case is sometimes referred to as *lexical* or *oblique*.

⁵ According to Burzio's (1986) Generalization, a verb can be a structural Case assigner only if it has an external argument.

- b) proud [John]

Case assignment for the nominal complement in (a) may be resolved by NP movement as in (8a) or by *of*-insertion as in (8b); for the adjectival complement, only the *of*-insertion option is available as shown in (9).

- 8 a) [the city]'s destruction *e*
 b) the [destruction [*of* the city]]

- 9 proud [*of* John]

This leads him to revise his earlier version of the Case Filter to accommodate both the assignment of the nominative and accusative Case to NPs on the basis of their S-structure position, and the D-structure assignment of the oblique Case of prepositions and the genitive Cases of nouns and adjectives.

He proposes the Uniformity Condition stated below to ensure that the association of inherent Case and θ -marking holds for Case-realization as well as Case-assignment.

- 10 The Uniformity Condition (Chomsky, 1986:194)
 If α is an inherent Case-marker, then α Case-marks NP if and only if
 it θ -marks the chain headed by NP.

Unlike structural Case which is configurationally assigned under government and/or agreement to NPs on the basis of their S-structure positions, inherent Case requires the inherently Case-marked NP to be governed by the lexical category which θ -marks it at D-structure.

Within the Minimalist framework, inherent Case receives brief mention in Lasnik (1993:14) where he suggests that the appropriate Case features are "checked in situ under the head-complement relation with the verb". Schütze (1993) makes a similar suggestion in his discussion of morphological Case (inherent) and positional licensing (abstract Case) in Icelandic. Given the link to θ -role assignment, Schütze argues that NPs with morphological Case check their Case feature VP-internally at D-Structure, and since they no longer have a Case feature to check following raising, that

morphological Case has precedence over that associated with functional heads.⁶ However, while arguing that these 2 types of Case (abstract and morphological) are distinct and not interchangeable, he claims that convergence requires that NPs check both a Case and licensing feature by LF. Laka (1993) also discusses inherent Case in the minimalist framework, claiming that it involves no Agr element, but occurs when verbal Case, C_v , is discharged VP-internally.

3.2 Babby's Case Distinctions

3.2.1 Syntactic Case

Babby (1986:198-199) classifies both structural and inherent Case as Syntactic Case which he characterizes as follows.

- 11 Properties of Syntactic Case
1. Assignment is to a nominal category on the basis of its structural position in relation to other lexical or phrasal categories.
 2. Assignment is obligatory when conditions for assignment (according to the Case Hierarchy & percolation paths) have been met.
 3. Syntactic Case establishes syntactic dependencies, and does not contribute to semantic interpretation since its occurrence is predictable.

Structural and inherent Case can be combined on the assumption that inherent Case is obligatorily assigned on the basis of its structural position and that it does not contribute to semantic interpretation. While inherent Case seems crucially linked to interpretation because of its theta-role link, Babby claims that it does not contribute to semantic interpretation because its occurrence is lexically predictable.

Syntactic Case includes what Babby refers to as configurational Case, the genitive Case

⁶ The requirement of convergence proposed by Schütze addresses the problem of whether NPs marked with inherent Case additionally require structural Case. Opinions on this requirement vary, with Belletti (1988) suggesting that it may be a "necessary condition", Cowper (1988) and Harbert & Toribio (1990) suggesting that it is a cross-linguistic possibility, and Sigurdsson (1989) arguing against the possibility of chains containing more than one Case.

Schütze refers to structural Case as *positional licensing*, maintaining the term *case* (with a small c) for *m-* or *morphological case*. His analysis differs from Chomsky's in that it assumes D-structure. The proposed split of case and licensing permits motivation of NP-raising for licensing even if the Case feature of the NP has been checked.

associated with certain quantifiers, and lexical Case. Configurational Case includes both nominative Case which Babby (1986, 1987) refers to as "the configurational case par excellence" and accusative Case.⁷ He considers that both nominative and accusative Cases have an "unmarked elsewhere status" since they are uniformly assigned in NPs without other Case types. The genitive Case associated with certain quantifiers, GEN(Q) Case, is obligatorily assigned to elements following certain quantifiers⁸ in Russian. Both types of syntactic Case are shown in the examples below.

- 12 Russian
 Nominative and Accusative Configurational Case
- a) Ja im dal [_{NP} inostrannye knigi]
 I(NOM) them(DAT) gave foreign(ACC) books(ACC)
 'I gave them foreign books'
- Gen(Q) Case
- b) Ja im dal [_{NP} pjat' inostrannyx knig]
 I(NOM) them(DAT) gave five(ACC) foreign(GEN) books(GEN)
 'I gave them five foreign books'
- c) *Ja im dal [_{NP} pjat' inostrannye knigi]
 I(NOM) them(DAT) gave five(ACC) foreign(ACC) books(ACC)

Expression of lexical Case, which corresponds to inherent Case in the GB framework, is obligatory according to Freidin & Babby's Principle of Lexical Satisfaction (1984:83) stated below.

- 13 Principle of Lexical Satisfaction (PLS)
 Lexical properties must be satisfied.

⁷ According to Babby (1987:108) in Modern Russian the abstract accusative Case-marking on verbal direct objects which are singular, animate masculine, I-declension nouns, or plural *animate* nouns is morphologically realized as genitive.

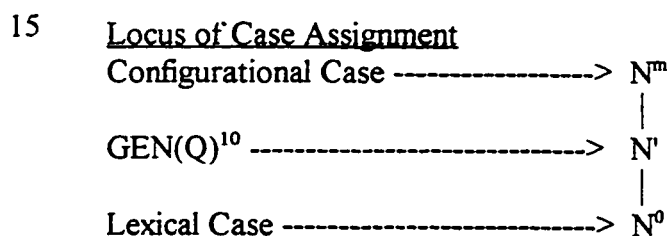
⁸ These quantifiers may include nouns such as *para* 'a few', *polovina* 'half', *bezдна* 'a great many' and all numerals except *odin* '1' which behaves like an adjective. Other numerals obligatorily impose genitive Case on following (nonoblique) head nouns, with the numerals 2-3-4 requiring genitive singular, and the others (5+) requiring genitive plural (Babby, 1987:100). Babby claims that the numbers 5-10 were feminine singular nouns in Old Russian (OR) with the status of heads, but that in Modern Russian (MR) they have undergone reanalysis to a new quantifier category whose morphosyntactic properties differ from those of nouns and adjectives. In support of this claim he notes that number agreement for determiner-type modifiers and subject-verb agreement was with the numerals in OR, but is with the following NP in MR.

14 Lexical Case in Russian

a) s [NPposlednimi pjat'ju inostrannymi knigami]
with last(INST) five(INST) foreign(INST) books(INST)
'with the last five foreign books'

b) *s [NPposlednimi pjat'ju inostrannyx knig]
with last(INST) five(INST) foreign(GEN) books(GEN)
(Babby, 1986:176)

Although configurational, GEN(Q), and lexical Case are all classified as syntactic in Babby's system, they differ with respect to their locus of Case assignment. Following his Uniform Structure Hypothesis, Case is always assigned to a uniform XP structure,⁹ namely, an NP(N^m) with an N⁰ head, as shown below.



⁹ According to Pesetsky's (1982:88) QP-Hypothesis only agreement numeral phrases with the structure [_{NP} [Q] [N]] have a uniform XP structure; phrases with the genitive of negation, distributive *po*, and no agreement numeral phrases, do not. In apparent violation of the endocentricity of X'-bar theory, they are considered QPs with a nominal head ([_{NP} [Q] [N]]).

¹⁰ In this schema, $\text{Gen}(Q)$ is assigned to an intermediate level c-commanded by Q .

percolation process; it is assigned to heads and projects upwards. Babby (1987:116) captures the observed Case distribution facts with the following Case Assignment Hierarchy.

- 16 Russian Syntactic Case Hierarchy
 Lexical Case > GEN(Q) Case > NOM/ACC

The addition of a locality principle in which direct assignment of the configurational Cases GEN(Q) and NOM/ACC takes precedence over assignment by percolation, permits Babby to reduce the hierarchy as follows:

- 17 Reduced Case Hierarchy
 Lexical Case > Configurational Case

However, given the PLS, this hierarchy seems somewhat redundant.¹¹

A crucial distinction between the analysis of Chomsky and Babby with respect to inherent Case is the assumption by the former that it is assigned to maximal projections, and by the latter that it is assigned to heads. Chomsky's analysis appears to assume homogeneous Case-marking within the NP, and while Babby's analysis can account for discontinuous Case-marking, it requires the possibility of the downward percolation, and the upward projection of Case features within the NP.

3.2.2 Semantic Case

The properties of semantic Case are noted below, with its most striking feature according to Babby being "its ability to contribute to the sentence's overall semantic interpretation" (1986:199).

- 18 Properties of Semantic Case
 1. Assignment is not determined by other lexical or phrasal categories.
 2. Assignment is not obligatory
 3. Semantic Case is associated with a specific semantic interpretation.

Semantic Case in Russian includes the genitive of negation, the partitive genitive, and the adverse

¹¹ Franks (1994:604) questions the necessity of this hierarchy given the PLS and the GB assumption that lexical (inherent) Case which is assigned at D-structure has precedence over configurational (structural) Case assigned at S-structure.

instrumental. These Cases alternate with nominative and accusative Case¹² as shown by the examples of the genitive of negation and the adverse instrumental below.

19 Genitive of Negation in Russian

- a) Ostalis' somnenija
 remained(3pl) doubts(NOMpl)
 'Doubts remained'
- b) Ne ostalos' somnenij
 Neg remained(3sg.n) doubts(GENpl)
 'No doubts remained'
 (Babby, 1980:3)

20 Adverse Instrumental in Russian

- a) Veter zadul spičku
 wind(NOM) blew-out match(ACC)
 'The wind blew out the match'
- b) Vetrom zadulo spičku
 wind(INSTR) blew-out(3sg.n) match(ACC)
 (Babby, 1986:206)

Babby notes that while nominative and accusative Case encode a definite referential reading in Russian, the genitive of negation is associated with an indefinite nonreferential reading. With the adverse instrumental, the syntactic Cases are associated with a neutral interpretation, while the instrumental semantic Case emphasizes the unpleasant consequences of a natural event. The interaction of semantic Case with lexical and configurational Case leads Babby to revise his Case assignment hierarchy as follows.

21 Revised Russian Case Assignment Hierarchy¹³
 Lexical Case > Semantic Case > Configurational Case

¹² The adverse instrumental is used to describe "agentless" natural acts with undesirable effects, and only alternates with nominative Case.

¹³ Babby's hierarchy suggests, that like Sigurðsson (1989), he excludes the possibility of double Case marking.

Although Babby describes semantic Case as optional, this optionality exists only in the syntax. Once a specific interpretation is contextually determined, Case selection must obligatorily ensure its identification.

3.3 De Hoop's Strong / Weak Case Distinction

The strong / weak Case distinction proposed by de Hoop (1991, 1992a & b) is based on interpretation and cuts across the inherent (lexical) and structural (syntactic) Case distinction. Weak Case is the structural default Case licensed at D-structure, while strong Case is licensed at S-structure. Weak Case may occur on NPs with lexical Case, but is distinguished from lexical Case in that it is not θ -linked.

Her analysis uses Type Theory in which e represents an *individual constant*, and t a *formula*. Nonprimitive types are defined as ordered pairs in which the first element, the input type, indicates the required type of expression, and the second element, the output type, identifies the resulting expression. As noted in Cann (1993:84), a one-place predicate such as *scream* combines an individual expression, type e , to give a formula, type t , which has the complex type $\langle e, t \rangle$.

In deHoop's analysis, NPs with strong Case are interpreted as generalized quantifiers of the type $\langle \langle e, t \rangle, t \rangle$, and those with weak Case are interpreted as variables, type e , or predicate modifiers, type $\langle \langle e, t \rangle, \langle e, t \rangle \rangle$. She claims (1992b:148) that subject NPs with a strong reading function as real arguments denoting generalized quantifiers, type $\langle \langle e, t \rangle, t \rangle$, whereas ones with a weak reading are interpreted as 'part of the predicate', presumably type e . Additionally, object NPs are interpreted as a generalized quantifier, type $\langle \langle e, t \rangle, t \rangle$ iff they bear strong Case. Object NPs bearing weak Case are interpreted as 'part of the predicate' and the predicate is interpreted as a one-place predicate. Such NPs may be the predicate modifier, type $\langle \langle e, t \rangle, \langle e, t \rangle \rangle$ of an intransitive verb, or a term of type e , when the verb "syntactically behaves as a transitive" (deHoop 1992a:132).

She illustrates this *generalized quantifier / part of a predicate* distinction with examples such as the following.

- According to Partee (Partee, (1987), Partee & Rooth (1983)), as cited in de Hoop (1992a) there are three basic NP types: referential NPs are type e , predicative NPs are type $\langle e, t \rangle$, and quantificational NPs are type $\langle \langle e, t \rangle, t \rangle$. Languages relate these different types of NPs by means of type-shifting principles which demonstrate cross-linguistic variation, being encoded syntactically,

lexically, or not at all. Determiners can be viewed as lexicalized type changers which change predicates of type $\langle e, t \rangle$ to NP denotations of type $\langle \langle e, t \rangle, t \rangle$. Since some languages have the option of not expressing determiners at all as in Finnish (26), or partially, by marking only definites, as in Arabic (27), Partee suggests that the determiners *a* and *the* are particularly "natural" type shifting functors.

- 26 Finnish
 Nainen osti kirjan
 woman bought book
 "A/the woman bought a/the book"
- 27 Modern Standard Arabic
 Kataba-l-kaatibu kitaaban
 wrote the writer book
 "The writer wrote the book"
 (de Hoop, 1992a:102)

Predicative *be* which is not expressed at all in some languages, (i.e. modern standard Arabic), is the inverse of the determiner *a*, in that it applies to generalized quantifiers of the type $\langle \langle e, t \rangle, t \rangle$ changing them to NPs of the type $\langle e, t \rangle$. According to Partee, positions are subcategorized as *e* or $\langle e, t \rangle$, but never as $\langle \langle e, t \rangle, t \rangle$. In the framework of de Hoop's strong / weak Case distinction, strong Case is a type-shifting functor that lifts argument NPs of type *e* or $\langle e, t \rangle$, whether in subject or object position, to quantificational NPs of the type $\langle \langle e, t \rangle, t \rangle$ and the associated strong reading. Regardless of the strength of their determiners, object NPs on their strong reading are always of type $\langle \langle e, t \rangle, t \rangle$,¹⁴ and on their weak reading they are either type $\langle \langle e, t \rangle, \langle e, t \rangle \rangle$ or type *e*. Objects of type $\langle \langle e, t \rangle, \langle e, t \rangle \rangle$ function as modifiers of one place (intransitive) predicates, while objects of type *e* function as modifiers of verbs which syntactically appear to be transitive. De Hoop considers incorporation

¹⁴ According to de Hoop, even quantificational NPs are not always of type $\langle \langle e, t \rangle, t \rangle$ as suggested by Partee. Strong quantificational NPs which bear weak Case must be of the predicate modifier type $\langle \langle e, t \rangle, \langle e, t \rangle \rangle$ which is why they are represented as PPs instead of NPs in languages such as English.

"the ultimate morphological realization" of the part of the predicate interpretation.¹⁵

Quantificational NPs in Finnish can bear partitive Case¹⁶ when they are objects of atelic or irresultative predicates as shown in (28). In this case, de Hoop considers them to be interpreted as "part of the predicate" (Ibid.:105) and to function as predicate modifiers which are type $\langle\langle e, t \rangle, \langle e, t \rangle\rangle$.

- 28 Finnish
 Presidentti ampui **kaikkia lintuja**
 President shot **all(PART) birds(PART)**
 "The president shot [**at all birds_{pp}**]"
 (Ibid.:104)

According to de Hoop the PP in the English translation¹⁷ indicates that the partitive marked NP bears weak Case and is interpreted as a predicative modifier type, $\langle\langle e, t \rangle, \langle e, t \rangle\rangle$. If the postverbal NP is marked accusative as in (29), she claims that it functions as an argument of the verb, bears strong Case, and is of the generalized quantifier type, $\langle\langle e, t \rangle, t \rangle$.

- 29 Finnish
 Presidentti ampui **linnun**
 president shot **bird(ACC)**
 "The president shot **a/the bird**"
 (Ibid.:105)

Although some NPs maintain their strong referential reading whether scrambled or not, others lose this reading when they are interpreted as part of the predicate. Only strong Case can be

¹⁵ She provides examples from the Groningen dialect of Dutch in which strong NPs can get incorporated, a process which, according to her generalization, requires them to have the part of the predicate interpretation. However, she makes no predictions about the Case of incorporated NPs given that they may not even require Case.

¹⁶ According to Chesterman (1991), partitive Case is the main Case for object NPs in Finnish. It is obligatory after a negative verb. Intrinsically irresultative verbs invariably require partitive Case on their objects, but it is restricted to partial quantity NPs following resultative verbs. Total quantity NPs which are objects of resultative verbs are assigned accusative Case.

¹⁷ While the PP in the English translation captures the atelic aspect, de Hoop notes that translation of an object NP as a PP in English is not sufficient to indicate that it is a predicate modifier. Presumably translation of an object NP to an NP in English is also not sufficient to exclude interpretation as a predicative modifier since the PP translation option is not available to convey this aspectual distinction for all verbs.

30 Turkish

a) Ben dün aşam çok güzel bir¹⁹ biftek yedim
I yesterday evening very nice a steak ate
"Yesterday evening, I ate a very nice steak"

b) *Ben çok güzel bir biftek dün aşam yedim
I very nice a steak yesterday evening ate

c) Ben bifteg-i dün aşam yedim
I steak(ACC) yesterday evening ate
"I ate the steak yesterday evening"
(de Hoop, 1992a:78)

DeHoop (Ibid. 166) claims that the principle of contrastiveness requires object NPs of type $\langle\langle e, t \rangle, t \rangle$ to have contrastive predicates.²⁰ This is demonstrated by the following examples from

²⁰ DeHoop (Idem) claims that this principle, stated below, in fact holds for all NPs of type $\langle\langle e, t \rangle, t \rangle$.
Principle of Contrastiveness (POC)
For all NPs Q of type $\langle\langle e, t \rangle, t \rangle$ and predicates P : $Q(P)$ is only appropriate if $|P| \in C$ & $|C| \geq 2$.

Dutch, where NPs with strong Case and NPs with scrambled weak Case are excluded since *reizen* 'travel' is a predicate with no contrastive alternates.

- 31 Dutch
 a) Strong Case with Noncontrastive Predicate
 *Ik heb gisteren **alle/de meester kilometers** gereisd
 'I have traveled **all/most kilometers** yesterday'

 b) Scrambled Weak Case with Noncontrastive Predicate
 * Ik heb **enkele kilometers** gisteren gereisd
 'I have **some kilometers** yesterday traveled'
 (Ibid.:106)

Since the direct object NPs in both (a&b) cannot be passivized, and can be deleted, de Hoop claims that *reizen* is in fact an intransitive verb, and that the NP in question functions not as an object, but as a predicate modifier type, $\langle \langle e, t \rangle, \langle e, t \rangle \rangle$. However, acceptability results if the predicate is changed to a contrastive one such as *te paard afleggen* 'cover on horseback' which contrasts with *te voet afleggen* 'cover on foot', or if the adverb is stressed thereby making the predicate contrastive (traveled *yesterday* as opposed to *today*).

De Hoop's strong / weak Case distinction makes reference to the following Case positions. for object and subject NPs. For object NPs, the licensing of weak Case at D-structure requires "a certain configuration... for instance government" (1991:137) by a transitive verb or a preposition. For subject NPs, she adopts an analysis in which languages vary as to the position in which they base generate subject NPs. She claims that in English all subjects are base generated in Spec-IP, a position which permits both weak and strong nominative subjects. Thus, in English existential *there* sentences, *there* is in Spec-IP, and the VP-internal NP can only receive a weak reading. However, in Dutch, the D-structure position for all subjects is Spec-VP, a position associated with both strong and weak Case. NPs that undergo raising to Spec-IP can only get the strong Case reading, the only interpretation associated with this position in Dutch. This duality of subject positions in Dutch makes it possible for postverbal NPs in existential *there* sentences to have either a strong or weak reading even though the definiteness effect still applies. Additionally, there is no requirement for verbs in this construction to be ergative as there is in English.

3.4 Moorcroft's Componential Case Types

Moorcroft (1995) proposes cross-linguistic variation in the number of clause level functional projections in the Germanic V2 languages of Danish, Icelandic, Yiddish, and German, and develops a theory of Case which distinguishes the following three components:

- 32 Moorcroft's Case components (Ibid.:123)
- a) thematic case or *t-case* which licenses thematic roles
 - b) abstract case or *a-case* which licenses a phonetically specified NP
 - c) specific case or *s-case* which marks specific reference and is limited to presupposed NPs

Both *a-case* and *t-case* are assigned overtly in the syntax, while *s-case*, which is linked to a specific interpretation, can be assigned at LF.²¹ She argues that the obligatoriness of a case component for an argument is dependent upon its grammatical function and reference. The only component that is obligatory for all verbal arguments is *t-case*, the only case required by objects. Subjects require both *t-case* and *a-case*, and only presupposed NPs with specific reference require *s-case*. This analysis accommodates the possibility of Case being assigned by different Case assigners and in different structural positions, with the only condition on the marking of case being that it "should be visible, either structurally or morphologically" (Ibid. 125), a condition which resembles Gerdts' Principle of Relational Visibility.

3.5 Summary of Reviewed Case Types

Previous analysis identifies the following functions of Case.

- 33 Case Type Functions
- a) identification of grammatical roles
 - b) expression of a lexical property of certain predicates
 - c) identification of semantic interpretation

While there seems to be some agreement about the functions of Case, as demonstrated by the review of Case types, this agreement does not extend to the interpretation, expression and licensing of the

²¹ According to Moorcroft (Ibid.:165), it is "assigned at LF only if the language has no structural positions in which an argument can receive *s-case*".

different Case types. The following section motivates the proposed function based classification of Case which serves as the basis for explaining the variation found in the realization and licensing of Case.

3.6 Information Based Case Types

The functions of the three Case types introduced in chapter 1 are distinguished by the type of information encoded. The first type, Grammatical Case, identifies configurationally determined grammatical roles. In an SVO head-initial language, in a pre-minimalist structure with a nonarticulated INFL, the [Spec-IP] position identifies subject NPs, the [VP, NP] position, direct object NPs, and the [PP, NP] position, indirect objects. As a configurational feature, Grammatical Case combines aspects of Chomsky's structural Case and Babby's configurational Case. It is concerned solely with the identification of grammatical roles, and as such, cuts across the Moorcroft's Case classification in which subject NPs obligatorily require *a-case*, while verbal object NPs (and presumably prepositional ones too) only need *t-case*. While referred to as "Case", its realization is not restricted to morphological Case-marking.

Using Dixon's terminology extended to include the grammatical role of indirect object, I refer to the markings of the configurationally-determined grammatical roles as follows:

- 34 Grammatical Case
- a) S-marking identifies the subject position of intransitive verbs
 - b) A-marking identifies the subject position of transitive verbs
 - c) O-marking identifies the object position of transitive verbs
 - c) IO-marking identifies the indirect object position of prepositions

Since Grammatical Case is a configurationally determined feature of NPs in syntactic derivations, S-, A-, O- and IO- markings are not required on NPs in isolation.

In the following example from Chukchee,²² grammatical Case coincides with the morphological Case markings; ergative Case A-marks the subject, and absolutive Case O-marks the object.

²² Chukchee, or Chukchi, is a Palaeosiberian language from the Luorawetlan group.

- 35 Syntactic Case in Chukchee
 ætləg-e lʔunin ekək
 father(ERG) saw son(ABS)
 'The father(A) saw the son(O)'
 (Spencer, 1991:24)

However, as noted by Gerds' study of thirty-seven languages, when grammatical roles are not morphologically marked by Case, word order is more constrained. This is demonstrated by Korean, a language with relatively free word order, which O'Grady (1991:210) suggests is licensed by the "constancy in the function of case markers". When object NPs are marked with accusative Case, they are free to move to a preverbal position, but as noted by the following examples from Gerds (1990:200), when the accusative Case marker is absent (a grammatical option), they cannot move to this position.²³

- 36 Word Order and Optional Accusative Case in Korean
 a) Chelsu-ka haksəng-tɨl-ɨl manna-t-ta
 Chelsu(NOM) student (pl.ACC) meet(pst-ind)
 'Chulsoo met the students'
 b) Haksəng-tɨl-ɨl Chelsu-ka manna-t-ta
 student (pl. ACC) Chelsu(NOM) meet(pst.ind)
 'Chulsoo met the students'
 c) *Haksəng-tɨl Chelsu -ka manna-t-ta
 student -(pl) Chelsu(NOM) meet(pst.inf)

The object NP *haksəng* 'student' is only free to move in front of the subject NP *Chelsu* 'Chulsoo' when it is marked with accusative Case

In languages with morphological Case, the realization of this Case marker is not restricted to the NP in a structural position linked with a grammatical role. In the following Malayalam example, the nominative (S) Case marking activated by the NP *baalanə* 'boy' in the subject position does not

²³ With reference to the distinguishing characteristics of prepositions and Case markers in Korean, O'Grady (1991:5) notes that only the Case suffixes are optional. Youn (1990:29) notes that nominal plural marking also appears inconsistently.

appear on this NP but rather on the nonsubject NP *saṁtoṣam* 'happiness'.²⁴

- 37 Malayalam
 baalanə saṁtoṣam waṇṇu
 boy(DAT) happiness(NOM) come(past)
 'The boy became happy'
 Mohanan & Mohanan (1990:47)

The second Case type is lexical or inherent Case, a lexical property of certain predicates. It encodes a fixed semantic relation which is identified by a specific morphological Case-marking on a predication argument. Lexical Case avoids the problem of θ -role specification, requiring only that the relation between the predicate and its argument be fixed across contexts of occurrence. I refer to the morphological Case specified in the lexical entry of the predicate as Case *x*. It is demonstrated in the following Malayalam example in which the sole argument, *kuṭṭik'k'ə* 'the child', of the verb *ṭaṇuṭṭu* 'be cold' must be marked with dative Case.

- 38 Malayalam
 kuṭṭik'k'ə / *kuṭṭi ṭaṇuṭṭu
 child(DAT) child(NOM) be cold(past)
 'The child was cold.'
 (Mohanani & Mohanan, 1990:43)

While the definition of lexical Case proposed here resembles that of Babby, there are crucial differences. First, contrary to his analysis, both quantificational genitive and the genitive of negation in Russian would be classified as lexical given the consistency of genitive Case marking in the presence of either the quantifiers or negative markers so specified.²⁵ Secondly, while Babby (1986) considers lexical Case a feature of nominal heads, I assume that it is assigned to XPs. Lexical Case also differs from Moorcroft's *t*-case, the Case of objects, since *t*-case does not encode a fixed

²⁴ As discussed in detail in chapter 5, the syntactic properties of the dative NP indicate that it is in the structural subject position.

²⁵ This classification is in fact quite different from that proposed by Babby, and leads to very different predictions as far as the interaction of Case types and the requirement for lexical satisfaction. These differences are discussed in detail in the following chapter.

semantic relation that is uniformly identified by a lexically specified morphological Case. Although the Case of objects in nominative/accusative systems is generally accusative, this accusative marking is not constant across contexts as shown by its loss under passivization in the following Russian example.

- 39 Russian
 a) Active
 Maša kupila šapku
 Masha(NOM) bought cap(ACC)
 'Masha bought a cap'
 b) Passive
 Šapka byla kuplena Mašej
 cap(NOM) was bought Masha
 'The cap was bought by Masha'
 (Comrie, 1989:71)

However, the possibility of lexical Case marking on objects is demonstrated by the following Icelandic example from Yip, Maling, & Jackendoff (1987:233). They claim that the accusative Case marking of *peningana* 'money' in (a) is not the usual accusative (O) Case-marking, but is in fact an instance of lexical Case since it is preserved under movement as shown in (b) where the verb *vantar* is used monadically.

- 40 Preservation of Postverbal Lexical Accusative in Icelandic
 a) Active
 Mig vantar peningana
 Me(ACC) lacks(3sg) money(ACC)
 'I lack money'
 b) Passive
 Peningana vantar
 the-money(ACC) is lacking(3sg)

While the contrast with the Russian example supports the claim that the accusative (O) marking realized on the argument of *vantar* 'lacking' is lexical, it does not exclude the possibility of the argument so marked being additionally marked with grammatical Case.

The third Case type, semantic Case, encodes semantic information about the nominal in

relation to its context of occurrence. Although inspired by, and closely related to Babby's definition of semantic Case, it combines the semantic interpretation associated with Babby's Russian examples, de Hoop's strong and weak Case, and Moorcroft's *s-case*. Semantic identification may be expressed by morphological Case as with the Russian adverse instrumental mentioned earlier, and with the partitive genitive marking of a weak interpretative reading in the following example.

- 41 The Partitive Genitive in Russian
 a) Xleb ostalsja
 bread(NOM) remained
 'The bread was left over'

 b) Xleba ostalos
 Xleba(GEN) remained
 'Some bread was left over'
 (Babby, 1986:204)

Although associated with interpretative meaning, the adverse instrumental and the partitive genitive are not instances of lexical Case since the interpretation encoded is not linked to a specific lexical item. Rather, as shown by the contrast in interpretation between the (a) and (b) examples, this type of Case identifies interpretation determined by the referential relation of the NP to its context of occurrence. As shown by the Hindi example (13) of Chapter 2 in which the topicalized inanimate object NP is interpreted as definite, semantic Case, like grammatical Case, is not restricted to realization by morphological Case.

Semantic Case encodes contextually determined information which is often morphosyntactically complex in its realization. While licensing on the basis of morphosyntactic features may, in some instances, be possible, the licensing of semantic Case requires that the interpretation encoded in the grammar, and identified at the level of logical form (LF), match the interpretation specified in the referential world of the discourse.

3.7 Conclusion

Following a review of previously proposed Case types, I identified three "Case " types based on the type of information encoded. The first type, grammatical Case ensures identification of the

grammatical role of an NP on the basis of its structural position. Although not restricted to identification by morphological Case, in languages with morphological Case, the occurrence of an NP in a structural position associated with a grammatical role activates the associated Case marker. The second type, lexical Case, a feature of certain lexical predicates, encodes a fixed aspect of the predicate argument relation by a specific morphological Case. The third type, semantic Case, encodes a contextually determined semantic interpretation which is often morphologically complex in its realization.

While lexical Case is a feature of certain lexical predicates, Case is not a feature of nominals in isolation. It is only required on nominals in syntactic derivations to identify aspects of their syntactic or semantic relations. The proposed tripartite classification suggests that the Case types distinguished by the type of information encoded may also be distinguished by their level of specification. Only lexical Case which is linked to certain lexical predicates is specified in the lexicon. Grammatical Case which is concerned with the identification of grammatical roles requires specification in the syntax, and the interpretation encoded by Semantic Case is identifiable at the level of logical form.

However, the issue of the licensing of the Case types remains to be addressed. In the following chapter, I propose a licensing procedure which relies on a combination of feature matching and feature percolation. This procedure highlights differences in the licensing of each Case type and raises questions about the interaction of Case types.

Chapter 4 The Licensing of Case

4.0 Introduction

In this chapter, I propose licensing procedures which are sensitive to Case type differences. The proposed analysis incorporates aspects of the categorial signatures and percolation constraints proposed in Lieber (1992), and makes a distinction between inherent features, those specified in the citation form of a lexical item, and derived features, those which only require specification in syntactic derivations. The ϕ -features of person, number, and grammatical gender are inherent nominal features and as such contrast with Case, a derived nominal feature. Grammatical and lexical Case undergo relational identification in a spec-head agreement or sisterhood configuration, but since semantic Case is contextually determined, it undergoes relational identification with the context of occurrence. Licensing additionally requires that the relationally identified features match.

4.1 Lieber's Percolation Analysis

In the licensing procedure I am proposing, Lieber's (1992) word level account of categorial signatures and feature percolation is extended to the syntactic level. In her analysis, percolation takes place within a frame which she refers to as the categorial signature, a collection of all the morphosyntactic features of the categories $[\pm N]$, $[\pm V]$ that are of syntactic relevance in a particular language. Person features have a binary classification for first and second person which provides the possibilities outlined in Table 1.

PERSON	$\pm I$	$\pm II$
first	+I	-II
second	-I	+II
third	-I	-II
inclusive first & second	+I	+II

Table 1
Person Specification

Binary masculine and feminine features provide the 3-way gender distinction shown in Table 2.

GENDER	±MASC	±FEM
MASC	+MASC	-FEM
FEM	-MASC	+FEM
NEUT	-MASC	-FEM

Table 2
Gender Specification

While gender features are relevant features of the Lexical Conceptual Structure of certain nouns in all languages, they are only included in the nominal categorial signatures of languages in which gender is a morphosyntactic feature. Lieber also uses a binary classification for Case so that a classification of the type $[\pm\text{Case}_i]$, $[\pm\text{Case}_j]$ provides a 4-way Case distinction.

Categorial signatures are sensitive to cross-linguistic differences as shown by the following nominal categorial signatures which Lieber (Ibid.:89) proposes for German, English and Chinese.

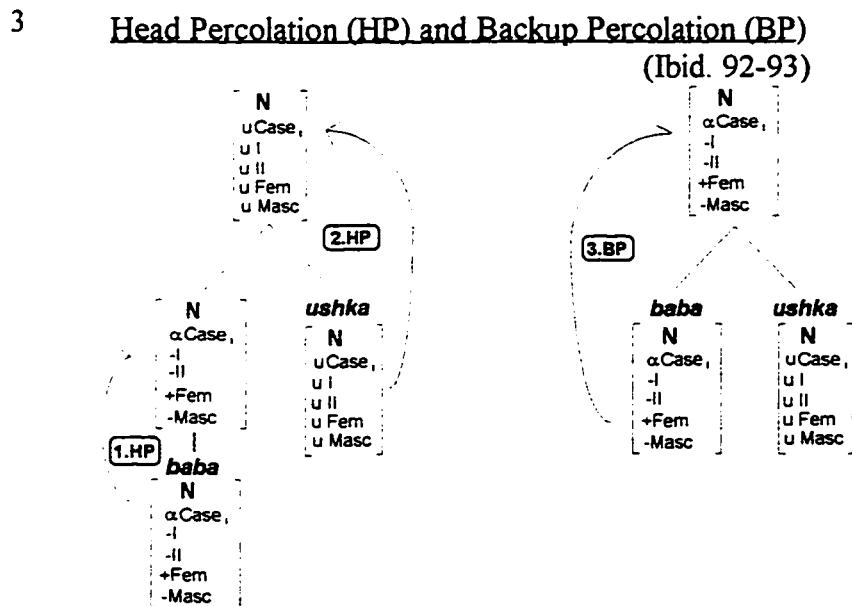
- ¹ a) English Nouns
[±plural, ±I, ±II]
- b) German Nouns
[±plural, ±Case_i, ±Case_j, ±Fem, ±Masc, ±I, ±II]
- c) Chinese Nouns
[N]

Categorial signatures prevent features from crossing categorial lines, and feature percolation is constrained by the following percolation conventions (Ibid.:92) (cf. Cowper, (1987), di Sciullo & Williams, (1987)).

- ² a) Head Percolation
Morphosyntactic features are passed from a head morpheme to the node dominating the head
- b) Backup Percolation
If the node dominating the head remains unmarked for a given feature after the Head Percolation, then a value for that feature is percolated from an immediately dominated nonhead branch marked for that feature. Backup

Percolation propagates only values for unmarked features ¹ and is strictly local.

Lieber illustrates these conventions with reference to the Russian diminutive noun *bab-ushka* 'grandmother'. As shown in (3) below, the noun *baba*, provides the specification [α Case, -I, -II, +Fem, -Masc] for its nominal categorical signature feature through Head Percolation (1.HP). The diminutive suffix *-ushka* which is also a head, changes this specification through the head percolation of its unmarked features to [uCase, uI, uII, uFem, uMasc] (2.HP). This results in an unmarked dominating head node which becomes marked [α Case, -I, -II, +Fem, -Masc] through the Backup Percolation (3.BP) of the features of *baba* which is now a nonhead, being word internal [*baba* ushka].



In Lieber's analysis, derivational morphemes have full categorical signatures while inflectional features are only specified for the features they carry. Derivational morphemes can override the specification of inner morphemes, but inflectional morphemes which are only "affected" by Backup Percolation fill in features unspecified in the categorical signatures of their bases.

While Lieber's analysis concentrates on word-internal percolation, she considers percolation

¹ Unmarked features do not have an assigned value.

to be operative at all levels of the grammar. However, she notes that the derivational / inflectional distinction is problematic for proposals within the GB framework which suggest that verb-movement involves movement of a head to a governing INFL. Since INFL is viewed as the locus of tense and agreement and affixation occurs after head movement of the verb, these affixes appear to be category changing which should be impossible if inflectional affixes do not possess categorial signatures. She suggests a possible solution is to consider that INFL lacks its own categorial signature, but that the category features of the verb can percolate to the top of the INFL node, and tense and agreement features can be added by Backup Percolation. In the following section, I provide an account of the licensing of the different Case types which incorporates Lieber's notion of categorial signatures and adapts feature percolation to the syntax.

4.2 The Percolation and Licensing of Features

Adapting Lieber's notion of categorial signature to the syntax, I assume that the terminal nodes of syntactic trees have categorial signatures.² The generalized categorial signatures for these nodes include features which are potentially active in the syntax, and, as in Lieber's analysis, language-specific categorial signatures are composed of a subset of these features. In contrast to the minimalist assumption of syntactic nodes with specified features, the categorial signatures of the terminal nodes are unspecified, and only receive their specification after lexical insertion.

The percolation and licensing of features varies according to whether they are inherent or derived features of the category they specify. Inherent features are specified in the citation form of lexical items, and this specification can only be changed if they are in the scope of another inherent feature of the same type. They contrast with derived features which need not be specified in the citation or dictionary form of lexical items, and which, even if specified, have varied realizations that are dependent upon syntactic context.³

² See Holmberg (1986) and Sigurðsson (1989) for other percolation accounts of Case.

³ See Lumsden (1987) for an analysis in which features, whether expressed as affixes, or as minor grammatical categories such as determiners and prepositions, head independent phrases. Lexical entries have two feature matrices, one for their major categorial features, and one for their grammatical or minor categorial features. The independent status of the features of inflectional affixes is obscured by the head-to-head movement required by their underlying phonological incompleteness. Affixal "agreement" involves percolation of syntactic features and requires that agreeing elements be in the same constituent underlyingly.

Lexical Case is an inherent feature specified in the citation form of certain predicates. It is often indicated by reference to a complement marked with the specified Case, as shown by the dictionary entries for the impersonal Icelandic verb *svima* 'feel dizzy' cited in (a), and the German preposition *bei* 'near, by' (b) cited below.

- 4 a) Icelandic
svima (v): mig svimar
 me(ACC) dizzy
 'I feel dizzy, faint'
 (Taylor, 1990:141)
- b) German
bei (prp): ... dem Haus
 by, near the(DAT) house
 'close to the house'
 (Messinger, von, 1982:163)

The Case marking on the NPs indicates that the meaning illustrated by these examples is obligatorily encoded by accusative Case with *svima*, and by dative Case with *bei*. Case can only be an inherent feature of predicates. While the dictionary entries of nominals in languages with morphological Case are Case-marked, this Case-marking is a derived feature since its form is dependent upon syntactic context and/or interpretation.

Following the lexicalist hypothesis (cf. Lapointe (1980), Lieber (1980), Williams (1981), Selkirk (1982), Di Sciullo & Williams (1988)), I assume that lexical items are inserted into derivations fully inflected, with the ordering of word-internal elements (stems and affixes) being determined by the application of word formation rules.⁴ Although the syntax does not have access to the internal ordering of the morphological marking of features, the minimalist assumption of licensing by feature matching requires that the syntax have access to the features encoded (cf. Jensen & Stong-Jensen (1984)).

⁴ Discussion of the interaction of morphology and syntax raises questions about the possibility of domain-specific rules. Baker's (1988) Mirror Principle suggests that order of morphological and syntactic changes is reciprocally reflected in derivations. Lieber (1992) argues that derivational parameters such as the position of a head with respect to its complements, modifiers, and specifiers is set just once for both the morphology and the syntax of each language. For a comparison of the maximal projections of words and phrases, see Williams (1989).

As noted in chapter 1, I distinguish between relational identification and licensing. Relational Identification requires identification of relational features such as Case and occurs in the following syntactic configurations.⁵

- 5 Relational Identification Configurations
 a) Spec-head agreement
 b) Sisterhood

Relational identification does not ensure licensing, which additionally requires that the identified features match the X^0 features of the categorial signatures specified by lexical insertion. If the features specified by relational identification are X^{MAX} or X' features, features specified by lexical insertion must percolate until in a matching configuration. The specified features of heads may percolate upwards to their maximal projection and undergo projection-external relational identification as in the case of nominal ϕ -features participating in verbal concord. Percolation is constrained as in (6), with a blocking element defined as in (7) (cf. Holmberg (1986:60).

- 6 Percolation Constraints
 a) Features **must** percolate until licensed.
 b) Features **may** continue to percolate if no blocking element is met.
- 7 Blocking Element
 a) An identical feature with a different specification.

Feature percolation paths and licensing procedures vary according to category and feature type. Complementiser agreement, a feature of numerous dialects of Dutch, German, and Frisian demonstrates the possibility of continued feature percolation (6a) in the absence of a conflicting specification. In the following example from West Flemish cited in Zwart (1993:160), a language which has a complete paradigm of complementiser agreement, the agreement morpheme of the complementiser is identical to that of the verb.

⁵ Since the expression of semantic Case requires the relational identification of contextually determined features, it is not necessarily constrained by these configurations.

- 8 West Flemish
 da -n -k ik kome-n
 that-1sg-I I come -1sg
 'that I come'

This suggests that the ϕ -features of the (pro)nominal head percolate to an XP position, presumably ArgSP, where they undergo additional licensing, this time by feature matching under sisterhood, with the complementizer.

The interaction of Case types illustrates the functioning of a blocking element. As a relationally identified X^{MAX} feature, Case undergoes licensing with the Case features specified by lexical insertion. However, if it encounters a Case feature with a different specification, as in the Russian example (12) in Chapter 3 repeated below as (9), the licensing by feature matching of the X^{MAX} accusative Case feature and that specified by lexical insertion are blocked by the inherent genitive Case of the quantifier realized on the quantified complement *inostrannyx knig* 'foreign books'.

- 9 Russian Gen(Q) Case
 Ja im dal [_{NP} pjat' inostrannyx knig]
 I(NOM) them(DAT) gave five(ACC) foreign(GEN) books(GEN)
 'I gave them five foreign books'

As an inherent feature, lexical Case has the potential to override other Case types, a process ensured by Freidin & Babby's Principle of Lexical Satisfaction (1984:83) which is stated below.

- 10 Principle of Lexical Satisfaction
 Lexical properties must be satisfied.

According to Babby's (1986:186) analysis, when a noun is governed by a lexical Case assigner, the lexical Case feature "is assigned directly to the head noun N^0 and is projected up along with the head's other syntactic features (gender, number, animacy)". A variation of this analysis is reiterated by Freidin & Sprouse (1991:397) who assume "that lexical Case marking involves a head-to-head

relation (like selection)".⁶ While acknowledging that lexical Case is a feature of the predication head for which it is specified, I consider that like other Case features, it is a derived NP feature which, following relational identification, is licensed by feature matching with the N^0 Case feature specified by lexical insertion.

4.3 Nominal Features

While not specifying the form of isolated items in the lexicon, I assume that besides denotational meaning and category $[\pm N]$, $[\pm V]$, lexical items are specified for their inherent features. The features of nominal categorial signatures will minimally include what Chomsky (1981:31) refers to as ϕ -features: person, number, grammatical gender and Case,⁷ features which according to Bouchard's Principle of Lexicalization (1984:41) are necessary for the lexicalization of a noun at PF.⁸

As stated in Lyons (1968:276), "*person* is clearly definable with reference to the notion of participant-roles". I adopt the person specification used by Lieber and outlined in Table 1 since this classification recognizes the negative nature of third person, which unlike first and second person does not refer to participant roles. Although often unmarked, the possibility of a third person setting is included in the categorial signature of terminal nominal nodes because of its role in verbal concord.

While not grammaticalized features in all languages, number and grammatical gender are also considered features of the nominal categorial signature.⁹ Number is indicated in the categorial

⁶ They further assume "that Case is assigned to a maximal projection" and propagates to the head lexically marking all projections of N ("and presumably all lexical constituents governed by N"). Arguing for a distinction between assignment, "a lexical property of certain heads", and licensing, "a configurational property of constructions", they replace the Case Filter with the following Case Licensing Principle:

A lexical NP (that is one containing phonetic material) must occur in a Case-licensed position.

⁷ They can be adapted to include other features which have the potential to play a role in the syntax.

⁸ Bouchard refers to ϕ -features as ψ -features. Although I have argued for Case as a derived feature, given the lexicalist assumption of insertion applying to fully inflected lexical items, and the proposal that categorial signatures represent the terminal nodes in syntactic derivations, categorial signatures must permit specification of both inherent and derived features.

⁹ Sigurðsson (1989:113) considers both number and gender head features of NPs.

signature by the binary feature [$\pm$ plural].¹⁰ Although only marked on the citation form of nouns with irregular plurals such as *child*, *children*, I consider number an inherent feature of nouns since it can be directly determined by reference to the nominal in isolation. This contrasts with features such as definiteness whose specification is contextually or syntactically dependent.¹¹ Following Lieber, I use the grammatical gender classification outlined in Table 2.¹²

Person, number and (grammatical) gender are inherent features of lexical nouns, and features of the categorial signatures of terminal nominal nodes to which they are inserted. As inherent features they are licensed projection-internally at the point of lexical insertion. They only require further identification when participating in projection-internal or projection-external concord relations.

11 Properties of Inherent Nominal Features

- a) They are specified in the citation form of lexical item.
- b) Their citation form specification cannot be overridden in syntactic derivations.
- c) They can be licensed projection-internally.

Case, unlike the specification of citation form ϕ -features, is a derived feature whose marking is dependent upon the syntactic context of the NP it marks.¹³ The presence of Case on citation form nominals highlights the distinction between marking and specification. The morphological marking of features such as Case on citation forms provides the lexical items thus marked with a specific phonological form. However, this Case-marking is a default, noncontextualized marking, which does not reflect the specification of Case, a feature which is determined by syntactic context.¹⁴

¹⁰ I use [$\pm$ plural] rather than [$\pm$ singular] since plurality is the more marked feature. (See Croft, 1990 for discussion). Languages such as Inuktitut which have a dual marking for two and only two, would additionally require a [$\pm$ dual] specification.

¹¹ For an optimality account of the plural morpheme in English see Proctor (1996).

¹² Gender represents one type of noun class distinction, and like other noun class features, its semantic-based link is not always direct. While languages such as the Bantu languages of Swahili and SiSwati may have more than six semantic based noun classes, discussion is restricted to gender as a representative noun class feature.

¹³ This distinction between Case and the other ϕ -features supports the claim by Bittner & Hale (1996) that while structural Case and pronominal agreement correlate in a "nontrivial" manner, they are independent phenomena.

¹⁴ The Case of citation form nominals is usually nominative (or absolutive), Case markings, which as previously noted, are often unmarked.

Another derived nominal feature is the referential feature of definiteness.¹⁵ Its specification is determined by relational identification with its context of occurrence. Like Case, it shows variation in its morphosyntactic form. It may be unmarked, surface as a suffix or a distinct lexical determiner, or be expressed by the interaction of a combination of factors such as animacy and word order.¹⁶ Like the ϕ -features of person, number and gender, definiteness has a binary classification as [$\pm$ definite]. When Case type is not specified, Case is just indicated as [Case].¹⁷

Although Case and definiteness may be marked on the nominal citation form, they are derived features reflecting a projection-external relation, and as such, must undergo relational identification prior to licensing. The inherent and derived features mentioned above form the following minimal generalized categorial signature for terminal nominal nodes.

- 12 The Categorial Signature for the Terminal Node of Nominals
- a) Inherent Features
 [$\pm$ I, $\pm$ II], [$\pm$ plural], ([$\pm$ Fem, $\pm$ Masc])¹⁸
- b) Derived Features
 ([$\pm$ definite]), ([Case])

Prior to examining the percolation and licensing of these nominal features, I examine the nature of the nominal projection.

¹⁵ Definiteness is representative of semantic features which could also include features such as [$\pm$ specific], [$\pm$ individuated], [$\pm$ generic] etc. While definiteness is an integral factor in the realization of semantic Case associated with the strong and weak reading of a nominal, it is not the sole factor in this type of Case and is hence referred to as a feature not as an instance of semantic Case.

¹⁶ The cross-linguistic variation found in the ability of definiteness to surface as a distinct lexical item or as an affix resembles the variation found in the form of verbal inflection.

¹⁷ The binary classification accompanied by indices used by Lieber which allows for the identification of specific morphological Cases is not used here to leave open the possibility of Case type variation and multiple Case marking.

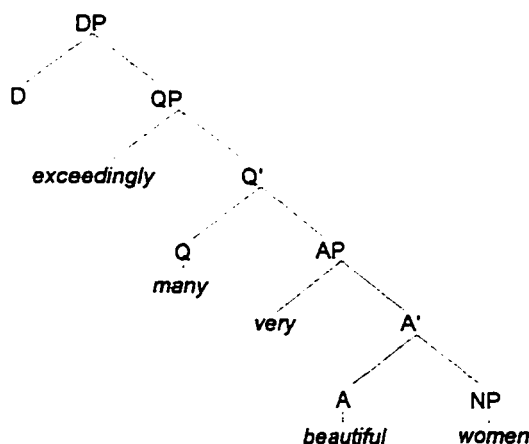
¹⁸ Parentheses indicate the optionality either of the feature in the case of grammatical gender, or of morphological expression of the feature as in the case of definiteness and Case.

4.4 The Nature of the Nominal Projection

The question of feature percolation within the nominal projection raises the question of the nature of this projection. Two possibilities are the D(eterminer) P(hrase) structure proposed by Abney (1987) (cf. Brame, 1982), and the X-bar structure of a head noun (N^0), projecting to a maximal N(ominal) P(rojection) which has the determiner in the specifier position.

Abney proposes a structure in which determiners head a functional projection, DP, above nouns, analogous to the functional projection(s) above the VP. Between the determiner head and the NP, there are QP and AP projections each with their own head and specifier positions as shown below.¹⁹

13 Abney's DP Structure (Ibid.339)



He considers D, as the head of the noun phrase, to be the site of an NP's referential features, and also suggests (Ibid.:283) that the full range of inflectional markings found on the determiners of many languages indicates that they are also the site of its grammatical or ϕ -features. While determiners are often the site for the realization of such features in a language, the first language acquisition data reported in Karmiloff-Smith (1977, 1986) clearly indicate that determiners are not the locus for their specification.

¹⁹ While admitting some problems with this aspect of his analysis, he assumes that NP has no specifiers of its own, although QP and AP, potential complements of D, do have specifiers. Cardinaletti (1994) adopts Abney's proposal that English pronouns are intransitive D's for clitic pronouns, but considers strong pronouns to be DPs with an internal NP.

Karmiloff-Smith (1986) found that French-speaking children pass through 3 levels in their acquisition of what she refers to as the "plurifunctionality" of morphological elements such as determiners. Prior to age five, they employ morphemes in a unifunctional manner. At this stage, although they appear to use articles such as *les*, or *mes* correctly, they use them to mark plurality or plural possession only, and are unaware of their "totalizing" function, and of the fact that *mes x* 'my x' indicates a subset of the total class of objets being referred to. Specification of most features is determined extralinguistically, and the definite article *le/la* serves a clearly deictic function. Following this unifunctional stage, there is an agrammatical phase, in which there is redundant marking of each function.

The acquisition of gender specification as marked on determiners, reflected a strong sensitivity to gender-based nominal endings. These included endings such as *-on*(M), and *-onne*(F),²⁰ with children identifying imaginary female figures referred to as *bicrons* as *le bicron* on the basis of the ending *-on*. Karmiloff-Smith's experiments suggest that while determiners are often the site for the morphological realization of nominal features, the nominals themselves are the site which determines the specification of these features.²¹ This finding argues against motivation of a DP analysis based on the assumption that the determiner is the site of nominal grammatical features such as gender. The recognition of nouns as the site for specification of their grammatical features is readily accounted for in an NP analysis, and accommodates the assumption that such features can undergo relational identification, licensing and percolation within this projection. In this light, I adopt the NP analysis.²²

²⁰ The frequency of L2 language learner errors in the selection of gender-appropriate determiners indicates a lack of awareness of these nominal phonological clues.

²¹ While arguing in favour of a nominal locus for ϕ -feature specification, in languages such as Diyari (Pana-Nyungan), the status of determiners as concord dependents is less clear since, as illustrated by the following example from Blake (1994:102), the determiner is morphologically similar to, or the same as, the 3rd person pronouns.

(1) Nhu-lu karna pirna-li wama thayi-yi
 he(ERG) man big(ERG) snake(ACC) eat(pres)
 'The big man eats snake'

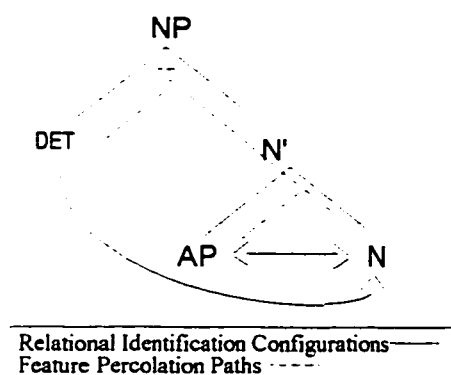
This is also true for the direct object clitics *le*, *la*, et *les* in French.

²² However, while rejecting Abney's motivation for a DP analysis, I do not exclude the possibility of a DP analysis of the Case-related phenomena discussed.

4.4.1 Relational Identification and Feature Licensing within the Nominal Projection

Features specified by lexical insertion can percolate from the categorial signature of the nominal head to the maximal projection, unless a blocking element is encountered. Inherent features can enter into projection-internal concord relations with a modifier (AP) or a specifier (DET) by relational identification under sisterhood or Spec-head agreement; they can also enter into a projection-external concord relation following percolation to the NP position. Lexically specified derived features such as Case and definiteness can also percolate and undergo licensing by feature matching with NP features specified by projection-external relational identification. The NP-internal relational identification configurations, and the percolation paths for inherent nominal features and those specified by lexical insertion are shown below.

14 Relational Identification and Feature Percolation within the Nominal Projection



In this schema, features such as Case which is specified by relational identification with a predicate, or definiteness which is specified by reference to the context of occurrence are NP features. They are licensed by undergoing feature matching with the features of the categorial signatures of the terminal nodes which have received their specification by lexical insertion. The inherent nominal features of person, number and gender participating in projection-internal concord relations undergo relational identification by spec-head agreement or sisterhood and are subsequently licensed by feature matching. If participating in a concord relation with the verb, these features percolate upwards within their projection, and as features of the NP undergo relational identification with an agreeing inflected verb. The percolation of both types of features can be stopped by a blocking element.

4.4.2 The Realization of Case Types within the Nominal Projection

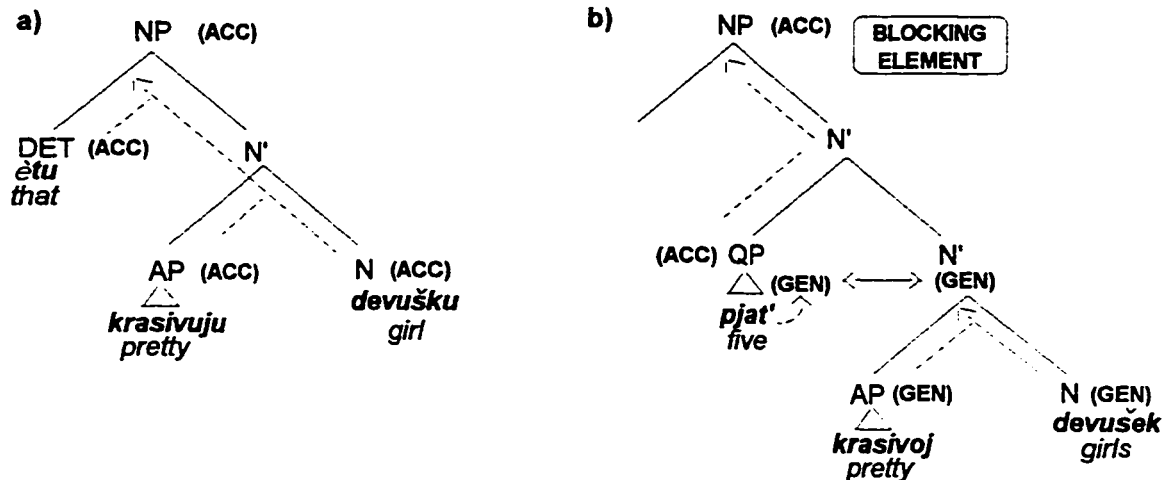
4.4.2.1 Grammatical and Lexical Case

The interaction of grammatical and lexical Case within the nominal projection is examined with reference to Russian examples noted in Babby (1980, 1986, 1987), Freidin & Babby (1984), and Freidin & Sprouse (1991). In Russian, genitive Case is found following quantifiers including negation. As mentioned earlier, Babby considers this genitive Case marking an instance of semantic Case as it alternates with configurational Case. According to the Case classification presented here, such genitive Case marking is an instance of lexical Case as it is a feature of a lexical item, the quantifier, and encodes a fixed semantic relation that is consistently realized by the same morphological Case. The alternating Case patterns with and without the quantifier *pjat'* 'five' are shown below.

- 15 Russian
 a) Grammatical Case
 Ivan poceloval [_{NP} ètu krasivuju devušku]
 Ivan(NOM) kissed that(ACC) pretty(ACC) girl(ACC)
 'Ivan kissed that pretty girl'.

 b) Quantifier Lexical Case
 Ivan poceloval [_{NP} pjat' krasivyx devušek]
 Ivan(NOM) kissed five(ACC) pretty(GEN) girls(GEN)
 'Ivan kissed five pretty girls'

In (a), the accusative (O)-marking of the NP *ètu krasivuju devušku* 'that pretty girl' relationally identifies it as an internal verbal complement. This grammatical Case marking is licensed by undergoing feature matching with the accusative Case feature of the lexically inserted items as in (a).

16 Grammatical and Lexical Case

In (b), the accusative Case marking of the NP, specified by projection-external relational identification, undergoes licensing by feature matching with the upward percolating Q^0 accusative Case feature specified by the insertion of *pjat*.²³ The inherent genitive Case feature of the quantifier itself percolates to the QP-level and undergoes relational identification and feature matching under sisterhood with the upward percolating genitive Case feature of the lexical items c-commanded by QP, namely *krasivoj devuške*.²⁴ Percolation of genitive Case to the NP level is blocked by the accusative Case feature of the NP, a Case feature with a different specification.

However, if a verb assigns lexical Case as in (a) below, it overrides the lexical Case marking of the quantifier as shown by the ungrammaticality of (b).

17 Verbal Lexical Case

- a) Ivan pomog [_{NP} pjati krasivym devuškam]
 Ivan(NOM) helped five(DAT) pretty(DAT) girls(DAT)
 'Ivan helped five pretty girls'

²³ Although I assume that the numeral *pjat* 'five' is case marked, the Case marking of Russian numerals is unclear since nominative, accusative and zero marking are $-\emptyset$. According to Pesetsky (1982:95), QPs, which include genitive phrases under negation, distributive *po*-phrases, and no agreement numeral phrases, are caseless. Franks (1994:646) claims that *pjat* is a caseless "frozen form".

²⁴ Reinhart's (1976, 1981) definition of c-command will suffice here.
 α c-commands β if neither α nor β dominates the other and the first branching node dominating α dominates β

- b) *Ivan pomog [_{NP} pjati krasivyx devušek]
 Ivan (NOM) helped five(DAT) pretty(GEN) girls(GEN)
 (Freiden & Sprouse, 1991:397)

Given my classification of both the verbal and quantifier Cases as instances of lexical Case, the suppression of the genitive Case of the quantifier is problematic according to the principle of lexical satisfaction (PLS). Babby's Case classification system avoids this problem since he considers the genitive Case of quantifiers a semantic Case (1986) or a configurational Case (1987). According to either classification, its expression is not required by the PLS. However, maintaining the classification of both Cases as instances of lexical Case, I account for the suppression of the genitive Case of the quantifier by the following revision to the principle of lexical satisfaction.

- 18 Revised Principle of Lexical Satisfaction
 If two elements have conflicting lexical properties, the lexical property of the element with the widest scope must be expressed.

Suppression of the lexical Case feature of the quantifier is therefore expected since it is in the scope of (c-commanded by) another lexical Case feature, that of the verb.

This analysis maintains the following well formedness condition which Babby (1987:116) claims is expressed by his Syntactic Case Hierarchy

- 19 A Well-formedness Condition on Case Distribution
 All lexical and phrasal categories that are c-commanded by Q^m must be marked with the GEN case, provided they are not also c-commanded by a lexical case assigner.

He avoids the conflict with the PLS by not classifying the genitive Case feature of quantifiers as lexical. However, while avoiding this conflict, it raises questions about the failure of a Case which is linked to a lexical item and expresses a fixed semantic relation by means of a specific morphological Case not being classified as lexical. The proposed analysis maintains the integrity of the proposed lexical Case classification by simply assuming that the PLS is scope-sensitive.

The link between scope and the expression of lexical Case is further supported by the genitive of negation in Russian which, for Babby, is an instance of semantic Case. However, given that it is

a feature of the negative marker, a lexical item which encodes a fixed semantic interpretation linked to a specific morphological Case, according to the classification proposed here, it must be lexical. Citing examples from Karcevski (1927), Babby (1980:14-15) notes variation in Case and word order in affirmative and negatives sentences as shown below.²⁵

- 20 Russian
- a) Affirmative Existential Sentence
 Zdes' vobjatsja losi
 here are-found(pl.) elk(NOMpl)
 'There are elk here'
- b) Negative Existential Sentence
 Zdes' **ne** voditsja losej
 here NEG is-found(sg) elk(GENpl)
 'There are no elk here'
- c) Affirmative Declarative Sentence
 Zdes' losi vobjatsja
 here elk(NOMpl) are-found
- d) Negative Declarative Sentence
 Zdes' losi **ne** vobjatsja
 here elk(NOMpl)NEG vobjatsja
 'There aren't elk here'

The contrast between (b) and (d) shows that only when the NP is in the scope of negation can it be marked with the genitive of negation.²⁶ As illustrated by the following examples, word order is not the only indication of the scope of negation.

- 21 Word Order and the Scope of Negation
- a) Pticy bol'se **ne** pojavljalis'
 Birds(NOM) any-more NEG appeared(3pl)
 'The birds didn't come again'

²⁵ Babby argues "that there is no direct link between case marking and word order in these sentences". According to his description, while negative existential sentences may have either SV or VS word order, affirmative ones have fixed SV word order. Affirmative declarative sentences normally have SV word order too (if the subject is definite).

²⁶ This does not mean that the genitive of negation is optional. If the negation is not in the scope of another lexical Case marker, the genitive Case associated with it must be expressed.

- b) Ptice bol'she ne pojavljalos'
 Birds(GEN) any-more NEG appeared(3sg)
 'No birds came again'
 (Freidin & Babby, 1984:94)

While word order indicates no difference with respect to the structural position of negation in (a) & (b), the interpretative differences encoded by Case indicate that the subject in (b) is in fact in the scope of negation, an interpretation which presumably results from the LF-movement of negation.

The interaction of grammatical and lexical Case also arises in examples of continuous and discontinuous Case-marking noted in Babby (1987:92-93). While most adjectives behave like *poslednie* 'last', an adjective which takes the same Case-marking as the quantifier itself, there is a small group of adjectives which behave like *dobryx* 'a good', and take the genitive lexical Case marking that appears on the complements of quantifiers.²⁷ The *dobryx* type adjectives modify the quantifier only, and are referred to by Babby (1987:122) as "prequantifiers". Continuous Case-marking with *poslednie* is shown in (22a), and discontinuous Case-marking is shown with *dobryx* in (22b).

- 22 Case Agreement in Russian
 a) Continuous Agreement with *Poslednie*
 poslednie pjat' butylok²⁸
 last(NOMpl) five(NOM) bottles(GENpl)
 'the last five bottles'
 a') *poslednix (GENpl) pjat'(NOM) butylok(GENpl)
 b) Discontinuous Agreement with *Dobryx*
 dobryx pjat' butylok
 good(GENpl) five(NOM) bottles(GENpl)
 'a good five bottles'

²⁷ Noting the homophonous NOM/ACC Case form, Franks (1994:610) questions the viability of the NOM/ACC vs. GEN Case differences observed by Babby on the basis of native speaker judgements.

²⁸ While *poslednie* and *butylok* do not agree in Case, as noted by Babby (Ibid:120) they do agree in number supporting the assumption here that Case and number are independently determined.

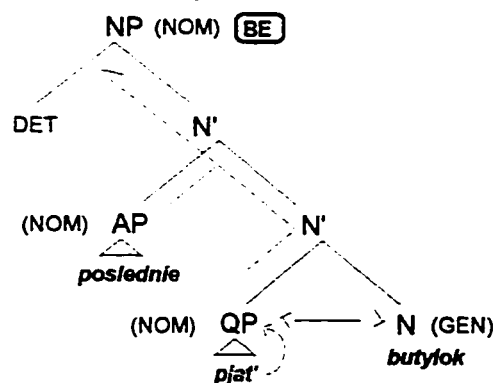
- b') *dobrye(NOMpl) pjat'(NOM) butylok(GENpl)
(Ibid.:92-93)

Babby accounts for the different distributional patterns by proposing different levels of attachment for these adjectives within a nominal projection with 4 intermediate N-levels. The *poslednie* type adjectives are attached at an N^4 -level. The quantifier is attached at a lower N^3 -level and does not c-command the adjective which is marked with the accusative Case marking of the maximal nominal projection (N^m). The *dobryx* type adjectives are attached at the N^3 -level, the same level as the quantifier phrase and its complement, where they are assigned genitive Case by the quantifier.

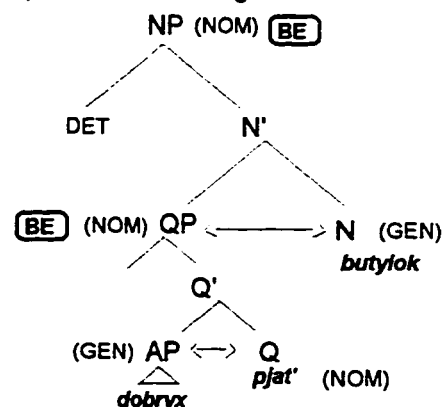
To account for these Case marking differences, the interpretative difference is translated into differences in constituent attachment. Since *poslednie*-type adjectives modify the quantifier and its complement, they are attached to a position higher than these items within the NP projection. As modifiers of a quantificational head, prequantifiers like *dobryx* are attached within the QP projection. The structures proposed for both adjective types are shown below.

23 Continuous and Discontinuous Case Agreement in Russian

a) Continuous Agreement



b) Discontinuous Agreement



In (a), the adjective *poslednie* modifies the quantified phrase *pjati butylok*, and the nominative Case marking of the NP is licensed by feature matching with the upward percolating nominative Case features specified by the lexical insertion of the adjective and the quantifier. Percolation of genitive Case-marking of noun *butylok* is licensed by feature matching following relational identification with the inherent genitive Case feature of the quantifier. Percolation of this feature to the NP level is blocked by the nominative Case feature of the NP itself. In (b) the genitive Case feature of the head

N is licensed in the same manner as (a). However, unlike *poslednie* in (a), *dobryx*, is a modifier of the quantifier itself, and is therefore internal to the QP. In this position its genitive Case marking is relationally identified and licensed under sisterhood with the inherent Case feature of the quantifier. Percolation of this feature beyond the AP-level is blocked by the nominative Case feature of the QP.

Babby rejects the analysis in (b) in which the prequantifier is part of the QP since *dobryx* agrees in number with *butylok*, not with *pjat'* which he claims has no inherent number. However, this is not problematic for the analysis proposed here in which Case and ϕ -features such as number are licensed independently. The [+plural] number feature of the noun *butylok* undergoes relational identification with the QP, and is also free to undergo licensing by feature matching with the QP-internal adjective *dobryx* since no blocking element in the form of a number feature with a different specification is encountered.

4.4.2.2 Semantic Case

The licensing of semantic Case differs from both grammatical and lexical Case in that its specification is determined by relational identification not with a predicate, but with the context of occurrence. This is illustrated with reference to the previously cited example of the adverse instrumental in Russian, in which nominative Case marks a neutral interpretation with respect to adversity, and instrumental Case emphasizes the adversity of the consequences of a natural event.

- 24 Adverse Instrumental in Russian
- a) Volna razbila lodku
 wave(NOMf) smashed(3sg.f) boat(ACC)
 'The wave damaged the boat'
- b) Volnoj razbilo lodku
 wave(INSTR) smashed(3sg.n) boat(ACC)
 (Babby, 1986:205)

The change in Case is not configurationally determined, but is the result of relational identification with the context of occurrence as illustrated below.

	NP	RI	Context of Occurrence
	NOM		[-adverse]
	INST		[+adverse]

Another instantiation of semantic Case is the marking of temporal adjuncts noted in the Greek example in Chapter 1. This type of semantic Case marking also occurs in Russian as shown by the accusative Case marking of the temporal adjunct in (a).²⁹ As shown in (b), this contextually determined Case marking is suppressed when the temporal adjunct is in the scope of the lexical genitive Case marking of negation.³⁰

a) On spal vsju noč'
He(NOM) slept all(ACC) night(ACC)
'He slept all night'

b) Ja ni odnoj minute ne somnevajus' v ètom
I(NOM) not one(GEN) minute(GEN) neg doubt in this
'I don't doubt this for a single minute'
(Babby, 1986:218)

³⁰ Wechsler & Lee (1996) note a similar pattern in Finnish, where accusative marked adverbials are marked with partitive Case when the verb is negated.

extensive measure function which temporally quantifies the event or state depicted by the clause."³¹ Citing Korean examples such as the following from Maling (1989) in which active predicates assign accusative Case to this type of adjunct, while passive ones assign nominative, they claim that these voice-induced nominative / accusative Case alternations provide "strong evidence that such adjuncts receive structural Case from the verb."

27 Active / Passive Case Split in Korean Temporal Adverbials

a) Active / Accusative³²

swuni-ka sip -il pheyinthu-lul twu pen-ul chilhay-ess-ta
 Swuni(NOM) house(ACC) paint (ACC) twice (ACC) brush -pst-dec
 'Swuni painted the house twice'

b) Passive / Nominative

Cip-i swuni-eyuyhay pheyinthu-ka twu pen-i chilhay-ci -ess -ta
 house(NOM) Swuni-by paint (NOM) twice(NOM) brush -pass-past-dec
 'The house was painted twice by Swuni'
 (Wechsler & Lee, 1996:631)

On the basis of such evidence they argue that the domain of direct Case (nominative and accusative) assignment be extended to include these nonsubcategorized phrases, and propose the following Case Domain Generalization.

28 Case Domain Generalization

The lexically specified domain of direct case for a predicate may be extended to include a situation delimiter.
 (Ibid.:637)

Additionally, they propose the following optional (since not all situation delimiting adverbs need be Case-marked) universal Case Domain Extension Rule.

³¹ The Case marking of Situation Delimiters is contextually sensitive, since W&L note that in Korean, accusative Case can mark durative, multiplicative and distance adverbs, but not other types such as manner adverbs. They claim that "the essential semantic property of situation delimiters... is that they are EXTENSIVE MEASURES, a standard notion from measurement theory" (Ibid.:645).

³² The accusative marker *lul* has an elided initial *l* when it follows a consonant; the nominative marker is *-ka* after a vowel, and *-i* after a consonant. The (dec)larative marker is *-ta*.

- 29 Case Domain Extension (CDE)
 Optionally assign the feature CASE to a dependent R, where R is a situation delimiter.
 (Ibid.:640)

Wechsler & Lee demonstrate how the CDE combined with the following Korean Case rules, can account for the Case-marking of the durative adverbial in examples such as (31).

- 30 Korean Case Rules
 i) Assign ACC to any CASE dependent with an external co-argument.
 ii) Assign NOM to any CASE dependent lacking an external co-argument.
- 31 Durative Case-Marking in Korean
 Tom-i twu sikan-tongan-ul tali-ess-ta
 Tom(NOM) two hours-period(ACC) run-pst-dec
 'Tom ran for two hours'
 (Ibid.:640)

In (31) the durative adverbial is annexed into the direct case domain by the CDE, and the Accusative Case Rule assigns it accusative Case since it has an external co-argument. The occurrence of accusative marked temporal adverbs noted in the Ancient Greek example in chapter 1, and in the Russian example in (26a) suggest that the first Korean Case Rule extends to other languages and represents a type of default Case marking. In Korean, if this accusative marking is unavailable, due to absorption following passivization, the adverbial is marked with nominative Case as in (27b). In the Russian example (26), if the accusative Case marking is unavailable due to suppression by a lexical Case marker (26b), then the adverbial is marked with lexical Case.

The analysis of temporal adjuncts as SITUATION DELIMITERS captures the interpretative function of such temporal adjuncts, and supports my analysis of their case-marking as an instance of contextually determined semantic Case. Their ability to be marked with nominative and accusative Case demonstrates the possibility of a grammatical and semantic Case combination. However, although the morphological marking of these temporal adjuncts is identical to the S/A and O markings of grammatical Case, it does not identify them as subject or object, but as suggested by Wechsler & Lee's CDE, is indicative of their dependence upon the configurational Case marking of the situation they delimit, generally by O-marking, unless it is unavailable.

32 Definiteness for Inanimates in Hindi

a) siitaa-ne aaj subah **aam** khaayaa
Sita(ERG) today morning mango eat(perf)
Sita ate **a mango** this morning

b) **amm** siitaa-ne aaj subah khaayaa
mango Sita(ERG) today morning eat-(perf)
Sita ate **the mango** this morning
(Singh 1992:196-197)

Case type differences based on the type of information encoded suggest that the level of specification for each type is dependent upon the level at which this information is available. While lexical Case is not realized until surface structure, it is specified in the lexicon, as an inherent feature of certain predicates. Grammatical Case, the Case which identifies grammatical relations, is not specified until the syntax. While Semantic Case, the Case associated with interpretation, may be specified prior to logical form, confirmation of the specification identified is often only available at the level of logical form.

Inherent nominal features participating in projection-external concord relations undergo relational identification and licensing NP-externally. I assume that, for verbal objects, this is done in the VP-internal complement position, and for prepositional objects it occurs in the PP-internal

³³ Even at the level of logical form, there is not always agreement about the interpretation as witnessed by de Hoop's (1992) criticism of the correlation between partitivity and definiteness proposed by Belletti (1988).

complement position. Lexical NPs fulfilling the grammatical role of subject undergo projection-external relational identification for the identification and licensing of both their grammatical Case feature and their ϕ features participating in concord relations.

4.5 Verbal Features

Verbal features include transitivity, finiteness, tense, aspect, mood, and voice as well as ϕ -features and Case. Inherent features are specified in the citation form of the verb and include a category specification (V), a transitivity specification (t/i), and where appropriate, a lexical Case feature which is demonstrated with reference to specific examples such as for the Icelandic verb *svima* 'feel dizzy' noted in (4).³⁴ Although not generally specified in dictionary entries, I assume that, because their predication nature requires verbs to have subjects, the structural position and the A/S-markings necessary for the relational identification of the subject role, are inherent features of verbs (cf. Rothstein (1983), Chomsky (1982)). Although verbal citation forms are nonfinite, finiteness, like the marking of Case on the citation form of nominals, is a derived feature. The derived [+V] verbal features of tense, aspect, mood, and voice are licensed in TP, the functional projection above the verb. The derived [+N] verbal features of person, number, and gender, features have the possibility of VP-internal feature matching with the NP in complement position, and of feature matching with the NP in Spec-VP, VP-internally, or VP-externally in the projections of tense or agreement. Additionally, V2 languages have the possibility of checking verbal features in COMP.³⁵ The availability of these positions for the licensing of verbal features necessitates verb-movement, or feature percolation to permit the licensing of all verbal features. Verb-movement must be local following the Head Movement Constraint of Travis (1984:131).

³⁴ Although specified in the infinitival form of dictionary entries, finiteness is, like the Case feature on the citation form of nominals, a derived verbal feature since its form can change in syntactic derivations.

³⁵ This represents a minimal number of functional projections justified by the proposed system. However, while it suffices for the explanatory purposes of feature licensing and percolation, I do not exclude the possibility that certain cross-linguistic phenomena may require other projections. Distinct functional projections have been proposed for individual features such as mood (Cf. Rivero, (1990), Pollock 1993)). In Moorcroft's analysis, languages exhibit considerable variation in the number of functional projections, with Icelandic having a five-level articulated INFL, while German only has one functional projection above the VP. This analysis contrasts with that of Travis (1991) who proposes one tree with a nonarticulated INFL and variation in the ordering of VP-internal elements to support an ECP account for word order variation in English, German, Swedish and Icelandic.

- 33 The Head Movement Constraint³⁶
 An X^0 may only move into the Y^0 which properly governs it.

4.5.1 Inherent Verbal Features

The transitivity feature of the verbal categorial signature is shown in (34).

- 34 The Inherent Verbal Feature of Transitivity
 [α transitive [α O-marking] ([α ϕ -features]])³⁷

This marking acknowledges the possibility of alternations in a verb's transitivity (Levin, 1993),³⁸ and provides for the option of object agreement. Contrasting settings for the transitivity feature of the English verb *eat* are shown below.

- 35 Transitivity Alternations
 a) to eat [-transitive [-O-marking]]
 to eat
 b) to eat [+transitive [+O-marking]]
 to eat [_{NP} chocolates]

A positive setting for transitivity activates projection of a complement position, the embedded O-marking necessary to identify the NP inserted into this position as the direct object, and optionally, the ϕ -features necessary for object agreement.³⁹ Whether realized morphologically or not, O-

³⁶ Since proper government is lexical government, this has the effect of requiring moved elements to govern their traces.

³⁷ According to this notation, features marked as α must agree in their setting, thereby excluding possibilities such as [-transitive, +O-marking] and [+transitive, -O-marking].

³⁸ Verbal citation forms often indicate the possibility of transitivity alternations as noted by the following example for *sleep* from (Sykes, 1982:994).

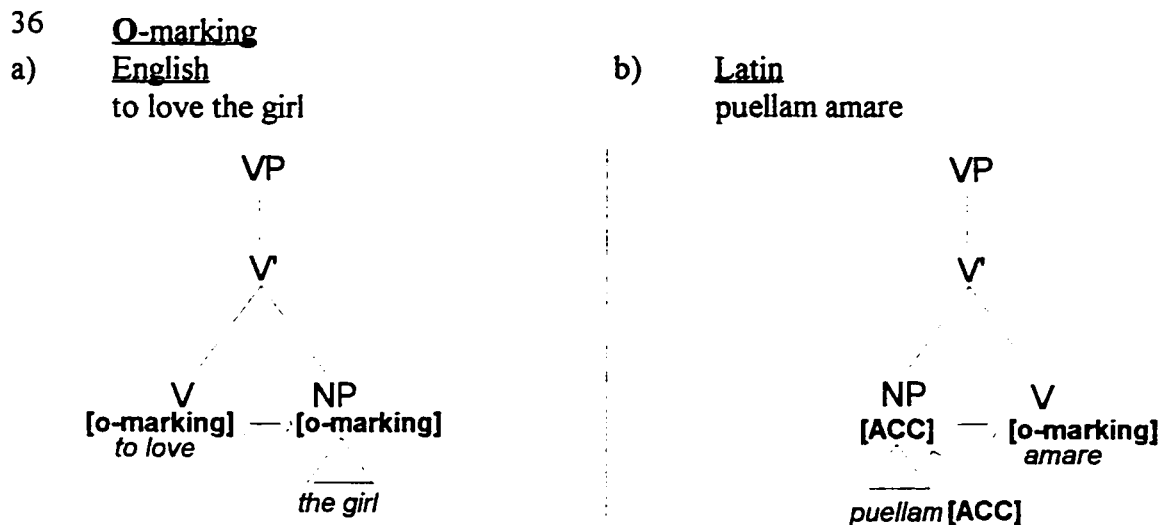
 sleep 1. *v.i.* be in state of sleep ...

 6. *v.t.* provide sleeping accommodation for

While the [α transitive] feature allows this possibility for all verbs, it does not require it. See Levin for lists of major class differences within the intransitive class.

³⁹ The possibility of licensing the optional ϕ -features by relational identification under sisterhood eliminates the need for projection of an Agr-O position to accomplish this.

marking, is a positional feature. In languages such as English, position suffices to identify an O-marked NP; in languages with morphological Case, the positional O-marking undergoes licensing by feature matching with the Case feature of the NP inserted into the complement position. Differences in covert (a) and overt (b) O-marking are shown below.



Another inherent verbal feature is lexical Case which, as noted in the discussion about lexical Case in Icelandic, has the potential to mark both subject and object NPs. This indicates that the categorial signature of verbs should include the possibility of two lexical Case markings, one embedded in transitivity with the potential to undergo relational identification and licensing with the complement NP, and an unembedded one with the potential to undergo relational identification and licensing with the NP inserted in the Spec-VP position. The proposed verbal categorial signature is shown below.

- 37 Verbal Categorial Signature
[A/S-marking], [α transitive [α O-marking] ([α ϕ -features]), ([Case x]), ([Case x])

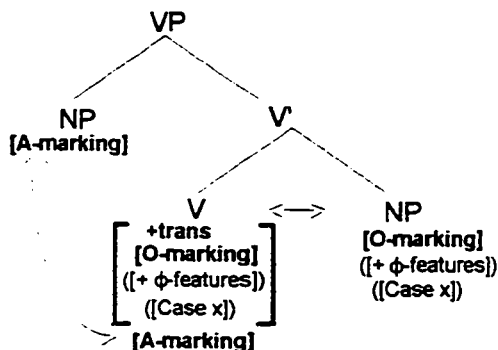
With the exception of the optional ϕ -features embedded in transitivity, the features of the verbal categorial signature are inherent verbal features. The optional derived ϕ -features are necessary to account for the possibility of object agreement. The properties of inherent verbal features are listed below.

- 38 Properties of Inherent Verbal Features
- a) They are specified in the citation form of lexical items.
 - b) Their specification does not change in syntactic derivations
 - c) They undergo relational identification VP-internally.⁴⁰

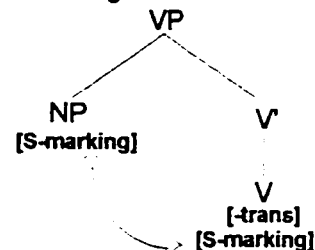
The possibility of the VP-internal licensing of grammatical (A/S and O-marking) Case is shown below.⁴¹

39 VP-Internal Relational Identification of A/S- and O-marking

a) A- and O-marking



b) S-marking



Although not embedded in transitivity, the selection of A- or S- marking for the Spec-VP position is crucially linked to the transitivity specification since, by definition, A-marking is only available with transitive verbs, and S-marking with intransitives.

While lexical insertion of a verb activates the grammatical Case marking, it is configurationally dependent upon predicate argument structure, with A/S marking undergoing relational identification with the Spec-VP position and O-marking undergoing relational identification with the verbal complement position. Since both the grammatical relations of subject and (direct) object can be relationally identified by structural properties, additional identification by morphological marking is a parametric option. Even if the Case marking associated with these configurational positions is realized morphologically, as will be discussed in Chapter 5, its realization is not restricted to the NPs

⁴⁰ Morphological A/S-marking may also undergo VP-internal licensing. Morphological marked Case features (lexical Case or O-marking) and the optional ϕ -features for object agreement must undergo VP-internal licensing.

⁴¹ This analysis assumes a VP-internal subject position. (cf. Koopman & Sportiche, 1991).

inserted into these positions.

4.5.1.1 VP-Internal Nonfinite Subjects

Generally, the lexicalization of infinitival subjects is, as shown by the following examples, restricted to governed positions.

- 40 Infinitival Subjects
 a) John believes {Bill/*PRO} to be intelligent.
 B) John wants {Bill/PRO} to leave.
 C) John tried {*Bill/PRO} to leave.

Underlying this generalization is the assumption that infinitivals cannot assign nominative (A/S) Case to their subjects. However, given the assumption that the A/S-marking is an inherent verbal feature available VP-internally, it is not clear why such a restriction should exist. In fact, the restriction against lexicalized subjects in nonfinite contexts is not absolute.

Bobaljik (1993) notes that, in nominative languages, the Case and agreement features of the A and S arguments are defective in nonfinite environments.⁴² Working in the minimalist framework, he assumes an articulated INFL with 3 functional projections, Agr 1P, TP, and Agr 2P. Since only features checked in Spec-Agr1 are finite-dependent he predicts that only features checked in this position will be affected by finiteness. In NOM/ACC languages both A and S (nominative) arguments are checked in this position. However, in ERG/ABS languages, while A (ergative) arguments are checked here, S (absolutive) arguments, like O (absolutive) arguments are checked in the lower Spec-Agr2 position. Combined with his prediction about finiteness affecting only features checked in Spec-Agr1, Case system differences are as follows.

- 41 Case and Agreement in Nonfinite Contexts⁴³
 a) NOM/ACC: *A(NOM) *S(NOM) O(ACC)
 b) ERG/ABS: *A(ERG) S(ABS) O(ABS)

⁴² Bobaljik suggests that is why nonfinite subjects are restricted to PRO (unless exceptionally Case marked or marked by complementizers) since lexical NPs are excluded by the lack of Case in this environment.

⁴³ Starred argument-Case combinations are excluded from nonfinite contexts.

He supports the (a) predictions with reference to English which prohibits lexical NPs as subjects (A&S) of nonfinite clauses, and to Miskitu and Swahili, nominative languages which exhibit object agreement in both finite and nonfinite environments. Support for the (b) predictions comes from Yup'ik and Inuit, in which the agreement morphology of embedded nonfinite intransitive verbs indicates agreement with an absolutive S argument.⁴⁴

In the proposed analysis, O-marking is an inherent verbal feature which relationally identifies the NP in the VP complement position as the direct object. Whether or not this O-marking is morphologically realized (as accusative or absolutive Case), its failure to be affected by finiteness is not surprising. However, the overt realization of S-(absolutive) marking in nonfinite contexts noted by Bobaljik is surprising, not by its occurrence, but by its restricted occurrence, and specifically by its restriction to S-marking. The assumption that A and S-marking are inherent verbal features predicts the possibility of their overt realization in nonfinite contexts.

Additional support for the possibility of VP-internal A/S marking comes from infinitivals in European Portuguese which, as discussed in Raposo (1987:86), are inflected as shown by the following citation forms.

42 Inflected Infinitives in European Portuguese

eu comer-Ø		nós comer-mos	
I	eat -agr	we	eat -agr

Although inflected infinitival clauses are restricted to certain embedded clauses,⁴⁵ like normal finite subjects, they take lexical subjects and objects. As shown by the contrast between (a&b) below, the agreement marker is obligatory with lexical subjects.

⁴⁴ Bobaljik assumes that the agreement markers are arguments themselves (cf. Jelinek, 1989) or license a null *pro* in argument position (cf. Baker, 1991). He notes the rare occurrence of apparent ergative agreement morphology, but cites a suggestion by Fortescue that these are "analogical forms" with limited acceptance.

The dissociation of absolutive Case from finiteness noted by Bobaljik is also noted by Laka (1993) who makes a distinction between tense Case (C_T) (A/S marking), and verbal Case (C_v) (O-marking).

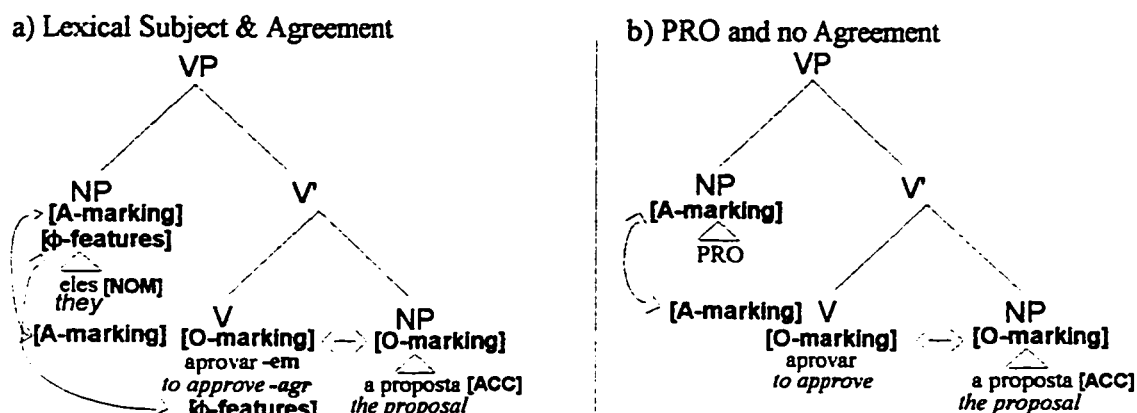
⁴⁵ They cannot occur in complements subcategorized by volitional predicates such as *desejar* 'to wish', nor as embedded interrogative clauses, as embedded relative clauses, or in constructions with a null operator in COMP.

- This contrast in grammaticality crucially links licensing of a lexical pronoun in the Spec-VP position to the realization of the verbal agreement marker VP-internally. As expected, this agreement marker occurs with a null *pro* subject (a) but is excluded in the context of PRO (b) as shown below.

- Raposo attributes the phenomenon of inflected infinitives to the INFL parameter and the Null Subject Parameter. European Portuguese exhibits a rare option of what he refers to as the INFL Parameter, Infl ~ [[±Tense], (Agr)]. This marked setting of [[-Tense, Agr]] permits infinitival INFL to be specified for overt Agr. He hypothesizes that an infinitival [-Tense] INFL that consists solely of Agr can assign "nominative Case to a lexical subject only if it is itself specified for Case" (Ibid.:92), and notes that the possibility of such an Agr is restricted to null subject languages.

These inflected infinitives demonstrate the realization of A-marking in nonfinite contexts, and further supports Bobaljik's findings of agreement markers in nonfinite contexts. In the analysis I have proposed, the A-marking and concord features are available for VP-internal licensing following lexical insertion, and, as shown below, I assume that both these features are checked VP-internally in European Portuguese.

45 The Checking of VP-Internal Features in European Portuguese



In (a) the Spec-VP position is relationally identified by A-marking under Spec-head agreement. The A-marking of the NP undergoes feature matching with the nominative Case feature of the lexically inserted pronoun. The ϕ -features of the nominal also undergo relational identification with the verb under Spec-head agreement resulting in ϕ -feature concord. In (45b), the Spec-VP position is relationally identified by A-marking under sisterhood as a potential transitive subject position, but lexical insertion is prohibited as there is no agreement marker.⁴⁶

4.5.2 Derived Verbal Features

As previously mentioned, I assume that the derived verbal features of finiteness, tense, aspect, mood, voice and ϕ -features are licensed VP-externally in the functional projections of tense and agreement. The categorial signature proposed for tense is shown in (46), and includes the following derived verbal [+V] features.

46 The Categorial Signature of Tense
[α finite], [tense], [aspect], [mood], and [voice]

The categorial signature for Agreement includes derived verbal [+N] features which participate in

⁴⁶ The availability of A/S-marking in this context is similar to the null Case Chomsky & Lasnik (1995) claim is available in this context.

47 The Categorical Signature of Agreement
 [±I], [±II], [±plural], [±masc], [±fem]

48 Properties of Derived Verbal Features

- As noted above, the inflection of European Portuguese infinitivals permits the VP-internal licensing of their derived [+N] verbal features with the pronominal NP in Spec-VP. Although Icelandic infinitivals lack such inflection, on the basis of agreement morphology, Sigurðsson (1989, 1991) shows that, although the Icelandic infinitival subject position cannot be lexically filled, PRO can be Case-marked either by grammatical or lexical Case in this position. In the following example from Sigurðsson, (1991:331), the indefinite pronoun *allir* 'all' has "full fledged 'strong' adjectival inflection" and exhibits Case agreement with PRO.

49 Quantifier Agreement with Nominative PRO in Icelandic⁴⁷

⁴⁷ Sigurðsson attributes the reluctance of many speakers to accept such examples because of the scope conflicts created by embedding floating quantifiers.

50 More Quantifier Agreement with Nominative PRO in Icelandic
 Strákarna langaði til [að **PRO** komast **allir** í veisluna]
 the boys(ACC) wanted(3sg) for to (NOM) get **all**(NOMm.pl) to the party
 'The boys wanted to all go to the party'
 (Ibid.:337)

51 Agreement with a Lexically Case-Marked PRO
 Strákarnir vonast til [að **PRO** vanta ekki **alla** í skolann]
 the boys(NOM) hope for to (ACC) lack not **all(ACCm.pl)** in the-school
 'The boys hope not all to be absent from school'

52 Verb Movement with Icelandic Infinitivals
 Main Verb

a) Maria lofaði að lesa *alltaf* bókina
 Mary promised to read(inf) always the-book
 'Mary promised always to read the book'

b) *Maria lofaði að *alltaf* lesa bókina.

48 As noted earlier, Yip, Maling & Jackendoff (1987) provide evidence that the verb *vantar* 'lack' has 2 lexical Case features.

46 Auxiliary Verb

- a) *María vonaðist til að hafa ekki lesið bókina*
 Mary hoped for to have(inf) not read the-book
 'Mary hoped that she had not read the book'
- b) **María vonaðist til að ekki hafa lesið bókina*

He claims that in these constructions *að* acts as a complementizer and while there is verb movement to INFL, only PRO is permissible in these contexts because lexical arguments must be properly governed by INFL/+AGR. Regardless of the availability of Case-marking, INFL/-AGR is not a proper governor for a lexical subject.

To account for the possibility of the VP-external Case marking of infinitival PRO in Icelandic, I assume that this occurs in Spec-TP, when the infinitival has moved to the head of tense to check its derived [+V] verbal features. Sigurðsson (1989, 1991) proposes the following structure for both subordinative declaratives and PRO infinitivals.

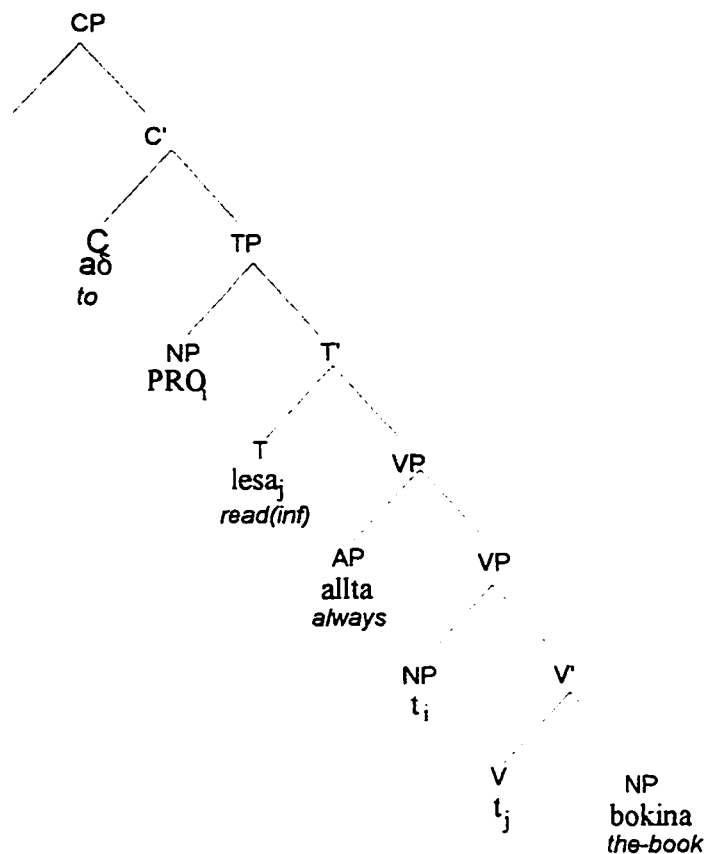
53 PRO Infinitivals in Icelandic

$[_{CP} \text{að} [_{IP} \text{PRO}_i [_{I'} \text{Infinitival}_j [_{VP} \text{adverb} [_{VP} e_i [_{V'} v_j \text{NP}_i]]]]]]$

Roberts (1993) posits a recursive Agr structure with the nonfinite verb moving to Agr2, a position above the tense projection and below the Agr1 projection.⁴⁹ To account for the possibility of a VP-external position for nonfinite verbs, I adopt the following structure (cf. Pollock (1989), Belletti (1990) and Roberts (1993)).⁵⁰ The derivation proposed for the infinitival phrase *að lesa alltaf bókina* 'to read always the-book' is shown below.

⁴⁹ Roberts proposes an Agr Recursion, [Agr1P[Agr2P]] analysis for Icelandic in which Spec-Agr1 is a topic position for fronted material, Agr1⁰ is the position for the finite verb, Spec-Agr2 is the subject position, and the nonfinite verb is found in Agr2⁰. This analysis resembles the proposal by Moorcroft (1995) that Icelandic has a Topic Phrase between AgrSP and CP.

⁵⁰ While the structure is the same as that of Roberts (1993:17), the nature and motivation of these projections varies considerably. See chapter 1 of Roberts (1993) for a detailed discussion of his analysis.

54 Icelandic Case Marked PRO with Infinitival Main Verb

The assumption that finiteness is checked in the head of tense is consistent with the assumption that derived features are checked projection-externally.

Thus far, relational identification and licensing of A/S-marking has been shown to occur in two possible positions, Spec-VP in European Portuguese and Spec-TP in Icelandic. In languages like English, where Case marking is generally associated with agreement, I assume that the licensing position for this Case feature is Spec-AgrP,⁵¹ and that the subject NP must move to this position to license its grammatical Case.

Thus, the A/S-marking for the identification of subjects can be licensed in three positions, Spec-VP, Spec-TP, and Spec-AgrSP. The VP-internal licensing of Case is a very marked option only

⁵¹ Various analyses have been proposed to account for verb-movement in English which, as shown by Pollock (1989), is limited to auxiliaries. For an account of English participle constructions see Cowper (1995), and for an account of the origin and structure of English auxiliaries see Meechan (1995).

The three possible domains for the licensing of the verbal features are shown below.

```

graph TD
    CP --> C_prime[C']
    CP --> AgrP1[AgrP]
    C_prime --> C0[C^0]
    C_prime --> AgrP1
    AgrP1 --> NP1[NP]
    AgrP1 --> Agr_prime[Agr']
    Agr_prime --> Agr0[Agr^0]
    Agr_prime --> TP
    TP --> NP2[NP]
    TP --> T_prime[T']
    T_prime --> T0[T^0]
    T_prime --> VP
    VP --> NP3[NP]
    VP --> V_prime[V']
    V_prime --> V[V]
    V_prime --> NP4[NP]
  
```

Diagram illustrating the hierarchical structure of a sentence, showing the movement of elements (indicated by dashed lines and numbers 1, 2, and 3) from the VP to the AgrP and TP structures.

⁵³ This structure supports the claim made by Heycock and Lee (1990) that nominative Case (A/S-marking) is independent of the inflectional features of tense and agreement. Based on the distribution of the *-ka/-ga* markers in Korean and Japanese, and the occurrence of multiple nominative markings found in these languages, they claim that, cross-linguistically, nominative Case is in fact a reflex of syntactic predication that marks the subject of the predication relation. For a contrasting analysis see Youn (1990) who claims that the multiple nominative Case markings are just that and do not identify multiple subject NPs.

verb- and/or NP-movement and feature percolation to account for the licensing of all nominal and verbal features.

4.6 Conclusion

In this chapter, I have proposed an account of the licensing of Case (and other inflectional features) based on the distinction between inherent features, those specified in the citation form of lexical nouns and verbs, and derived features, those which require specification in syntactic derivations. Inherent features and derived features specified by lexical insertion can percolate upwards unless a blocking element is encountered.

Both nominal and verbal morphosyntactic features participating in projection-internal and/or projection-external relations share the same configurational requirements of Spec-head agreement or sisterhood for relational identification. Interpretative features encoded by semantic Case require relational identification with the context of occurrence. Licensing of relationally identified features additionally requires feature matching.

The proposed structure for the licensing of nominal and verbal features includes a functional projection, TP for the licensing of derived [+V] verbal features, and AgrSP, for the licensing of derived [+N] verbal features participating in concord relations. The ordering of the projections above the VP is as follows: [CP [AGRSP [TP [VP]]]]. As noted in (55), this structure also provides three possible checking positions for derived nominal features. As will be shown in the following chapter, once activated by lexical insertion, the morphological marking of the A/S Case features which identify these subject positions is not restricted in its realization to NPs in these positions.

Chapter 5

Quirky Subjects: The Interaction of Lexical and Syntactic Case

5.0 Introduction

Quirky Case, whether marked on subject or objects, is an inherent verbal feature. As an instance of lexical Case, it has the potential to suppress configurational or semantic Case-marking. To examine the interaction of grammatical and lexical Case-markings, I examine their occurrence in quirky subject constructions.

Quirky subjects provide an instance of the interruption of the co-occurrence patterns of Case, grammatical, and thematic roles noted in Chapter 1 since, although considered subjects, they bear nonnominative Case and have nonagentive theta-roles. While their morphological Case markings and verbal agreement patterns provide scant evidence of subjecthood, Cole et al. (1980), Seeffranz-Montag (1984), Andrews (1990), Davies (1986), Harris (1981), Hermon (1985), Sridhar (1979), Thráinsson (1979), and Zaenen, Maling & Thráinsson (ZM&T) (1990), among others, demonstrate that these NPs have some of the syntactic properties of subjects. Accounting for their unsubject-like Case has been the source of much discussion, with proposals ranging from the possibility of double Case marking (Belletti (1988), Cowper (1988), Harbert & Toribio (1990)), to Sigurðsson's (1989:238) universal ban on chains containing more than one Case, and resolutions of Case conflicts along the lines of Babby's (1987) Case hierarchy. Following a description of quirky subjects and the nature of the semantic relation encoded by their Case marking, I suggest that their Case marking reflects their interpretation as predicate modifiers. Their morphological and syntactic properties are accounted for in the framework of the percolation theory of Case proposed in chapter 4. Finally I examine the evolution of quirky marked NPs in German, English and Icelandic to determine what linguistic characteristics predict the occurrence of quirky subjects in a language.

5.1 The Morphological and Syntactic Properties of Quirky Subjects¹

Quirky subjects are often described as dative or oblique subjects, although they are neither

¹ Discussion concentrates on 'inherent' quirky subjects, not those derived by the passivization of quirky objects.

invariably dative nor oblique.² They are also referred to as "squishy" subjects (Sridhar, 1979), and as "preverbal oblique nominals (PVONS)" (Thráinsson, 1979). They occur in constructions described as impersonals, subjectless, and experiencer constructions. Historically, they occurred in Indo-European languages such as Sanskrit, Latin, and Old English. They continue to have a wide geographic distribution, occurring in languages as diverse as Icelandic, Georgian, Hebrew, Japanese, Korean, Quechua, Choctaw, and many Dravidian languages.³ Examples from Icelandic and Old English are shown below.

1 Quirky Subjects

a) Icelandic

Mér líkar þetta
I(DAT) like(3sg) this

b) Old English

& him gelicade hire þeawas
and him(DAT) liked/pleased(3sg) her behaviour(ACC/NOMpl)
& þancode Gode
and (he) thanked God
'and he liked her behaviour and thanked God'

(ChronD 201.32 (1067), cited in D. Denison (1985))

While grammatical subject is far from a unified notion, Cole et al. (1980) provide criteria for identifying the NP fulfilling this function on the basis of its coding (morphological) and behavioural (syntactic) properties. Coding properties include nominative Case and verbal agreement. Quirky subjects are characterized by the following properties.

2 Morphological Properties Associated with Quirky Subjects

a) Nonnominative Case

b) Lack of verbal agreement

² While dative Case is probably the most common Case for quirky subjects, they are also marked with genitive, accusative, and locative. While the possibility of accusative Case suggests that *oblique* is a misnomer since oblique Case generally excludes both nominative and accusative Case, the accusative Case in question is not a direct or structural Case.

³ Masica (1976:164) considers the Dative subject characteristic of the "India area", but not of Korean. However, working in the relational grammar framework, Youn (1990) provides evidence supporting the final subjecthood of dative experiencers in Korean too.

- c) They can occur with nominative "objects"

In Icelandic, an SVO V2 language, nominative subjects trigger verbal agreement.⁴ Although verbal agreement with quirky subjects is generally 3rd person singular, if there is a nominative NP elsewhere in the sentence, the verb tends to agree with it. However, as shown by the example below, both options are possible.

- 3 Icelandic
 Mér {líkar /líka } þessir bílar
 me(DAT) {likes(3s)/like(3pl)} these cars(NOM pl)
 'I like these cars'
 (Thráinsson 1979:466)

Agreement with postverbal nominative NPs is not surprising since, even though it is not in subject position, it has the Case marking with which the verb usually agrees. These examples are representative of the morphological (coding) properties of Case marking and verbal agreement associated with quirky subjects, properties which are consistently non-subject like.

In contrast, their syntactic properties are generally subject-like. They can bind reflexives, participate in subject-verb inversion, surface as controlled PRO, occur in ECM contexts, and undergo conjunction reduction. The binding of reflexives is a common diagnostic used to distinguish topicalized objects from subjects, since generally, only the latter are able to bind reflexives.⁵ As shown by the following examples from Kannada, Icelandic, Marathi, and Choctaw, quirky subjects in these languages do bind reflexives.

⁴ Icelandic differs from German in that V2 is not restricted to main clauses, but occurs in both main and embedded clauses. According to Thráinsson (1986), it also has V1 in yes/no questions, imperatives and the narrative V1 and a special kind of parentheticals, and rare instances of V3 where the verb is preceded by the subject and an adverb.

⁵ The trace of topicalized nonquirky subjects can also bind reflexives as shown by the following example from M. Authier. *Mary_i I'm not so sure t_i likes herself_i but Sue I'm sure.*

4 The Binding of Reflexives

a) Kannada

sōmanige_i tānu_i tumba ishta
Soma(DAT) self(NOM) much liking
'Some is very fond of himself'

(Hermon, 1985:204)

b) Icelandic⁶

Henni_i þykir bróðr sinn_i/*hennar leiðinlegur
her(DAT) thinks(3s) brother(NOM) her(+R/*-R) boring(NOM)
'she finds her brother boring'

(ZM&T, 1990:102)

c) Marathi⁷

Ravi-laa_i swataa -č_i pustaka aavḍ-t -aat
Ravi-(DAT) self(R) -'s books like -prs-agr
'Ravi likes his (own) books'

(Rosen & Wali, 1989:11)

d) Choctaw

ŋi_i -am_i -ahchiba-h
(R)-I(DAT)-tired -pred
'I am tired of myself'

(Davies, 1986:88)

The Icelandic example below demonstrates that quirky subjects can also participate in subject-verb inversion.

⁶ The binding of reflexives is not a reliable test for subjecthood in Icelandic since, as shown below, objects may optionally bind reflexives.

(i) Optional Reflexive Binding by Icelandic Object

Jón_i sýndi Harald_i föt á {sig_i /sig_j, *hann_i/hann_j}
John_i showed Harold_j clothes for {himself_i/himself_j, *him_i/him_j}

(Thráinsson, 1979:291)

Based on evidence from the South Asian languages of Bhojpuri and Magahi, Verma (1990:98) suggests that the binding of reflexives may be a graded ability in which languages may permit the binding of reflexive adjectives, but not of reflexive pronouns.

⁷ Working in the relational Grammar framework, Rosen & Wali (1989) argue that while dative experiencers are initial 1s, they are final 3s. Pandharipande (1990) argues against interpreting dative experiencers as subjects in Marathi.

Hefur henni alltaf þótt Ólafur leiðinlegur
has she(DAT) always thought Olaf(NOM) boring(NOM)
(ZM&T, 1990:103)

6 a) Imbabura Quechua

b) Icelandic⁹

In some languages, infinitival subjects such as *hermi* 'her' in the example below retain their quirky case marking in exceptional Case marking (ECM) contexts.

7 ECM Contexts

Quirky subjects are deleted when conjoined with nominative subjects as in the following examples.

⁹ Andrews notes that when used as a subject modifier, *ein* 'one' agrees with the subject in gender, number and Case. Sigurðsson (1989:188) provides examples in which the predicative agreement of lexical Case assigning verbs is consistently neuter singular, but their Case may be nominative or lexical.

8 Conjunction Reduction

a) Icelandic

Hann segist vera duglegur, en $\emptyset$ finnst verkefnið of þungt
 He(NOM) says-self to-be diligent, but (DAT) finds the-homework too hard
 'He says he is diligent, but finds the homework too hard'
 (ZM&T, 1990:105)

b) Middle English

Lewed men leued hym well and $\emptyset$ liked his wordes
 Ignorant men(NOM) loved him well and (ACC) liked his words
 (Dame Sirith, 82, A.D. 1275,
 cited in Cole et al., 1980:729)

While there is considerable variation in morphosyntactic properties of "quirky" NPs synchronically, diachronically, language internally, and cross-linguistically, syntactic properties serve as a diagnostic for confirming that they function as subjects at some level of representation.

Although there is cross-linguistic variation in the occurrence of these properties, they are used to identify quirky marked NPs as subjects, and distinguish them from NPs such as *mir* in the German example below which shares the coding properties of quirky subjects, i.e. dative Case, third person agreement, and a nominative "object" which does not possess subject properties.¹⁰

9

German

Coding Properties

Mir gefallen diese Damen
 me(DAT) likes(3pl) these ladies(NOM)
 'I like these ladies'

5.2 The Distribution of Quirky Subjects

Cross-linguistically, quirky subjects occur with monadic and dyadic verbal and adjectival predicates in a variety of constructions. While not all constructions are present in each language, quirky subject environments include impersonal constructions, expressions of meteorological phenomena, the middle voice, possessives, desiratives, evidentials, ergative pairs, and passivized

¹⁰ See Cole et al. (1980) for a detailed list of the nonsubject properties of these quirky subject look-alikes.

quirky objects. The examples below illustrate their occurrence as the experiencer (non-agentive) subject of impersonal verbs.

10 Experiencer Subject of Impersonals

Icelandic¹¹

- a) Mig kelur
me(ACC) is-freezing(3sg)
'I am freezing/getting frost bite'
- b) Drengina vantar mat
the-boys(ACCpl) lack(3sg) food(ACC)
'the boys lack food'

Old English

- c) Ac me nu þynceð & bet licaðm þætte ...
but me(DAT) now seems and better pleases that
'but it now seems to me, and I prefer that...'
(Bede 66.19 cited in D. Denison (1985:120))
- d) siþþan him hingrode
afterwards him(DAT) hungered
'afterwards he was hungry'
(Ælfric Homilies cited in J. Anderson, 1984:248)

Georgian

- e) Bavšvs šia
child(DAT) he-hungers-IND
'The child is hungry'
- f) Bavšvs scva
child(DAT) he-cold-IND
'The child finds it cold/The child is cold'
(Harris, 1984:280)

¹¹ Icelandic examples are from Andrews (1982:461-463) unless otherwise stated. Quirky subjects occur with dative, accusative and genitive Case in Icelandic, and while Andrews has nothing to say about triggers for genitive marking, he notes that accusative is generally associated with physiological states and dative with psychological states.

There is a tendency in Icelandic known as "Dative Sickness", which as implied, neutralizes Case distinctions on quirky subjects to dative. This is discouraged in schools, and suggests that while the class of quirky subjects is readily identifiable, specific Case markings may in fact be idiosyncratically marked and require prescriptive teaching to be maintained. See Dooley Coliberg (1986) for a more extensive discussion of dative sickness in Icelandic, and Smith (1994) for a discussion of its occurrence in Germanic.

- g) gelas uqvars nino
Gela(DAT) he-loves-her-IND Nino(NOM)
'Gela loves Nino'
(Ibid.:269)
- h) Kannada
nange idu ishta illa
me(DAT) this liking neg
'I don't like this'
(Sridhar, 1979:101)
- i) əvənige haslvagide
him(DAT) hunger-strike
'He is hungry'
(Abbi, 1990:257)
- j) Hindi
Ramesh ko kaafii pasand nahii
Ramesh(DAT) coffee liking not
'Ramesh does not like coffee'
(Kachru, 1990:60)
- k) Choctaw
Sa- hohchafo-h
me(ACC)-hungry -(pred)
'I am hungry'
(Davies, 1986:24)

When perception is uncertain, the uncertainty may be expressed as part of the lexical meaning of the verb as with the verb *seem* which, as shown below, takes a quirky subject in Icelandic (*þykja*) and Old English (*þyncan*). If the uncertainty (or incompleteness) is expressed by the conditional, subjunctive, or evidential mood,¹² quirky subjects are not linked to specific lexical items, but occur with predicates in this mood as in the Georgian example (c').

¹² While I refer to this as mood, as noted in Willett (1988:55), there is frequently an overlap with other modal categories such as tense, and aspect.

11 Uncertain Perceptions (Lexical)Icelandic

- a) Mér sýnist hann (vera) góður drengur
me(DAT) seems he(NOM) (to-be) good fellow
'he seems to me (to be) a good fellow'

Old English¹³

- b) me þynceþ þæt ...
me(DAT) seems that ...
'It seems to me that ...'

Uncertain Perceptions (Evidential Mood)Georgian

- c) Non Quirky

vano-m damala pul -i
Vano(ERG) hideIII-3AOR money(NOM)
'Vano hid the money'

- c') Quirky¹⁴

vano-s daumalavs pul -i
Vano(DAT) hideIII-3PERF money(NOM)
'(Apparently) Vano has hidden the money'

The use of quirky subjects to express possession occurs in Dravidian languages which, as noted in Masica (1976:166), lack a lexical verb *have*. This is demonstrated by the following examples.

¹³ Elmer (1981:45) notes that although *þyncan* 'seem' could not occur with a nominative subject, *þencan* 'to think' does occur with the nominative as in *ic þence þæt* ...

¹⁴ According to Vamling (1991:7) "the perfect of the third tense/aspect -series implies that the action was not witnessed by the speaker and that only the result of the action is at hand".

a) avaḷige ibbaru makkaḷu iddāre
she(DAT) two children are
'She has two children'

b) Malayalam
meeṛik'kə kaṇṇil wellam waṇṇu
Mary(DAT) eye(LOC) water(NOM) come(past)
Mary had water in her eyes

¹⁷ C. Rosen (1984) argues against a semantic basis for oblique subjects on the basis of exceptions, as does Hermon (1985:15) who claims that a "semantic" hypothesis for case marking is obviously false..., since languages can differ as to whether experiencers are case marked with nominative or nonnominative case." While arguing for a semantic basis for active systems, Mithun (1991) notes that it is difficult to apply it to synchronic Mohawk, which, like other Iroquoian languages, has a highly idiomatic lexicon. According to Baker (1992), the distinction between subject and object agreement in synchronic Mohawk "seems to be an arbitrary lexical feature on verbs".

English verb *liken* which originally identified the subject as the location of the "liking" by quirky dative Case marking. Today this meaning is no longer marked morphologically, but is limited to the impersonal verb *please*, and the original verb *like* now occurs with a with a non-quirky subject.¹⁸ Variation is also found in the presence or absence of quirky subjects in certain lexical contexts. While not all languages with quirky subjects use them to express possession, Masica (1976) links the occurrence of experiencer subjects in Indian languages to the absence of a lexical verb *have*.¹⁹

Numerous descriptions of the relevant semantic distinction have been proposed. Quirky subjects are frequently linked to the theta-roles of experiencer, possessor, goal or recipient, and location, as well as the notions of nonagentivity, affectedness, lack of volition and control (undergoer).²⁰ Identification based on verb class indicates that quirky subjects occur with predicates described as unaccusative,²¹ psychological, and stative. While evidence from a specific language may more readily support a specific theta-role or semantic notion, there is an obvious overlap in the proposed semantic triggers which are of two types. The first type concentrates on what quirky subjects NPs are not: nonagentive, nonvolitional, noncontrolling etc.. The other type concentrates on what they are: experiencer, undergoer, goal, possession, etc.. While the boundaries between such categories seems relatively clear in isolation, in contextualized language the boundaries often become blurred.

Confusion arises with perception verbs such as *see* which as discussed in Cruse (1973) may be considered agentive (Lyons, 1968) or nonagentive (Gruber, 1967). Confusion also arises about the agent / experiencer boundary as witnessed by the variation found with the verb *know* which takes

¹⁸ In languages without Case and agreement morphology, relational identification by S-marking consistently coincides with a structural position which becomes the source for identification of S-marking.

¹⁹ This link does not extend to Hungarian which lacks a lexical verb *have*, uses dative Case to mark possession, but does not have quirky subjects.

²⁰ See Mithun (1991) for a discussion of the appropriateness of aspect, agentiveness, affectedness, and control as identifying features of active/agentive Case marking systems in a variety of languages.

²¹ Unaccusative in the sense that they do not assign a structural accusative Case. Although the occurrence of objective Case marked NPs with quirky subjects in Bengali may appear to be an exception to this generalization, it is not since Klaiman (1981:14) notes that objective Case is the Case of the indirect object.

quirky subjects in some languages (Kannada), but not others (Icelandic, Sinhala).²² Such confusion reflects a difference in perceptual perspective about the subject's participation in these activities; i.e. is the subject a passive recipient of his vision or knowledge, or does the subject participate actively in the acquisition of this knowledge.

Proposals focusing on the agentive distinction receive support from ergative pairs such as the following in which quirky subjects are nonagentive, and nominative ones are agentive. Although both (a&b) versions are possible, the nominative version is, according to Thráinsson (1979:475-476), nonstandard and associated with "a more active role of the subject".²³

- 13 Icelandic
- a) Bátinn rak á land
 the-boat(ACC) drifted(3sg) to land
 'the boat drifted ashore'
- b) Baturinn rak á land
 the-boat(NOM) drifted(3sg) to land
 'the boat drifted ashore'

Similar quirky-nominative Case alternations tend to support both volition and agentiveness as the distinguishing semantic factor of quirky subject NPs. In the following Kannada examples, Sridhar (1979:102-103) notes that while the adverb *bēkūnta* 'deliberately' is compatible with nominative subjects (14a) which are volitional agents, it is incompatible with quirky (dative) ones (14b) which are experiencers or recipients.

- 14 Kannada
- a) avanige jvara bantu
 he(DAT) fever came
 'he got a fever'

²² If this confusion reflects a difference in cross cultural perspectives, finding and identify quirky subject characteristics will be difficult. However, further study might find that such differences reflect coding differences determined by the availability of lexical alternatives. At this point I do not have sufficient information to confirm either of these alternatives with respect to the coding of *know* in the languages mentioned.

²³ According to Thráinsson, accusative quirky subjects are quite unstable in Icelandic, also exhibiting a tendency to become dative (dative sickness).

- b) avanu jvara (-vannu) barisikoṇḍa
 he(NOM) fever (ACC) cause-come-past
 'he got a fever'

In addition to the incompatibility of adverbs such as *deliberately* or *purposely*, support for a nonvolitional interpretation comes from quirky subjects linked to impulsive behaviour as in the Sinhala examples below.

- 15 Sinhala
 a) maməna ʔənəwa
 I(NOM) dance-pres
 'I dance'
 b) maʔa nəʔuna
 I(DAT) dance-P-past
 'I danced (by impulse)'
 (Gair, 1990:17)²⁴

Foley (1990) characterized the nonagentive, nonvolitional aspect of the predication relation of quirky subjects as lack of control with control defined as follows.

- 16 The Control Feature of Quirky Case Relations
 An argument has control over a predicated activity when it is or is perceived by the speaker, to be:
 a) an autonomous participant in the predicated activity
 b) a causer of it, or
 c) intending to react to, or interact with it

Determining control is, as shown by the Icelandic examples below, not always easy.

²⁴ Gair (1990) notes that Sinhala, an Indo-Iranian language, is diglossic with sharply distinct written and spoken varieties. His examples are taken from colloquial spoken Sinhala which differs from formal spoken Sinhala. Gair uses A, P & C to refer to verb classes, and notes a close association between P verbs and oblique subjects. He also provides the following nominative to accusative Case change for (15) which, as shown by the gloss, indicates an external cause.

i) maawə nəʔuna
 I(ACC) dance-past
 'I danced (for some external reason)'

- 17 Icelandic
 a) Honum mæltist vel í kirkjunni
 him(dat) spoke(3sg) well in the-church
 'He spoke well in church'

 b) Mér sýndist álfur
 me(dat) thought-saw elf(nom)
 'I thought I saw an elf'
 (Andrews, 1982:462)

Applying the definition above to the first example suggests that the speaker's ability to speak well was in fact beyond his control. In the second example the subject can be perceived as lacking sufficient control over the predicated action to confirm his perception of an *elf*. Examples supporting [-control] as a characteristic feature of the predication relation of quirky subjects emphasize the thin line distinguishing the notions of agentivity, affectedness, volition and control. While [-control] seems quite an encompassing feature for capturing the nature of the predicate - quirky subject relation, it is not exclusive to the quirky subject NP and does not actually distinguish the quirky subject NP with dyadic predicates such as *like* in (10j) repeated below.

- 10j) Hindi
 Ramesh ko kaafii pasand nahii
 Ramesh(DAT) coffee liking not
 'Ramesh does not like coffee'

Approaching the problem from the perspective of characterizing quirky subjects by what they represent, not by what they lack, Mohanan & Mohanan (M&M) (1991) examine dative subjects in Malayalam. They claim goal represents the "inherent meaning" of dative Case, and quirky subjects in Malayalam are marked dative because they are in fact goals. However, they suggest that the best manner to characterize quirky subjects is on the basis of cross-classifying semantic categories such as locative-goal, source-goal, experiencer-goal, experiencer-possessor, goal-possessor etc.

They support their argument for a goal interpretation of dative quirky subjects in Malayalam

with the following examples.²⁵

18 Malayalam

- a) baalan skuul -ileek'k'ə waṇṇu ²⁶
 boy(NOM) school(LOC-DAT) come(PAST)
 'The boy came to school'

- b) baalan dukk^hiccu / santōoṣiccu
 boy(NOM) be sad(past) / be happy(past)
 'The boy became sad/happy '

- c) baalanə dukk^ham / santōoṣam waṇṇu
 boy(DAT) grief(NOM) / happiness(NOM) came(past)
 'The boy became sad/happy' (literally *To the boy came happiness*)
 (M & M, 1991:47-48)

Example (a) demonstrates the nonsubject 'inherent' use of dative Case which, according to M&M (Idem), refers to "movement of an entity towards a point in physical space". Examples (b) & (c) illustrate what M&M, adopting the terminology of Jespersen (1927) and Grimshaw & Meister (1988), refer to as the "heavy" counterpart (b) of a "light" verb (c). In light verb constructions, "the first element is a noun, adjective or nonfinite verb, and the second element is a verb with impoverished semantic structure". On the assumption that the meaning of the verb *war̄* 'come' is common to both heavy constructions (b) and light ones (c), they claim that the inherent meaning of movement towards an abstract or concrete point is present in both instances.

Dative Case marks the target of movement which they refer to as goal, a theta-role specification which they assume can combine with other theta roles in the cross classificatory system noted earlier. They support their claim that goal is "a dative inducing semantic construct" with reference to the literal translation (in italics) of examples such as the following.

²⁵ M&M refer to Verma (1976), Kachru et al. (1976), Kachru (1980), K.P. Mohanan (1983), and T. Mohanan (1988) for substantial evidence to support the analysis of these dative NPs as surface subjects.

²⁶ According to M&M, the locative marker *-il* can be used in isolation or in combination with the dative and genitive Case markers.

- 19 Malayalam
- a) ceṭ ik'k'ə kompə muḷ accu
plant(DAT) branch(NOM) sprout(past)
 'The plant sprouted branch(es).'
- a') *To the plant, branches sprouted*
- b) meeṛ ik'k'ə oṛ əa aṅkuṭṭi uṇṭaayi
Mary(DAT) one girl(NOM) be-become(past)
 'Mary had a baby girl'
- b') *To Mary came to exist a baby girl*
 (M&M, Ibid.:53)

While these examples demonstrate the possibility of a goal interpretation, it is not always clear why or how the quirky subject is the goal, particularly in (a), where the plant does not seem to be the goal, but rather the point from which the movement of branch-sprouting takes place.

Although M&M's idea of characterizing quirky subjects by the inherent meaning of their Case marking is intuitively appealing, it must extend beyond dative Case, to include the inherent meanings of all possible quirky subject Case-markings: dative, genitive, accusative, and locative. The following Bengali example suggests that the inherent meaning of locative, as the location of the experience, is an appropriate meaning.²⁷

- 20 Bengali
 aamaar paaye culkocche
 my leg(loc) is-itching
 'My leg itches' / 'It itches on my leg' / 'I have an itch on my leg'
 (Klaiman, 1981:4)

While locative quirky subjects are less common in the literature, the inherent meaning of *locative* seems best suited to providing a meaning which captures aspects common to all quirky subject Case types. Not only can a locative interpretation account for the above Malayalam examples, as shown

²⁷ Klaiman notes that in Bengali, the use of the locative with human referents is rare, being restricted to collective contexts, i.e. *people, you and I*, or reflecting a dehumanizing attitude.

below, it can also accommodate the italicized literal interpretations of previously cited examples noted below.

21 A Locative Interpretation of Quirky Subjects

- 10b) Icelandic
 Drengina vantar mat
the-boys(ACCpl) lack(3sg) food(ACC)
 'the boys lack food'
 i) *food is lacking to the boys*
- 10d) Old English
 sippan him hingrode
 afterwards **him(DAT)** hungered
 'afterwards he was hungry'
 ii) *hunger came to him*
- 15b) Sinhala
 maṭa nēṭuna
I(DAT) dance-P-past
 'I danced (by impulse)'
 iii) *dancing came/ happened to me*

These examples support the characterization of quirky subjects as the location of the predicated activity. Returning to the dubious goal (or even goal-location) interpretation for the Malayalam example in (19a), interpreting the quirky subject, the *plant* as the location of the branch-sprouting seems better suited to the reality of branch-sprouting than interpreting it as the goal. A locative interpretation can also accommodate the use of quirky subjects to indicate possession (19b) if the quirky subject were identified as the location, not of the possessed, but of the possession, or the act of possessing.²⁸

5.4 Quirky Subjects and Stage-Level Predicates

While a locative interpretation seems to characterize a meaning common to all Quirky subject cases, an additional characteristic of these Cases is that they are oblique, indicating the marking of

²⁸ As pointed out to me by P. Hirschbühler, the dative of inalienable possession indicates location as in the French example *Il lui manque une jambe*.

indirect objects.²⁹ Based on the interpretation of the quirky subject as the location of predicated event, I suggest that the verb and the quirky subject form a complex predicate. In this sense, quirky subjects are predicate modifiers of the type $\langle\langle e, t, \langle e, t \rangle \rangle$ described in deHoop (1992a), an interpretation only available to subjects of stage-level predicates.³⁰

The morphological marking of quirky subjects, regardless of its idiosyncratic instantiation, serves to ensure that these NPs receive a "part of a predicate" interpretation. This analysis also suggests an explanation for the postverbal nominative NPs which often accompany quirky subjects. Their nominative marking could be indicative of their interpretative role as the subject of a complex predicate created by the verb and its predicate modifier, the quirky subject. However, while their nominative (S) marking links them to a subject role interpretation, i.e., the last argument entering in the compositional interpretation, based on the syntactic properties of quirky subjects, it is clear that this link does not extend to the syntactic role of subject.

Their nominative Case marking is not a reflex of their own structural position, but of feature matching with the S-marking associated with the subject position. Since these postverbal NPs can never be O-marked as the verbs taking quirky subjects are unaccusative, there is no blocking element, and their nominative marking is free to percolate upwards and be licensed by feature matching under sisterhood with the grammatical S-Case feature activated by quirky subject NP.

The locative interpretation of a syntactic subject is only available when it is marked with quirky Case reflecting a 'part of the predicate' interpretation. When such NPs are marked with nominative Case, the 'part of the predicate' interpretation is not possible. This link between interpretation and Case is demonstrated by the previously mentioned nominative/quirky Case alternations in (13-15), and by the Malayalam examples below.³¹

²⁹ According to Blake (1994:11), oblique Case can also mark specific, animate direct objects, but as there is no evidence of this function in the context of quirky subjects, I leave it aside.

³⁰ The identification of quirky subject predicates as stage-level predicates with locative predicate modifier subjects is compatible with Burzio's (1986:28) claim that unaccusatives, the type of verbs in quirky subject constructions, do not have an external theta-role.

³¹ The literal translation in (a') is also from M&M.

- 22 Malayalam
 a) Quirky Subject
 kuṭṭik'k'ə wayarə niraṇnu
 child(DAT) stomach(NOM) fill(intrans)past
 The child was full
- a') **To the child**, the stomach was full.
- b) Nominative Subject
 kuṭṭo wayarə niraccu
 child(NOM) stomach(NOM) fill-cause-past
 The child filled his stomach
 (M&M, 1991:54)

With the stative verb in (a), the quirky subject receives a locative 'part of the predicate' interpretation as indicated by the literal translation in (a'), but in (b), when the verb has a causative marker, the subject plays an active role in the filling of his/her *stomach* and is marked with nominative Case. In both instances, the morphology of the "object" NP remains nominative, reflecting licensing with the S-marking of the subject position. However, in (a), the subject NP has quirky dative Case identifying it as the location of the predicated activity, and ensuring a 'part of the predicate' interpretation; in (b), this interpretation is excluded, and the nominative subject NP, *the child* is no longer the location of the predicated action, but an active participant in the activity of *stomach-filling*.³²

This analysis of quirky subjects as oblique locatives with a 'part of the predicate' interpretation accomplishes several tasks. First, it provides a means of identifying the NPs which surface as quirky subjects, secondly, it accounts for their quirky Case-marking by identifying them as 'a part of the predicate, and thirdly, it accounts for the nominative marking of the "objects" by Case percolation. In addition, since the 'part of the predicate' interpretation is restricted to stage-level predicates, it identifies the class of verbs taking quirky subjects as stage-level predicates.

³² Although the possibility of two interpretations is linked to a causative marker in this example, the availability of two interpretations with nominative / quirky Case alternations are not always so restricted as demonstrated by the Icelandic example (13).

5.5 The Case and Structural Position of Quirky Subjects

The syntactic properties of quirky subjects such as the binding of reflexives, subject-verb inversion, and conjunction reduction reflect their presence in a structurally prominent position associated with S-marking, presumably Spec-AgrS.³³ Although the verbs taking quirky subjects may project complement positions, being unaccusative verbs, they do have the O-marking necessary to identify the NP in this position as a direct object. Their Case markings are restricted to the lexical Case feature of the quirky subject and the grammatical Case S-marking associated with the subject position. As an inherent feature, their lexical Case marking undergoes relational identification and licensing VP-internally in the Spec-VP position under Spec-head agreement (cf. Ottosson 1989, Foley, 1990). As noted in chapter 4, examples of Icelandic *að* infinitivals such as the following from Sigurðsson (1991:331) support the claim that this lexical Case-marking is licensed VP-internally.

- 23 Icelandic
 Stákarnir vonast til [að PRO leiðast ekki öllum í skóla
 the boys(NOM) hope for to PRO(DAT) bore not all(DATm.pl) to school

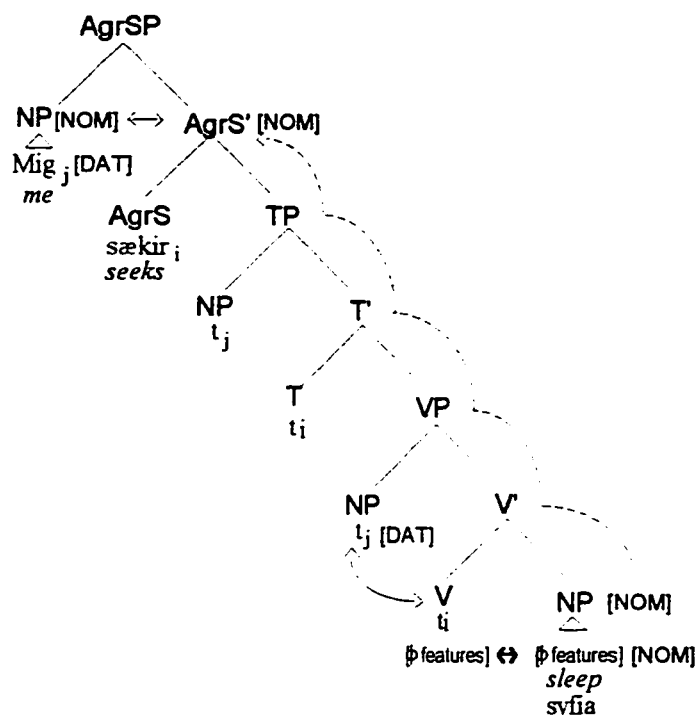
Although Sigurðsson provides evidence to shown that PRO is VP-external, I assume that it receives its Case marking VP-internally prior to movement. Additionally, although I argued in chapter 4 that PRO received its Case-marking in the Spec-TP position, I assume that the common position for the lexical subjects of finite verbs is Spec-AgrSP. The S-marking associated with this position is activated by verb-movement to the head AgrS⁰ and by movement of the quirky-marked subject NP to the specifier position. The activated S-marking is free to undergo relational identification under sisterhood and licensing with the upward-percolating lexically specified Case feature of the postverbal NP. Percolation to this point is possible since verbs with quirky subjects are unaccusative, and hence there is no blocking element. This is shown by the following example.

³³ The structural analysis I propose for quirky subjects is based largely on their occurrence in Icelandic, an SVO language with a nominative accusative Case system. I do not explore adaptations necessary to account for their occurrence in languages with other word orders and ergative or split Case systems here, but leave that for further research. Furthermore, I do not address the highly controversial issue of verb-movement in Icelandic since whether the verb moves to INFL (Rögnvaldsson (1984), Thráinsson (1984, 1986), Rögnvaldsson & Thráinsson (1990)) or on to COMP (Platzack (1985) and Holmberg (1986)) or is conditioned by the ECP Travis (1991), I assume that the common subject position for subjects of finite verbs is Spec-AgrS.

24 Quirky Subject and Postverbal Nominative Marking in Icelandic

- a) Mig sækir syfia
me(DAT) seeks(3sg) sleep(NOM)
'I am sleepy'

b)



In the above structure, the quirky subject *mig* gets its dative Case marking by Spec-head agreement in the Spec-VP position, but must move to the lexical subject position Spec-AgrSP to acquire its syntactic properties. Movement of the verb to the head of AgrS and of the quirky marked NP to its specifier activates the associated S-marking which is realized as nominative Case in Icelandic.³⁴ This marking does not appear on the dative marked nominal, but undergoes relational identification and licensing under sisterhood with the upward percolating nominative Case feature specified by the lexical insertion of the postverbal NP *syfia*. Percolation to this point is possible because no blocking element is encountered. Verbal agreement with the postverbal nominal NP *syfia* 'sleep' is the result

³⁴ According to this analysis, licensing occurs under sisterhood in the AgrSP projection, but the Icelandic infinitival data suggests that it could also occur in the TP projection.

of VP-internal feature matching prior to movement of the verb *sækir* 'seeks'. In constructions with no postverbal nominative NPs, verbal agreement exhibits what Sigurðsson (1991:333) refers to as the default form, a form which is homophonous with third person singular.

This analysis raises questions about why the nominative S-marking associated with the AgrSP projection is not realized on the quirky subject, or if in fact it is. Although Belletti (1988:25) raises the possibility of structural-inherent Case combination, a combination which Cowper (1988) claims is an essential condition in Icelandic, Sigurðsson (1989) argues in favour of a universal ban of chains (including individual NPs) bearing more than one Case. While Sigurðsson's arguments are convincing for Icelandic where quirky subjects would supposedly be marked with an invisible nominative Case which unlike other instances of nominative Case does not trigger verbal agreement, evidence from Korean suggest that such a ban is not universal. This is shown by the following Korean examples from Youn (1990) which demonstrate the possibility of Case alternations (a), and a double dative/nominative Case-marking, which Youn refers to as "Case stacking" (b).³⁵

25 Korean

a) Case Alternations on the Subject NP

Chelsu-eykey/ka ton -i mocala-ss-ta
 Chelsu(DAT/NOM) money(NOM) lack (pst.ind)
 'Chulsoo lacked money'
 (Ibid.:199)

b) Case Stacking on the Subject NP

chelsu- eykey-ka ton -i mocala-ss-ta
 Chulsoo(DAT -NOM) money(NOM) lack (pst.ind)
 'Chulsoo lacked money'
 (Ibid.:201)

As expected, when the Cases are stacked as in (b), the ordering reflects the licensing order since the VP-licensed lexical (dative) Case is closer to the noun than the grammatical (nominative) Case.³⁶

³⁵ Youn's analysis argues against previous analyses (Yim (1985), Lee (1987)) which claim that the experiencer constructions with multiple nominative Case markings are in fact multiple subject constructions.

³⁶ Working within the framework of Relational Grammar, Gerdts & Youn (1988) account for this ordering on the basis of Case rules which distinguish S-Cases, nominative and accusative, which are assigned in terms of final structure (final grammatical roles), and I-Cases, dative, instrumental, and comitative, which are selected on the basis of semantic roles.

While these examples provide evidence against a universal ban on double Case marking, they do not readily account for the lack of double Case marking in Icelandic. I suggest that this Case combination is related to the availability of distinct morphosyntactic properties for subject identification. As noted earlier, generally the morphological and syntactic properties of subjects are clearly divided in quirky subject constructions, with quirky subjects exhibiting only the latter. However, in languages such as Korean which lack verbal agreement and allow multiple nominal constructions, this division is not so clear, and the possibility of a Case combination in which the quirky Case identifies the oblique locative meaning, and nominative Case its subject role, facilitates identification of the quirky subjects.³⁷ In Icelandic, such a marking would require that nominative Case have two forms, one which triggered verbal agreement and one which occurred with quirky subjects and did not trigger agreement. Thus, while the Korean example provides evidence for the realization of S-marking on quirky subjects, the cross-linguistic availability of a grammatical and lexical Case combination in the context of quirky subjects appears related to the ability of morphosyntactic properties to identify quirky subjects as subjects in spite of their coding anomalies.

5.6 Requirements for the Occurrence of Quirky Subjects in a Language

In this section I examine the evolution of quirky subjects in English and Icelandic and of oblique experiencers in German, to determine necessary triggers for the occurrence of quirky subjects in a language. In their discussion of the acquisition of subjecthood, Cole et al. (1980:720) propose that subject properties are acquired in the following stages.

According to their ordering rules, I Case will precede S-Case since the former is determined in the initial stratum and the latter is determined in the final stratum.

³⁷ The failure of Korean subject properties to be as clearly divided as they are in Icelandic probably results in confusion about the presence of quirky subjects in Korean (cf. Masica, 1976). Youn supports his claim that these oblique experiencers are in fact subjects in Korean by noting their subject properties of Case Stacking, Subject Honorification, Plural Copying and constructions with the conjunctive *myense(to)* which attaches to predicates to form subordinate clauses whose understood subject is controlled by the final subject of the main clause. To further support his claim that the oblique NPs are actually subjects, Youn provides evidence that the preverbal nominative NP in sentences such as (25) is not a subject.

26 Stages in the Acquisition of Subjecthood

A: The NP in question exhibits none of the coding or behavioural properties of subjects.

B: The NP in question exhibits only the behavioural properties of subjects.

C: The NP in question subsequently exhibits the coding properties of subjects.

Minimally, quirky subjects require that a language has evolved to Stage B which implies the presence of a structural position associated with subject NPs. The occurrence of quirky subjects also seems linked to the requirement for this position to be filled, and to the referential nature of the element which can fill it.

The languages of Old English (OE) and Old High German (OHG) both had preverbal nonnominative experiencers, but only the former had quirky subjects. Quirky subjects were present in English until the mid-16th century. As shown by the following example, sentential coordination conjoins a sentence with a dative experiencer NP and a sentence with a null ($\emptyset$) subject.

27 Sentential Coordination

& him felicade hire þeawas & $\emptyset$ þancode Gode
& him(DAT) liked/pleased(3sg) her behaviour(ACC/NOMpl) & (he) thanked God
'and he liked her behaviour and thanked God'

(ChronD 210.32 (1067) cited in D. Denison, 1985:114)

According to Allen (1993:456), the fact that the number of preposed dative experiencers exceeded dative objects in coordinate subject contexts further supports the subjecthood of these NPs. Their subject properties confirm recognition of a structural subject position associated with syntactic subject properties in Old English (OE).

The demise of quirky subjects in OE has been linked to the loss of morphological Case, a change from a semantic based to syntactic based Case system, the loss of lexical predicates associated with quirky Case, and to the analogical reanalysis of quirky subjects as nominative subjects following a change to an SVO word order (cf. Allen (1993), Elmer (1981), Fischer & Van der Leek (1983), Lightfoot (1991), Seeffranz-Montag (1984)). While undoubtedly a contributing factor, the loss of morphological Case distinctions seems insufficient cause for the disappearance of quirky subjects since they are often pronominal and most pronouns maintain a nominative / other Case distinction even today. However, the change from semantic based Case to syntactic based Case is crucial since

these subjects could not be "quirky" without their semantic-based lexical Case markings.³⁸

As noted in Allen (1993), and Elmer (1981), the disappearance of lexical predicates associated with quirky subjects was gradual and variable. Although some verbs had nominative and quirky variants, nominative variants were rare in OE. The nominative variant of the verb *lician* / *liken* shown in (a) originated in the 14th century.

- 28 Anglo-Saxon English
 a) ic licige
 b) me liceþ
 (Elmer, 1981:39)³⁹

The verb *lician/likēn* 'to please'⁴⁰ belongs to Elmer's *please/desire* class which rarely occurred in personal constructions, and never in *it*-constructions. While the French loanword *please* showed an overlap with the use of *liken* in the impersonal (quirky) construction from the 14th to the 16th century, the impersonal function was unique to *please* from the 17th century on.

Although subject properties were well established in OE, pronominal subjects and expletives were often null.⁴¹ This is illustrated by the optional expression of *hit* 'it' in weather expressions such as (b), and of *þær* 'there' (d) in the following examples.

- 29 The Optional Expression of *hit* and *þær* in OE
 a) Hit sniwð
 It is-snowing

³⁸ According to Lumsden (1987), there was a change in the default Case of VP internal arguments from [+inherent] in OE, to [-inherent] in ME. Allen (1993:458) claims that the loss of lexical marking was gradual, affecting objects first. She believes its continued presence on subjects was due to its function "in signaling the nonagentivity of the subject."

³⁹ Elmer provides an in-depth discussion of the evolution of individual verbs. His source for the examples cited here is the Bosworth-Toller Anglo-Saxon Dictionary.

⁴⁰ Fischer & Van Der Leek (1983:342) note that although OE *lician* is assumed to have the causative meaning *please*, Chaucer used it both personally as in *she likes it*, and impersonally as in *it likes her* meaning *it pleases her*.

⁴¹ According to Mitchell & Robinson (1988), the omitted pronominal subject is frequently the same as that of the preceding clause. However, they cite an example from Maldon 11.17-21 where the subject is null and the reference changes twice.

- b) ... norþan $\emptyset$ sniwde
 ...from-the-north it-snowed
 (J. Anderson, 1988:8)
- c) **þær** was gidd ond gleo
 there was song and music
- d) On ðam timan $\emptyset$ wæs sum þegen Drihten gehaten on Norðhymbrelande
 in that period was a certain nobleman Drihten called in Northumbria
 'in that period **there** was a certain nobleman named Drihten in Northumbria'
 (Ibid., 1988:20)

Suppression of *þær* when the fronted element *On ðam timan* in (d) satisfies the V2 requirement, suggests that it is also a topicalized element in (c). However, its subject status is demonstrated by the following example in which it is expressed postverbally when *Donne*, a preposed element, satisfies the V2 constraint.

- 30 Postverbal *þær* in OE
 Donne is **þær** on neaweste sum swiþe mære burh
 then is **there** in neighbourhood a certain very famous city
 'Then there is a very famous city in the neighbourhood'
 (The Blickling Homilies 196:18, cited in Breivik 1989:45)

Like the V2 constraint, the optional expression of pronominal and expletive subjects has disappeared from Modern English.

Although German has NPs which superficially resemble quirky subjects (31a), they do not exhibit the syntactic subject properties of conjunction reduction (b) and control of PRO (c).

- 31 Dative Preverbal Experiencers in German
- a) Mir gefallen diese Damen
 me(DAT) like(3p.pl) these ladies(NOMpl)
 'I like these ladies'
- b) Conjunction Reduction
 *Er sah die Damen und $\emptyset$ sie gefielen
 He(NOM) saw(3p.sg) the ladies and $\emptyset$ them(NOMpl) like(3p.pl)
 'He saw the ladies and liked them'

c) Controlled PRO

*Ich versuchte PRO diese Damen zu gefallen

I(NOM) tried PRO these ladies(NOM) to like

'I tried to like these ladies'

(Cole et al. 1980:727-728)

Sigurðsson (1989:351) claims that these quirky subject look-alikes are topicalized S-Structure objects, and cites works by Haider (1988) and Haider & Rindler-Schjerve (1988) which claim that German has no fixed Case positions,⁴² and is exempt from the Extended Projection Principle, the requirement for a subject [NP,IP] position. The failure of quirky subject look-alikes to exhibit the syntactic properties of subjects supports the lack of a fixed "subject" position for German.

Lockwood (1968) notes that Old High German (OHG)⁴³ had impersonals with *es* referring to natural phenomena as in (a), and nonnominative experiencers such as (b).

32 Old High Germana) es schneit
it is snowingb) mich dürstet
me(ACC) thirsty(3sg)
'I am thirsty'

c) es dürstet mich

d) ich dürstet
(Lockwood, 1968:169-170)

Although OHG generally expressed *es* with impersonals denoting natural phenomena such as (a), it maintained the older Indo-European practice of omitting it when these expressions occurred with infinitivals. It was usually omitted with impersonals such as (b) unless it occurred sentence initially

⁴² Sigurðsson finds this nonconfigurational analysis implies that word order in German is actually freer than it is.

⁴³ The dates for German are:

Old High German: 0-11thC

Middle High German: 12th-14thC

Modern German: 1400-

as in (c).⁴⁴ Nominative alternatives such as (d) were rare in OHG.⁴⁵

According to Seeffranz-Montag (1984), the expression of *es* is becoming obligatory with nonnominative experiencers especially in spoken language.⁴⁶ Although this may be the result of a reanalysis of *es* as subject because of its sentence initial position, in expressions maintaining the impersonal meaning, it tends to be expressed even when postverbal as shown below.

- 33 Modern German
 a) Mich friert
 b) Es friert mich
 c) Mich friert (es)
 'I am cold'
 (Ibid. 1984:538)

Impersonals such as (a) are considered archaic. Although the impersonal meaning is lost in nominative versions such as (32d), according to Seeffranz-Montag (1984), young speakers tend to prefer them, or ones with *sein* 'to be' (34a), or *haben* 'to have' (34b), to nonnominative ones with or without *es*.

- 34 Modern German
 a) Ich bin durstig
 'I am thirsty'

 b) Ich habe Durst
 I have thirst
 'I am thirsty'

This preference for preverbal nominative NPs combined with the tendency for *es* to be expressed even in postverbal positions suggests that German is in the process of developing a subject position, with recognizable subject properties. A contributing factor in the reanalysis of *es* as subject noted by both Lockwood (1968) and Seeffranz-Montag (1984), occurred around the middle of the

⁴⁴ In OHG, *es* was not required to maintain the V2 order, and according to Curme (1960) cited in Breivik (1983:377), the grammatical subject was used sparingly "in oldest German".

⁴⁵ Seeffranz-Montag (1984:539) notes that *most* did not occur before the 18th century.

⁴⁶ This use of *es* contrasts with its use in the expression *es gibt* 'there is/are' where its presence is obligatory both preverbally and postverbally.

This reanalysis of *es* as subject is restricted to impersonal constructions. In existentials it appears sentence initially to satisfy the V2 constraint (a), but is excluded in the postverbal subject position if another element is fronted as in (b), or in inverted questions such as (c).

a) Es sind noch viele Studenten da.
it/there are still many students there
'There are still many students there.'

b) Da sind { *es/Ø } noch viele Studenten.

c) Sind { *es/Ø } noch viele Studenten da?
(Faarlund, 1990:64)

a) Ich kenne sie nicht.
I(NOM) know her not
'I don't know her'

b) Ø kenne sie nicht

c) *Sie_i kenne t_i nicht.

⁴⁷ See Thráinsson (1986) for a discussion of V1, V2, & V3 in Icelandic.

examples cited thus far, quirky subjects are common in Modern Icelandic. This contrasts with Old Icelandic where only the lexically marked NPs associated with the verb *þykkja* 'seem' demonstrated the subject property of controlling reflexivization.

37 Old Icelandic

- a) honum þóttir þú hafa haft við sik fjorráð
 he(DAT) seemed(2sg) you(NOM) to-have had against refl death-plot
 'He thought you to have had a death plot against him'
 (Njal:109, cited in Cole et al. 1980:722)⁴⁸

Sigurðsson (1989:153) claims that Old(er) Icelandic could freely drop subjects⁴⁹ including expletive (a) and referential (b) ones and argues that extraction facts support the interpretation of the missing NPs as subjects, not topicalized elements.

38 Old Icelandic

- a) Rígnir
 'It is raining'
 (Haiman, 1974:93)⁵⁰
- b) ok kom hann þangat, ok was Hoskuldr úti, er [e] reð í tún
 and came he there and was Hoskuldr out, when (he) rode into field
 'And he came there and H. was outdoors when (he) rode into the field'
 (Brennu-Njáls saga, 1908:35 cited in Sigurðsson, 1989:154)⁵¹

Like Modern German, Modern Icelandic permits the dropping of referential subjects only from the topicalized [Spec, CP] position as shown by the ungrammaticality of (b) in which the preverbal *það* blocks topicalization of the missing subject.

⁴⁸ Although the ability to serve as an antecedent for reflexives is a more reliable test for subjecthood in Old Icelandic than in Modern Icelandic, as noted in Cole et. (1980), control of reflexive possessive adjectives is not a reliable test.

⁴⁹ This contrasts with Haiman (1974:93) who claims that personal pronouns could only be omitted in poetry in Old Icelandic.

⁵⁰ Lockwood (1968:169) also cites this example, but refers to the language as Old Norse, the literary variety of Old Icelandic found in the *Icelandic sagas*.

⁵¹ In his examples, Sigurðsson (1989) uses [e] to indicate the empty subject position.

39 Modern Icelandic

- a) Veit það
 know(3sg) it
 'I know it / ?? (S)he knows it'
 (Sigurðsson, 1989:147)
- b) *Það_i veit (það veit [e] t_i)
 (Ibid.:147)

In Modern Icelandic, dropping null subjects from the [NP,IP] position is restricted to subjects with arbitrary reference (a) or to expletives (b).

40 Modern Icelandic

- a) Ekki er [e] hlægjandi að þessu
 not is laughing(/laughable) at this
 'One cannot laugh at this'
- b) Voru [e] stundum mýs í baðkerinu
 were sometimes mice in the-bathtub
 'There were sometimes mice in the bathtub'
 (Ibid.:162)

Both these types of null subjects can occur with the expletive *það* 'it, there' which, as demonstrated by the following examples from Thráinsson (1979), is a topicalized element which does not occur in subject position. As shown in (41) below, it can optionally occur in existentials, sentence initially as in (a), but not if something else is fronted as in (b), nor in inversion structures such as (c).

41 Modern Icelandic

- a) Það eru [Ø] mýs í baðkerinu
 'There are mice in the bathtub'
- b) Í gær voru { *það/Ø } mýs í baðkerinu
 'Yesterday were { *there/Ø } mice in the bathtub'
- c) Eru { *það/Ø } mýs í baðkerinu
 'Are { *there/Ø } mice in the bathtub?'
 (Thráinsson, 1979:477-478)

The following table summarizes properties of the languages discussed which might contribute to the presence of the quirky subjects in a language.

LANGUAGE	QUIRKY SUBJECTS	SUBJECT POSITION & SUBJECT PROPERTIES	OBLIQUE CASE	NULL SUBJECTS			NULL TOPICS
				ref	arb	expl	
OLD ENGLISH	✓	✓	✓	✓	✓	✓	—
MODERN ENGLISH	✗	✓	✗	✗	✗	✗	—
OLD GERMAN	✗	✓	✓	✗	✗	✓	✓
MODERN GERMAN	✗	✗	✓	✗	✗	✗	✓
OLD ICELANDIC	⊗	✓	✓	✓	✓	✓	—
MODERN ICELANDIC	✓	✓	✓	✗	✓	✓	✓

✓ present

⊗ acquiring or modified occurrence

✗ absent

⊗ rare

— unclear evidence
or non applicable

TABLE 1

Factors Contributing to the Presence of Quirky Subjects in a Language

Comparing the two languages with quirky subjects, Old English and Modern Icelandic, we see that they both have a fixed subject position associated with recognizable subject properties, oblique Case-marking, and the possibility of expletive and arbitrary null subjects.⁵² I suggest that these are the minimal requirements for the occurrence of quirky subjects in a language. As quirky subjects embody a split in the morphological and syntactic properties of subjects, a language must have both the

⁵² Sigurðsson (1989) provides evidence to indicate that in Icelandic both types of null subjects must be in topic position to be deleted. While the deletion position for subjects in OE is not as clear, it does not seem to be a major difference since the subject position is empty, whether the subject is deleted from its original position or only following topicalization.

morphology to provide oblique identification, and a structural subject position which is identifiable on the basis of syntactic properties such as coordination and subject-aux inversion. The occurrence of null expletives provides a potential landing site for quirky subjects since the verbal inflection provides no conflicting identificational (ϕ -features) properties. Although not identified in the brief overview above, I further suggest that the potential for the Case and agreement properties of the structural subject position to be licensed independently, is also linked to the possibility of quirky subjects. This requirement is supported by the fact that generally, in quirky subject constructions with two NPs, the nonquirky NP is marked with nominative (or ergative) Case and controls verbal agreement. This phenomena is accounted for by assuming that the ϕ -features triggering verbal concord are licensed VP-internally prior to verb movement as in (24), and that movement of the quirky subject NP to the Spec-AgrSP position, (and of the verb to the head of AgrSP), activates the S-marking associated with this position. The S-marking is free to undergo relational identification and licensing with the upward percolating nominative Case feature of the postverbal NP. Languages with quirky subjects therefore appear to require not only the independent identification of morphological and syntactic properties, but also that the individual morphological properties of the nonquirky NP can be licensed independently.

In English, a language which has a recognizable subject position with associated subject properties, there are no quirky subjects because it lacks the necessary oblique morphology to identify them, and since it lacks the possibility of null subjects and expletives, it cannot provide a structural subject position as landing site following movement. German, on the other hand, has the oblique morphology, but is lacking a recognizable subject position and the possibility of null subjects and expletives. Thus on the basis of the brief survey of these languages we can conclude that to have quirky subjects a language minimally requires the following properties.

- 42 Minimal Requirements for Quirky Subject in a Language⁵³
- a) A recognizable subject position with associated syntactic properties
 - b) Oblique Case morphology
 - c) Null expletive subjects, and as suggested above,
 - d) Independent licensing of S-marking and agreement

While these requirements were found to be necessary for the existence of quirky subjects in the above mentioned languages, more languages need to be examined before claiming that these conditions suffice to entail their presence in a language.

5.7 Conclusion

In this chapter I examined lexical and grammatical Case, and their interaction in the context of the quirky subject construction. As subjects of unaccusative stative predicates, I identified quirky subjects as locatives, a meaning which is compatible with the variety of quirky Case-markings. On the basis of their 'part of the predicate' interpretation, predicates requiring quirky subjects are identified as stage-level predicates, since according to de Hoop (1992b), this interpretation is restricted to subjects of stage-level predicates. Subjects of stage-level predicates also have the potential to be associated with a strong quantificational interpretation, an interpretation available with a nominative Case marked subject, a possibility with predicates permitting quirky / nominative Case alternations. Following this, I presented evidence from Korean to support the possibility of a combined lexical and grammatical Case marking, and argued that the availability of this option cross linguistically was dependent upon the clarity of the division between the morphological and syntactic properties which identify subjects. Finally, I examined the evolution of quirky subjects in English, German and Icelandic, and identified syntactic and morphological properties necessary to the occurrence of quirky subjects in a language. These properties are an identifiable structural subject position associated with recognizable syntactic subject properties, the oblique morphology necessary to identify the NPs as quirky, the possibility of null expletives, and the possibility of the independent licensing of the Case and agreement features of the subject NP. However, based on the sparsity of

⁵³ While not noted in this list, Icelandic and Old English also exhibit V2, or a tendency for V2, which suggests that this constraint may also influence the occurrence of quirky subjects.

the data supporting these properties, I consider them to be a necessary but not necessarily sufficient trigger for the occurrence of quirky subjects in a language.

In the following chapter, I examine the interaction of grammatical and semantic Case in the context of existentials, a context which bears considerable resemblance to that of quirky subjects.

Chapter 6

The Semantic Case of Existentials

6.0 Introduction

This chapter examines the interaction of semantic and grammatical Case in the context of English existential sentences such as (1)

- 1 There is a/*the llama on the hillside.

Like the NPs of experiencer constructions, both the expletive and postverbal NPs of existential sentences share irregularities in their coding properties, and like the locative analysis proposed for quirky subjects, the form of the English expletive shares a locative meaning. While theoretical accounts of existentials are consistent in their reoccurrence, explanations of their morphological, syntactic and semantic features are varied. Accounts of the Case of the postverbal NP involve chain formation with the expletive (Safir, 1985), direct Case assignment by the copula (Safir (1985), Belletti (1988), Lasnik (1992)) and even LF-word formation rules (Chomsky (1995), Lasnik (1993)). Syntactic solutions involve movement of the postverbal NP from the preverbal position associated with nominative Case (Milsark (1974, 1977), Chomsky (1981)). Semantic explanations concentrate on the Definiteness Effect (DE) which excludes NPs with a strong (definite) interpretation from the postverbal position (Milsark (1974, 1977), Diesing (1992)). Following a review of several theoretical accounts, coding and structural assumptions common to many of these theoretical analysis are questioned by a variational analysis of concord in English existentials by Meechan & Foley (1994). Incorporating these findings I propose an account of the Case and concord properties of existentials in which the Case of the postverbal NP is semantic, and like the nominative Case of postverbal NPs in quirky subject constructions, results from percolation and feature matching with the S-marking of the Spec-AgrS subject position.

6.1 Theoretical Analyses of Case, Agreement and Interpretation in Existentials

According to Chomsky (1991:441), existential sentences such as (1) have the following three salient properties.

2 Salient Properties of Existentials

- a) An NP must be in a certain formal relation to *there*.
- b) Number agreement is with the associate, not *there*.
- c) The associate NP may undergo overt raising to the subject position.

These properties are closely related. The *formal relation* between the expletive and the postverbal associate NP explains both the Case and agreement features of existentials, and in movement analysis, links the preverbal and postverbal position.

6.1.1 Milsark (1974, 1977) and Chomsky (1981)

The formal relation may result from movement or by chain formation. In movement analyses such as Milsark (1974, 1977) and Chomsky (1981) the NP may surface in its original preverbal position (a) where it receives nominative Case which is, under these analyses, linked to verbal agreement. The NP may also surface postverbally following movement, a process which, as shown in (b), leaves a trace, and is accompanied by *there-insertion* (C).

- 3 a) Preverbal Position
[_{NP} An old car] is in the garage
- b) Postverbal Position
t_i is [_{NP} an old car]_i in the garage
- c) There Insertion
There is an old car in the garage

According to Chomsky's analysis, the trace of the moved NP provides *there* with agreement specification prior to its deletion, a deletion which avoids a potential binding violation.

Milsark (1977) refines the Definiteness Effect (DE), the restriction on the occurrence of definite NPs outside list contexts in existentials to a restriction on NPs with strong determiners, or universal quantifier words. Only NPs with weak determiners, which he describes as cardinality words, are permitted in existential *there* sentences. According to his classification, strong determiners are *the*, *all*, *every*, *each*, (non-polarity) *any*, *some(of the)*, *many(of the)*, *most*, (universal) *θ*, while weak determiners are *a*, number determiners, *some*, *many*, *few*, *lots of*, *plenty of*, *several*, *no*, (non

universal) $\emptyset$ determiners. Quantifiers such as *some*, *many*, and the $\emptyset$ *determiners* fit both classifications, and although their classification is clear when they co-occur with the definite article *the*, distinguishing them outside such contexts can be, as noted by Milsark (1977:19), "a devilishly subtle business". He accounts for the DE by assuming that *there be* is equivalent to an expression of existential quantification, which, if combined with an NP with a strong determiner, results in double quantification. Weak determiners, being cardinality words and non-quantificational, escape this anomaly.

6.1.2 Safir (1985) and Chomsky (1986)

The chain formation analyses proposed by Safir (1985) and Chomsky (1986) provide a *formal relation* which not only ensures the transmission of nominative Case to the postverbal NP, but also number agreement with it. According to Safir's analysis, there are 2 types of *be*, Predicational BE (PBE) and Identificational BE (IBE). The *be* found in existential sentences which exhibit the DE is PBE. It has no meaning, no external argument, takes a small clause complement and does not assign Case. The proposed structure is shown below.

- 4 Predicational Be
 There_i is(PBE) [_{SC}[_{NP} a man_i] [_{PP} in the garden]]

In sentences with PBE, chain formation is required to account for Case transmission to the postverbal NP which, although θ -marked as subject of the small clause, is not Case marked. It must therefore form a chain with the (nominative) Case-marked expletive *there* to avoid a Case Filter violation. Safir refers to such chains as unbalanced since the expletive or non-argument is the head of the chain. He avoids the potential binding problem posed by such "unbalanced" chains by claiming that chains with indefinites, (the type of NPs found in existentials), are exempt from the binding conditions at S-Structure.

The *formal relation* is less evident with IBE, which in contrast to PBE, has identificational meaning, 2 θ -positions, and does not require chain formation since it assigns Case directly to an NP complement. On the basis of an American preference for *It's me* over *It's I*, Safir suggests that it

assigns accusative Case. The IBE can occur in existential sentences similar to (4), but which are exceptions to the DE in that the determiner is definite.

- 5 Identificational Be
 There is(IBE) [_{NP}[_{NP} **the man**] [_{PP} in the garden]]

While superficially similar, the different structures Safir proposes for examples such as (4&5) are intended to account for interpretational differences which result in the PP of PBE in (4) being considered a "property" of the NP which may serve to identify the location of *a man*, while in (5) the PP of IBE serves as an identifiable attribute of *the man*.

IBE also occurs in list contexts where, according to Safir (1985:119), *there* "stands for some discourse-controlled presupposed heading of a list". Here too determiners can be definite as shown in (6b).

- 6 IBE in Existential List Context
 a) What's left in the room?
 b) There's(IBE) [_{NP} [the ball], [six books], and [a hat]]

Although Safir argues for interpretive distinctions between PBE and IBE, identification based on interpretation alone is often difficult even with access to context.

Chomsky (1986) accounts for the expletive-argument pairs of existentials by the LF-movement of the associate NP to *there*. Again, the *formal relation* is chain formation which permits Case transmission and accounts for the agreement patterns.¹ He avoids binding violations by claiming that binding theory is essentially "a theory of referential dependency" (1986:143) and therefore not applicable to postverbal NP arguments bound by the Case marked nonargument expletive *there*. According to his analysis, the principle of Full Interpretation requires expletive substitution and deletion at LF since, being semantically empty, *there* has no interpretation.

¹ Chomsky (1986:135) describes the Case marking of a CHAIN as follows:
 A CHAIN is Case marked if it contains exactly one Case-marked position;
 a position in a Case-marked CHAIN is visible for θ -marking.

6.1.3 Belletti (1988)

The analyses of Belletti (1988) and Lasnik (1992, 1993) posit direct Case assignment but maintain the assumption of a *formal relation* between the expletive and the postverbal NP although their analyses eliminate the need to maintain this assumption. On the basis of Finnish data such as the following, Belletti claims that the Case assigned to the postverbal NP is inherent partitive Case.

- 7 Finnish
- a) Pöydällä on kirjoja
 on the table is (some) books(PARTpl)
 'There are some books on the table'
- b) Helsingistä tulee kirjeitä
 from Helsinki comes (some) letters(PARTpl)
 'There come some letters from Helsinki'
 (Belletti, 1988:2)

According to her analysis, although unaccusatives such as *be* lack the ability to assign structural accusative Case, they have the ability to assign inherent partitive Case.² They exhibit the DE because partitive Case, as shown by the above examples, is associated with indefinites. Following Williams (1984), she assumes that the NP is theta-marked with the existential theta-role of the copula *be*. She claims that partitive Case is also compatible with the interpretation of exceptions to the DE found in list contexts. Inherent Case eliminates the need for Case transmission between the postverbal NP and *there*, but Belletti (1988:22) maintains that the relation between them is what "guarantees the correct verbal agreement and the 'transmission' of the subject θ -role to the adjoined NP".

6.1.4 The Minimalist Analyses of Chomsky and Lasnik

Lasnik (1992) adopts Belletti's proposal that the Case of the postverbal NP is partitive, but claims that it is structural, not inherent. It is assigned to a small clause complement, not an NP,³ and

² On the basis of Italian unaccusatives such as the following in which the NP is nominative, she assumes that assignment of partitive Case must be optional. È arrivato Gianni
 arrived Gianni(NOM)

³ According to Lasnik, if "contentful verbs" assign partitive Case, it is inherent and assigned to their θ -marked complements. The assumption that *be* has no θ -role eliminates the possibility of it assigning inherent Case which is directly

although it has "semantic import", it is not linked to a specific theta-role. He supports his claim that this Case is structural rather than inherent with reference to the Russian genitive of negation, which as noted by the following examples (Ibid.:399) alternates with nominative Case in sentences with negated unaccusatives.

- 8 Negated Unaccusatives in Russian
- a) Ne pojavilis' studently
 NEG showed up(pl) students(mascNOMpl)
 'The students didn't show up'
- b) Ne pojavilos' studentov
 NEG showed up(neut.sg) students(mascGENpl)
 'No students showed up'

To further support his claim that this genitive of negation, which has semantic import which is similar to that of Belletti's partitive Case, is structural, not inherent, he notes that it is suppressed by verbs which assign lexical Case to their objects as shown by the following example (Ibid.:400) in which the verb *pomogat'* 'help' requires a dative object.

- 9 Negated Lexical Case Assigning Verbs in Russian
- a) Ja ne pomogaju nikakim devuškm
 I NEG help no girls(femDATpl)
- b) *Ja ne pomogaju nikakix devušek
 I NEG help no girls(femGENpl)

Lasnik notes that the suppression of the genitive of negation by the lexical Case of the verb *pomogat'* is expected according to Freidin and Babby's (1984) Principle of Lexical Satisfaction (PLS) under the assumption that the genitive Case is structural not lexical.⁴

He suggests that this structural Case is associated with functional elements such as the passive

linked to θ -marking. However, Lasnik suggests that if inherent were defined so that it could proceed in the absence of θ -marking associated with lexical content, then *be* could be considered to have inherent Case.

⁴ The claim that the genitive of negation is structural rather than inherent contrasts with the analysis presented in chapter 4, in which it is analyzed as an instance of lexical Case, and its suppression is accounted for by modifying the PLS to make it scope sensitive. Its suppression in (9) is expected since it is in the scope of another lexical Case assigner.

morpheme or the genitive of negation rather than the verbs themselves, and that the parametric variation in its expression could be a reflection of cross-linguistic differences in the blocking abilities of these functional elements. He later (Lasnik, 1995) changes this suggestion and claims that "*be* is responsible for partitive Case in both English and Italian passive sentences".

In Chomsky (1991, 1993, 1995),⁵ *there* is considered an LF-affix, and the *formal relation* is the result of adjunction of the associate NP at LF. This process creates the LF-word shown in (b).

10a) There is [_{α} a peacock] in the park

b) LF-Word (Chomsky, 1995:200)
[α -*there*]⁶

Chomsky motivates this movement by the principle of Last Resort which states that "a step in a derivation is legitimate only if it is necessary for convergence." In examples such as (10), the NP cannot check its Case feature in its postverbal position and must therefore LF-raising is necessary for convergence. The LF-word thus formed has all its features checked, but since the NP is now word internal, the features of the word are interpretable only in the trace position of the chain (α , t). Movement of the NP is motivated solely by its own Case requirements since the principle of Greed, self-serving Last Resort, prohibits movement to benefit other elements. Although this LF-adjunction also satisfies the affixal requirements of *there* which is uninterpretable if free standing, it is a purely a self-serving move for NP.

Lasnik (1993, 1995) adapts the assumption of partitive Case assignment to the Minimalist program. He criticizes Chomsky's morphological motivation of the LF-raising of the postverbal NP in existentials since feature checking for Case must be overt in English given the strong NP feature of tense. Since the strong NP feature of tense disappears following overt checking with *there*, it would no longer be available to check the Case feature of the LF-adjoined associate. This problem

⁵ Chomsky (1991), (1993) appear with minor revisions as Chapters 2 & 3 respectively in Chomsky (1995).

⁶ This differs from the LF-word of Chomsky (1991:442) in which the associate rather than the expletive was external resulting in the complex [there- [_{NP} a llama]]. Here, the ϕ -features of the associate determine those of the complex, and overt agreement with Agr-S is established at S-structure and checked at LF. Accounting for overt agreement with the 1993 form [α -*there*] is more problematic given that the associate's ϕ -features are word internal.

is avoided by both inherent and structural direct Case analyses. Lasnik posits the following 2 methods of checking the partitive Case feature.

- 11 Checking Partitive Case in Existentials
 a) IF INHERENT: It is checked in a head-complement relation with verb
 b) IF STRUCTURAL: It is checked at LF in Spec-AgrO

Although LF-adjunction of the associate is no longer required for the licensing of Case, he maintains it since it explains "both the chain-like property of the relation and the agreement features ... on the finite verb" (Lasnik, 1993:14).⁷ Movement of the NP is now motivated by the morphological requirement of *there* to be "an affix on an NP with partitive Case", which, as shown below, results in the formation of an LF-word in which the associate has partitive Case.

- 12 LF-Word (Lasnik, 1993)
 [α (PARTITIVE)-*there*]

In the examples below, Lasnik (1995) assumes that *someone* checks its partitive Case feature with *be* in (a).

- 13 The Partitive Case Feature of *be*
 a) I want there to be someone here at 6:00.
 b) *I want there someone here at 6:00.

The assumption of *be* checking a partitive Case feature explains the ungrammaticality of (b) since, even if *someone* did have partitive Case in (b), it could not be checked, and either this lack of Case, or the resulting free standing *there*, would cause the derivation to crash.

Lasnik (to appear:7) suggests that if Case and agreement are "two sides of the same coin", and Case is no longer a motivating factor for movement of the associate, one would not necessarily expect agreement. However, maintaining the assumption of agreement, he suggests that *there* "is

⁷ This analysis assumes verbal agreement with a partitive NP which contradicts the standard English practice of agreement with a with a nominative NP. Lasnik (1995:619) notes that given the interdependence of Case and agreement in the minimalist program, movement not motivated by Case would not necessarily lead to agreement. Maintaining the assumption of agreement, he suggests that *there* is generated with "any ϕ -features" which enables it to satisfy the requirement of agreement with the ϕ -features of its affix.

freely generated with any ϕ -features", its associate adjoins to it, and agreement is a result of a constraint which requires a category and an affix to have agreeing ϕ -features. He questions the need for NPs to check their ϕ -features, and notes that even if they do, they would do so prior to adjunction. The problem of motivating movement of the associate leads him to distinguish the following two versions of "last resort".

14a) Greed

Movement of α to β must be for the satisfaction of formal requirements of α .

b) Enlightened Self Interest

Movement of α to β must be for the satisfaction of formal requirements of α or β .

Movement of the associate is due to "enlightened self interest", because, as an LF affix, *there* will crash unless the associate adjoins to it.

The associate - expletive relation surfaces again in Chomsky (1995). He describes associate raising as covert since only the unchecked ϕ -features of the associate raise to the inflectional checking domain and "the rest" remains in situ. In contrast to his earlier analyses, adjunction is to I, not *there*⁸. The problem of disappearing features noted by Lasnik is avoided by claiming that, although *there* checks the strong features of I in its specifier position, it does not do so exhaustively, or there would be no features left to check those of the raised associate. He therefore suggests that "*there* must lack Case or ϕ -features, or both" (Ibid.:273).

Lasnik (in press:14) offers an alternative solution in which he suggests that the deficiency of *there* is not its affixal nature, but rather its lack of agreement features. This results in Agr having unchecked features, and necessitates movement of the associate's features to Agr, "in LF, because of Procrastinate". On the basis of examples such as the following, he rejects Chomsky's suggestion that *there* also lacks a Case feature.

15 *There someone laughed.

⁸ Adjunction to I predicts agreement, and while acknowledging the possibility of it being overridden with the form *there's* he considers this a superficial phenomenon since it is not maintained in questions.

He argues that if *there* did not check a nominative Case feature, it would be available to check the Case feature of *someone*, and the example would be grammatical. Lasnik further notes that if, as both he and Belletti propose, *be* and unaccusatives check Case, the assumption that checked features disappear would result in the disappearance of the Case feature of the associate, *a man* in (16), and in the requirement for it to move to AgrS.

16 There is a man.

However, he (Ibid.:16) saves the argument of Case checking with *be*, by claiming that, since the Case borne by the associate NP is "one with semantic import", it cannot be checked off, because it must "survive to the LF interface level".

6.1.5 Bošković (1995)

In his examination of Case and agreement in existentials, Bošković (1995) agrees with Lasnik that the associate is Case-marked by *be* with partitive Case prior to adjunction to *there*. However, based on evidence concerning A-movement, he argues in favour of Greed over Enlightened Self Interest, a move which results in a Case marked associate with no motivation to move, and a free standing LF affix *there*. He solves these problems by assuming that, rather than the associate raising, *there* is motivated to lower by its own morphological inadequacy, a move which is consistent with Greed.⁹ He accounts for the agreement of the associate with the verb with Lasnik's assumption of an agreement constraint on affixation.

Bošković (1995:142) supports his assumption of affix lowering on the basis of "facts concerning the interpretation of the associate, antecedent-contained deletion, and first conjunct agreement". He refers to the following examples to support his claim that in *there* constructions with conjoined NPs, verbal agreement is with the first conjunct.

⁹

He assumes that either *there* does not leave a trace, or that its trace is deleted.

- 17 Agreement with the First Conjunct in Existential *there* Sentences¹⁰
- a) There **is** a **man** and a woman in the house
 - b) *There **are** a **man** and a woman in the house.
 - c) There **is** a **man** and five women in the house.
 - d) *There **are** a **man** and five women in the house.
 - e) There **are** **four men** and a woman in the house.
 - f) *There **is** **four men** and a woman in the house.
- (Ibid.:141)

He supports his affix hopping analysis with reference to the Boolean Phrase description of the structural differences between the first and second conjuncts illustrated below.

- 18 A Boolean Phrase Description of Conjuncts
 [BP NP [B B ...NP]]

Assuming that *there* must adjoin to a partitive NP, the most economical way of achieving this is by adjoining to the first NP bearing partitive Case, which, in conjoined NPs such as those in (17), is the first conjunct. Combining this with Lasnik's constraint on affixal concord, predicts verbal agreement with this first conjunct.

While some of the more recent analyses of existential *there* sentences acknowledge an asymmetry between Case and ϕ -features, the notion of a *formal relation* between the expletive and the postverbal NP remains crucial. However, the nature of what that relation is, and how it is formed, remain a matter of ongoing debate.

6.2 A Variationist Analysis of Existentials

Many of the theoretical assumptions about the structural and coding properties of existentials are examined in a variationist study of social and linguistic factors affecting concord in existentials

¹⁰ While acknowledging that agreement patterns differ with the contracted form, as in *??There's four keys on the desk*, Bošković disregards these examples, noting that "presumably contraction minimizes the salience of agreement conflicts".

by Meechan & Foley (M&F) (1994).¹¹ Their findings support Milsark's account of the DE since strong determiners were only found in 16% of the tokens examined, but do not support the assumption of verbal concord with the postverbal NP as concord was found to be variable with plural concord in only 28% of plural contexts, and in only 8% of plural contexts with contraction. They finding that education was a significant factor contributing to the probability of concord suggests that prescriptive grammar which often accompanies higher education may be influencing the assumption of concord common to many theoretical analyses.

This lack of concord undermines analyses which assume that the Case of the postverbal NP in English existentials is structural nominative Case, since, under standard assumptions, it is limited to contexts of verbal agreement in English. Belletti's assumption that inherent Case assignment is obligatory when the postverbal NP has a weak determiner predicts less concord with weak determiners, as inherent Case is not assumed to be directly linked to verbal concord. However, M&F's finding that concord was not influenced by determiner strength¹² fails to confirm this prediction and undermines the hypothesis of a link between inherent Case and weak determiners. Although not reported in the published version of this study, M&F also examined the distribution of strong and weak determiners in small clause contexts since, according to Safir's analysis, weak determiners are restricted to this context. Again this prediction was not confirmed as they found weak determiners in 82% of the existentials which lacked small clause complements.

6.3 Determining Case by Comparison

Belletti and Lasnik support their proposals about the Case of the postverbal NP with reference to Finnish and Russian, languages in which Case is morphologically marked. While this marking permits assumptions about Case marking in languages like English which lack extensive Case morphology, analyses based on morphological analogy are not without problems especially when

¹¹ They examined a total of 670 tokens come from 1½ hour samples of recorded speech from 31 speakers of Canadian English. Factors found to be significant to the probability of concord were the form of the copula (.780 for the full form compared to .225 for the contracted form) and education (>11 years, .584, <11 years, .344).

¹² An exception to this generalization noted in their study is that the weak determiner *no* strongly disfavours concord.

6.3.1 Partitive Case in Finnish

19 Irresultative Partitive in Finnish
Pesimme autoa
washed(1pl) car(PART)
'We were washing **a/the** car
(Chesterman, 1991:133)

20 Finnish Partitive with Quantifiers All and Most

a) Jukka kikeili **kaikkia** reseptiejä
Jukka tried **all(PART)** recipes(PART)
'Jukka tried all the recipes'

b) Pekka kikeili **useimpia** reseptejä
Pekka tried **most(PART)** recipes(PART)
'Pekka tried most (of the) recipes'

(Ibid.:8)

¹³ Lasnik (1992:396) questions the inherent nature of partitive Case in existentials since *be*, unlike "contentful verbs" cannot assign Case inherently to a theta-marked complement.

Although partitive Case is associated with the expression of partial quantity (and indefiniteness) in Finnish, partial quantity is, according to Chesterman (1991:93), the weakest factor conditioning its occurrence as shown below.

21 The Hierarchy of Influence of Factors Conditioning Partitive Case in Finnish
 Negative Verb > Irresultative Affirmative Verb > Partial Quantity Resultative

Vainikka & Maling (V&M) (to appear) account for the association of resultative aspect with accusative Case in Finnish by claiming that accusative Case can only occur on complements of verbs which have the feature [+completed], a feature which is incompatible with negation since "one cannot simultaneously negate a verb and imply that the action has been completed" (Ibid.:16). According to Chesterman partitive Case is the main Case of the object in Finnish, and V&M refer to it as the "elsewhere" Case. They additionally claim that unaccusatives, including *be*, assign a structural partitive Case at S-structure when the object is indefinite.

An explanation of some of the difficulty encountered in trying to transfer the partitive - indefinite distinction from Finnish to English is provided by Chesterman (1991) who notes interpretational differences associated with the concept of definiteness. He describes definiteness as a compositional, scalar phenomenon with quantitative and referential aspects. He notes that in English the referential aspect is central to the interpretation of definiteness, while in Finnish, the quantitative aspect is central and "referential definiteness is usually left to be inferred from contextual factors" (Ibid.:159). Finnish does not have articles, and the identification of grammatically encoded definiteness is determined by the factors listed below which Chesterman (1991:160-161) claims form the following Hierarchy of Referential Definiteness.

22 Factors Influencing Definiteness in Finnish
 Context > Case > Function Words¹⁴ > Intrinsic Definites (*the sun*) > Word Order

¹⁴ Although these function words can mark definites and indefinites, their classification as articles is a matter of debate. Since their distribution both functionally and stylistically is more restricted than articles, Chesterman refers to them as "Embryo articles" (Ibid.:153)

Thus while the Finnish data definitely support a link between partitive Case and indefinites, the lack of articles in Finnish, combined with the differences in the interpretation of definiteness, question the morphological analogy underlying Belletti's claim that unaccusatives assign partitive Case. Her claim that this Case is inherent is also questioned by evidence that suggests that, at least in Finnish, it is a structural Case. The concord patterns noted by M&F question both the assumption of inherent Case and that of structural Case. As a lexical feature, inherent Case is independent of verbal concord and any observed concord should reflect random agreement not the strong preference for singular they noted. This preference and the finding of variable concord also undermines the assumption of structural nominative Case given the assumed nominative - agreement link.

6.3.2 Genitive Case in Russian

Lasnik questioned Belletti's claim of inherent partitive Case, by arguing that the Russian genitive of negation, which is similar to the Finnish partitive, alternated with structural Case and could therefore not be inherent.¹⁵ In chapter 4, I argued that this genitive marking was lexical or inherent, a classification which is compatible with Belletti's assumption of partitive Case. However, like the Finnish partitive Case which seems to straddle the inherent - structural border, the Russian genitive can encode more than one Case type.

Russian, like Finnish, lacks articles, and relies on genitive Case as an indication of a indefiniteness. In the quantificational and negation contexts (both weak determiner contexts) noted in chapter 4, I classified it as lexical since it lexically linked, encodes a fixed semantic interpretation, and can only be overridden in the scope of another lexical Case feature. However, the Case marking that is actually referred to as the partitive genitive in Russian is not lexically linked, alternates with structural accusative (grammatical O) Case, and as noted in the glosses of the examples below, encodes a weak interpretation.

¹⁵ While the distribution of the Finnish partitive and the Russian genitive are quite similar, the lack of proposals suggesting that the Case of the postverbal NP in English is genitive may reflect the fact the morphology of English permits confirmation of genitive Case-marking but not of partitive Case-marking.

a) Oni prinesli jabloki
they(NOM) brought apples(ACC)
'They brought **the** apples'

b) Oni prinesli jablok
they(NOM) brought apples(GEN)
'They brought **some** apples'
(Babby, 1986:203)

6.4 The Case of the Postverbal NP in English Existentials

While this semantic Case feature accounts for the interpretation of the postverbal NP, it does not provide information about its functional properties. Frequently this NP is referred to the "subject", a term supported by its ability to undergo raising to subject position. This suggests that it is, in some sense, S-marked although it is not in a S-marked position. Like the postverbal nominative NP in

quirky subject constructions, I assume that the postverbal NP in English existentials is S-marked, and following upward percolation, undergoes feature matching under sisterhood with the S-Case feature licensed by insertion of the expletive in the spec-AgrS position.¹⁶ The assumption of the postverbal NP being marked with the licensed S-marking feature of the expletive maintains the assumption that there is a formal relation between these two elements.

6.4.1 Concord in Existentials

While the S-marking of the postverbal NP in existentials resembles that of postverbal NPs in quirky subject constructions, concord patterns differ. Although theoretical assumptions favour concord with the postverbal NP, the pattern generally found with postverbal nominative NPs in quirky subject constructions, Meechan and Foley found concord in existentials to be variable with a strong preference for singular agreement. As claimed for quirky subject constructions, I assume that concord with the postverbal NP reflects VP-internal ϕ -feature licensing. Although this accounts for the generally assumed concord pattern in English existentials, it is a marked option.¹⁷ Usually the verb checks its ϕ -features with the expletive when both are in the AgrSP projection, the usual position for the checking of these features in English. The assumption that the expletive can check concord features which, in this context were shown to be variable, requires that the expletive be able to check both singular and plural features. However, the strong preference for singular agreement noted by Meechan & Foley suggests that it has a singular default setting.¹⁸

The structure proposed for the licensing of both the Case and concord features of existentials is shown below.

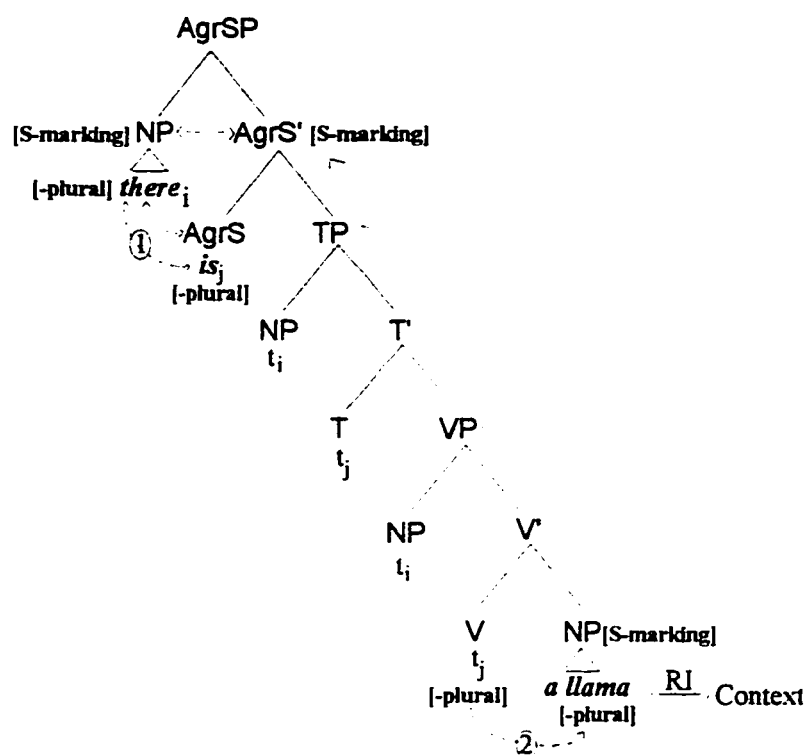
¹⁶ Unlike Icelandic quirky subject NPs which are not themselves S-marked, the expletive *there* presumably is, although the lack of morphology makes this a moot point.

¹⁷ The assumption of concord may also reflect the assumption of nominative Case assignment.

¹⁸ As noted by Meechan & Foley, the strong (92%) preference for singular concord with the contracted form may also reflect a PF requirement for the expression of tense. The singular contracted (oral) form *there's* permits expression of the tensed verb, but it phonologically disappears with the plural contracted form *there're*.

24 Case and Concord in Existentials

There is a llama.



In this structure the S-marking associated with the spec-AgrS position is licensed following relational identification under Spec-head agreement between the expletive and the copula. As there is no blocking element, this Case feature can also undergo relational identification under sisterhood with the upward percolating lexically-specified S-feature of the postverbal NP. The contextually determined semantic Case feature realized by the indefinite article *a*, encodes an interpretation which is grammatically specified by the definiteness effect associated with [there+the copula].

The singular concord could reflect the marked option of VP-internal licensing by feature matching between the copula and the ϕ -features of the postverbal NP(2), or of feature matching between the verb and the default setting of the expletive in the spec-AgrS projection (1).

6.5 Summary

In this chapter I examined the Case and concord of existentials. Assumptions common to

many theoretical analyses were questioned by the variationist study of Meechan and Foley. Theoretical assumptions derived by comparisons with Finnish and Russian were questioned with reference to additional evidence from these languages. Finnish data noted by de Hoop, Vainikka & Maling, and Chesterman not only questioned the transfer of Belletti's Case-based assumptions from Finnish to English, but even the validity of her assumptions in Finnish. With reference to Russian data, I questioned Lasnik's assumption that the Case of existentials was structural. I claimed that the postverbal NP in English existentials provided an instance of a semantic and grammatical Case combination in which the semantic Case specification is encoded in the article system and the grammatical S-marking reflects percolation of the S-marking of the expletive in subject position.

The interpretation of Case as a definiteness marker highlights two problems. First, assumptions about interpretation should not be made on the basis of a single surface marker such as morphological Case. As a contextually determined feature, the coding of definiteness is often morphosyntactically complex and may only be interpretable at LF. Second, the transfer of assumptions about the coding of semantic information from a language with a Case system and no articles to a language with an article system but little Case morphology is highly problematic.

Chapter 7

Conclusion

7.0 Case Types

In this thesis I identified three Case types based the type of information encoded: grammatical or syntactic Case, lexical or inherent Case, and semantic Case. Grammatical Case is strictly a structural property which identifies the subject position by **A**-(transitive) and **S**-(intransitive) marking, the direct object position by **O**-marking, and the indirect object position by **IO**-marking. Since it is structurally determined, identification of an NP's structural position suffices to ensure its grammatical Case marking. Lexical or inherent Case identifies a fixed semantic relation consistently encoded by a specific morphological Case specified in the lexical entry of a predicate. Semantic Case encodes meaning which is contextually (as opposed to structurally or lexically) determined, and shows considerable variation in its morphosyntactic coding often resulting in a delay in interpretation until LF. I examined Case in a variety of contexts including temporal adjuncts, quirky subject constructions, and existentials, and used the proposed Case classification to account for cross-linguistic variation in the morphological encoding of information by Case.

7.1. The Relational Identification and Licensing of Features

I identified Case as a relational feature with the capacity to encode grammatical, thematic, and referential information. Adopting Gerdts' (1990) Principle of Relational Visibility, I proposed a theory of feature licensing which distinguishes between relational identification and licensing. Relational identification ensures identification of grammatical relations such as Case and concord, and also of contextually determined spatial, temporal, and referential relations. Relational Identification does not ensure licensing which, following Minimalist assumptions, additionally requires that the relationally identified features match those of the lexically inserted items.

I extended Lieber's notion of categorial signatures to the syntax and characterized the heads of syntactic categories by categorial signatures which contained both inherent and derived features. I used the distinction between inherent features, those specified in the citation form of lexical items, and derived features, those which only required specification in the syntax, to account for the differing licensing patterns of the proposed Case types. This feature distinction crucially differentiates between Case and the ϕ -features of person, number and gender. Case is an inherent verbal feature and a

derived nominal feature, while the other ϕ -features are inherent nominal features and derived verbal features. Grammaticalized features such as grammatical Case, lexical Case, and ϕ -features undergo relational identification either in the configuration of Spec-Head Agreement or Sisterhood. For semantic Case, relational identification ensures the transfer of features from the context of occurrence to the grammar, and licensing requires that the identified features match those of the context of occurrence. The morphosyntactic realization of semantic Case features was shown to exhibit considerable cross-linguistic variation resulting in varied licensing and interpretative procedures.

The different Case types vary according to their locus of specification, realization and interpretation. Although lexical Case is specified in the lexicon, its morphological realization and interpretation occur in the syntax. Grammatical Case is specified, realized and interpreted in the syntax. Semantic Case is contextually determined, and although realized in the syntax, it may not be interpreted until the level of logical form, because of the morphosyntactic complexity which frequently accompanies its grammaticalization.

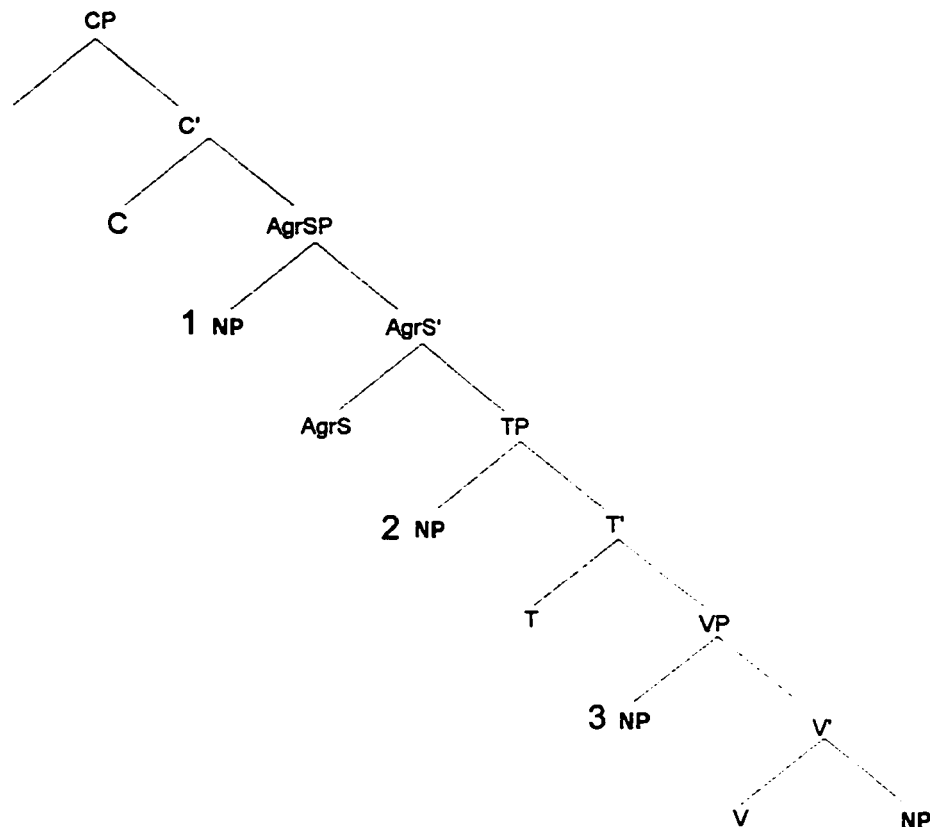
7.2 Case Within the Nominal Projection

On the basis of first language acquisition data I argued in favour of an NP analysis, and examined the interaction of grammatical and lexical Case within the NP with reference to Russian data from Babby (1980, 1986, 1987). To account for the suppression of lexical Case, an impossibility according to Freidin and Babby's Principle of Lexical Satisfaction (PLS), I proposed making the PLS scope sensitive.

7.3 Feature Licensing Within the Verbal Projection

To account for the licensing of the nominal and verbal features, I used the following structure in which inherent verbal features can be licensed VP-internally, the derived [+V] verbal features of finiteness, tense, aspect, and mood are licensed in TP, the projection immediately above VP, and the derived [+N] verbal features of Case and ϕ -features are licensed in AgrSP, the projection above TP.

1 The Licensing of the A/S-Marking of Subjects



My claim that the A/S-marking necessary for the identification of the subject position is an inherent verbal feature implies that is available for licensing VP-internally, and that if not licensed in this position, it moves with the verb. This results in three possible positions for the licensing of this feature, Spec-VP, Spec-TP, and Spec-AgrSP. The presence of the nominative pronominal which accompanies inflected infinitivals in European Portuguese (Raposo, 1987) supports the possibility of A/S-marking in the VP-internal position (3). The required presence of agreement markers on these infinitivals suggests that ϕ -feature identification is essential to the possibility of the VP-internal licensing of A/S-marking. The possibility of the TP-internal licensing of A/S-marking (2) is supported by Sigurðsson's (1989, 1991) claim that Icelandic had a VP-external position for non finite verbs and a Case-marked PRO. The licensing of A/S-marking in Spec-AgrSP position (1) is the option for languages like English in which this marking is usually accompanied by verbal agreement.

7.4 Case in Quirky Subjects

As an inherent feature, the lexical Case marking of quirky subject NPs is licensed in the Spec-VP position. I characterized quirky subject Cases as the location of the predicated activity, and as having a 'part of the predicate' interpretation. Since, according to de Hoop (1992a), this interpretation is only available with stage-level predicates, the predicates in quirky subject constructions were also identified as stage-level predicates.

Although Case marked VP-internally, quirky subject NPs must move to the Spec-ArgSP position to obtain the structural properties which identify them as syntactic subjects. I accounted for the nominative Case marking of the postverbal NP by claiming that it resulted from its upward percolation to a position where it could undergo feature matching with S Case feature activated by movement of the quirky-marked NP to the Spec-AgrS position. This is possible because the verbs associated with quirky subjects are unaccusatives and do not have an O-marking feature to act as a blocking element. Quirky subject constructions demonstrated that, although the S-marking associated with the identification of subjects is a configurational property, it is not limited in its realization to the NP in this position. Evidence from the Case marking of Korean quirky subjects demonstrated that the overt realization of a lexical-grammatical Case combination is possible.

Following an examination of the distribution of quirky subjects and some of their associated properties in Old and Modern English, German and Icelandic, I identified the following properties as necessary for the occurrence of quirky subjects in a language.

- 2 Properties Necessary for the Occurrence of Quirky Subjects
 - a) An identifiable subject position with associated subject properties
 - b) Oblique Case morphology
 - c) The possibility of null expletive subjects.
 - d) The independent licensing of S-marking and agreement.

While these properties were identified as necessary, they were not considered sufficient to ensure the occurrence of quirky subjects in a language.

7.5 Case in Existentials

Finally, I examined Case and concord in existentials. This construction was shown to be similar to that of quirky subjects in that the expletive subject has a locative association, and the S-marking activated by the expletive subject undergoes licensing with the S-marking of the postverbal NP. Belletti's (1988) claim, based on Finnish data, that the Case of the postverbal NP is inherent was questioned with reference to studies by Chesterman (1991), de Hoop (1992a&b), and Vainikka & Maling (to appear) which raised doubts about the classification of partitive Case as inherent, and about its identification of a weak indefinite interpretation in Finnish. The similarities noted in the coding functions of genitive Case in Russian and of partitive Case in Finnish questioned the validity of making assumptions about coding functions solely on the basis of a morphological name tag.

I claimed that postverbal NP has a semantic Case feature which, in the context of existentials, ensures that the NP has a weak interpretation. In Finnish and Russian, this feature is at least partially encoded by the Case marking of the NP, but in English, this interpretation is specified in the article system. I additionally claimed that the postverbal NP of English existentials could, like the postverbal NP in quirky subject constructions, be S-marked following percolation and licensing with the S-marking activated by the expletive in the Spec-AgrS position. The comparison of the encoding of definiteness in English, Finnish, and Russian highlights cross-linguistic differences in the realization of this feature and problems inherent in analyses based on the transfer of a Case encoded feature in a language without articles to a language with articles but with little Case morphology.

7.6 Summary and Conclusion

The tripartite information-based classification of Case I proposed provides a simplified basis for examining Case related phenomena, particularly in contexts where the morphology and the syntax furnish mixed messages about the type of the information encoded. The proposed distinction between derived and inherent features identifies differences in the licensing procedures of the different Case types. Throughout the thesis, I used the proposed Case classification and feature distinction to determine how the encoding of the relational information identified by Case operates in languages with and without morphological Case.

While morphological Case definitely serves to identify specific aspects of the predicate-

argument relation, and of the referential interpretation of nominals, it is but one surface indicator of this information. The analyses proposed for quirky subjects and existentials demonstrated that a thorough understanding of Case, whether or not it is morphologically realized, requires an examination both of its varied expression and its interaction with other aspects of the grammar.

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